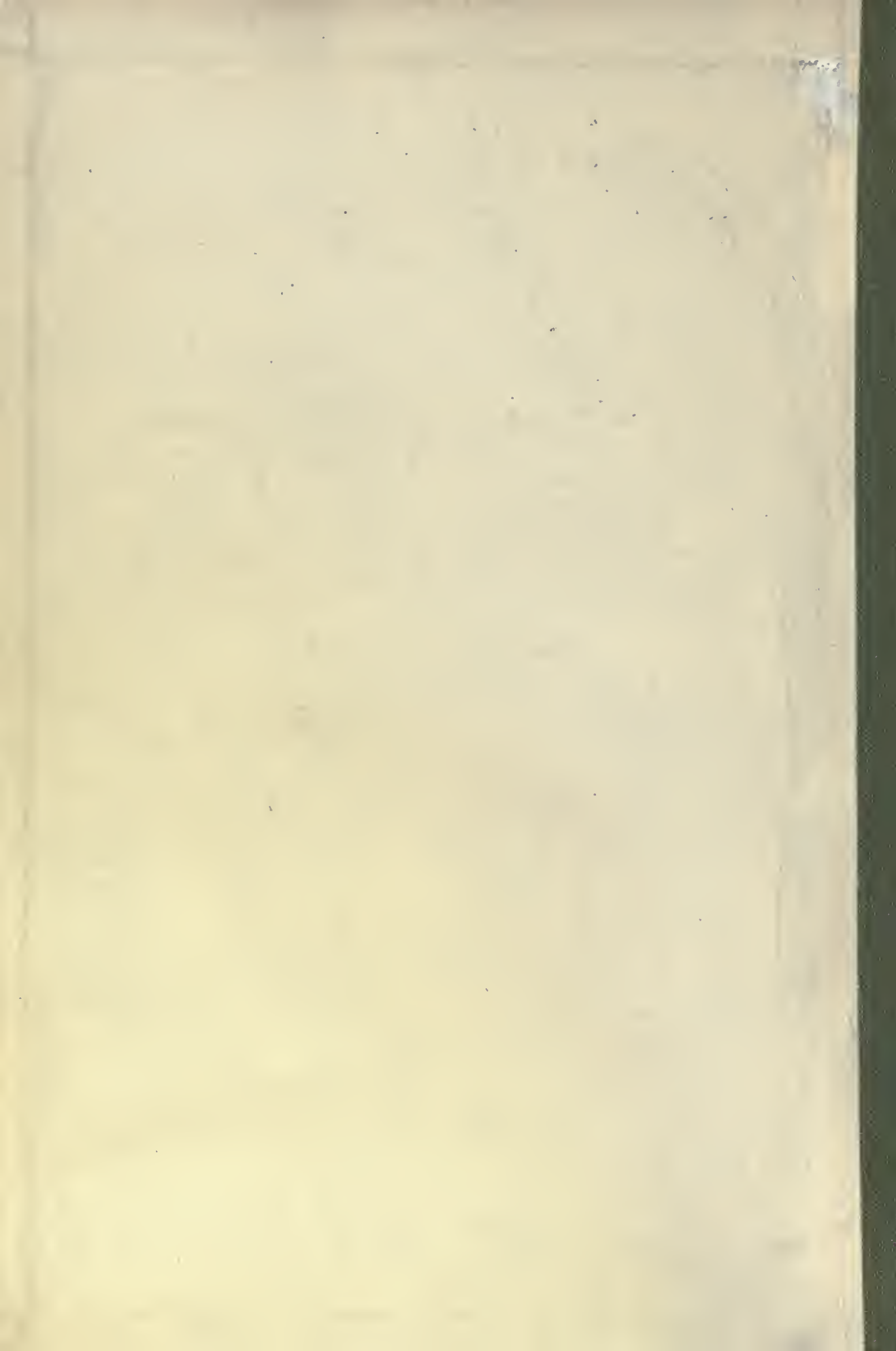


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American Medicine

A WEEKLY JOURNAL
FOUNDED, OWNED, AND CONTROLLED BY
THE MEDICAL PROFESSION OF AMERICA



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VOLUME I
APRIL-JUNE, 1901

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EDITORIAL AND BUSINESS OFFICES, 1321 WALNUT STREET, PHILADELPHIA

VOL. I, No. 1

APRIL 6, 1901

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For the Cause of Independent and Professional Journalism.—Less than three months ago a circular letter was sent out to test professional opinion and desire as to the establishment of a weekly journal which should be owned and controlled by the medical profession, and conducted in its interests regardless of societies, institutions, factions, or commercial influences. The enthusiastic responses received demonstrate the general resolve that there is henceforth to be absolute professional control of our journals and literature. Medical editors must be responsible to the profession and not to the publisher or capitalist.

The *American-Medicine Publishing Company* was incorporated on February 1, and the stock was offered in small amounts to members of the profession. By March 1, the allotted 600 Founders' Shares, at \$50.00 each, had been subscribed for, and sufficient of the preferred and common stock had been sold to warrant the resolution to establish AMERICAN MEDICINE. An editorial staff, a large corps of collaborators, and a sound and well equipped business department were soon organized. Later, reputable business firms answered solicitations for advertisements in the same spirit of good will. Less than one-third of American physicians have been asked to aid us, and yet the support received and promised justifies the pride of the founders of AMERICAN MEDICINE in the great success of their undertaking, unprecedented in the history of medical journalism. Prospectus, list of founders, stockholders and subscribers will appear elsewhere in this issue.

A Word of Acknowledgment and of gratitude is due those who have so nobly encouraged us during the last three months in our aim to add one to the number of professionally owned journals. It has been impossible to reply fittingly to the thousands of helpful letters sent, and we trust that this recognition and thanks may not be the only way of showing our appreciation. Those many letters said in different ways that the cause of independent medical journalism was a sacred one, and they commanded no waste of words, but the doing of the deed, the realization of the desire. The heartiness with which the proposal was greeted by editorial colleagues shows the unanimity and unselfishness characteristic of professional literary workers. Publishers and business men, by their good will, have made clear their appreciation of the fact that good medicine is in the long run good business, because, as everywhere, so here, "Hon-

esty is the best policy." All this should aid in quickening the resolve in each of us to unite our great guild for the realization of the ideals which all have at heart, through the stimulation of a more perfect *esprit de corps*, and a more unflinching devotion to the common good.

The Endowment of an Independent Medical Journal is today the greatest need and the most imperative duty of the American medical profession. No one who has not had long and direct experience as an editor can imagine the professional evils that flow directly and indirectly from the publishing and financial control of editorial action. They cannot be brought before the public eye and sentiment aroused to rid ourselves of them until a journal shall be established the editor of which shall be free from a thousand existing forms of intimidation and subservience. This freedom can be secured only by endowment. Every physician who has an opportunity should never fail to call to the attention of philanthropists and capitalists the fact that far more than hospitals, libraries, or any other educational or curative institution, the primal and fundamental condition of medical reform and progress lies in the endowment of a great independent medical journal.

Smallpox and Death.—The last report issued by the U. S. Marine Hospital Service shows that from December 28, 1900, to February 8, 1901, there were 4,359 cases of smallpox in the United States, with 55 deaths; the figures for the corresponding period of the previous year were 2,026 and 67 respectively. This shows quite a difference in the death-rate—one of the lowest of any extended epidemic. Doubtless this is due to a general vaccination which has been in progress for some months. It is quite probable that if vaccination and revaccination were systematically done annually this disease would in time become extinct. This has been demonstrated in many localities where the only occurrence of smallpox was due to importation from without.

Quack Legislation has been undertaken by several quack legislatures, but that of the Wisconsin lawmakers as regards the gold-cure treatment of impecunious inebriates has proved to be a gold-disease. The counties were permitted to pay the bills for this "treatment," and at

once, of course, the number of the diseased and of the treaters began to increase at an alarming rate, one county alone furnishing 133 patients. The Supreme Court held that the law was not a legitimate exercise of police power and the tax not for proper objects of charity. Now, *Who will pay the piper?*—becomes a humorous question. A police judge in Toledo has just held that drunkenness is a disease. If so, of course, the community must cure it in the impecunious. But, we would add, the community is scientifically bound to discover the etiology of this "disease" as much or more than is any physician. The logical conclusion is clear: those who produce and spread the "disease" are the true criminals. Proceed, then, O sapient legislators and judges, to punish the disease makers, and thus to prevent the evil. Licensing the whiskey-seller and authorizing the "disease" he produces at the expense of the public, then taxing the public to cure the pathologic consequences, is a proceeding worthy of quacks—legislative, judicial, or medical.

The Early Diagnosis of Typhoid Fever by Means of Blood-Cultures.—Of late active efforts have been made by many investigators to discover some more accurate means of early diagnosis of typhoid fever than have been at our disposal in the past. The most important of these new methods are: the Widal reaction, and the examination of the blood from rose spots and the examination of the stools for typhoid bacilli. The typhoid bacilli have also been found in the urine in a sufficient number of cases to make the bacteriological examination an important aid. Until quite recently, however, typhoid bacilli have been found in the blood in only a few isolated cases of typhoid septicemia and the examination of the blood for bacilli in ordinary uncomplicated cases has not been considered a means of diagnosis of any special importance. In a most thorough paper concerning the clinical value of the various methods of bacteriological investigation in typhoid fever, Scholz and Krause (*Zeitschr. f. klin. Med.*, Bd. 41, H. 5 & 6) have dismissed the subject in a single short paragraph with the statement that the diagnosis of typhoid fever by blood-cultures is impractical and that the bacilli are found in the general circulation only in rare cases. Encouraged by the successful results of several observers who have obtained the typhoid bacillus from rose spots, Dr. Rufus I. Cole has recently undertaken the routine diagnosis of typhoid fever by blood-cultures. His results were reported at the Johns Hopkins Medical Society on February 4. Dr. Cole has thus far made cultures in 15 cases of typhoid fever at from the sixth to the twenty-seventh day of the disease and he has obtained a positive result in 11 cases. In all of these cases the Widal reaction was present, but in 5 the bacilli were found in the blood before a positive Widal reaction was obtained. In 2 cases the diagnosis of the trouble was quite obscure until blood-cultures had been made. Cultures from the urine were made in 10 of the cases with a positive result in 5. In employing this method of diagnosis Dr. Cole emphasizes the necessity for using large amounts of blood and of diluting freely in bouillon. From 8 to 10 cubic centimeters of blood were used, this amount being divided between 6 flasks, each flask containing 150 cc. of bouillon.

Care in technic is also very important. These investigations were undertaken without any previous knowledge that similar work was being done by German investigators. Schottmüller (*Deutsche med. Wochenschrift*, August 9, 1900) in a preliminary paper mentions having obtained the bacillus in 40 out of 50 cases in which he made blood-cultures. Auerbach and Unger have also undertaken a similar series of investigation. In the *Deutsche medicinische Wochenschrift* for December 6, 1900, they report positive results in 7 out of 10 cases. They also used fluid media and large dilutions.

These encouraging results from 4 independent observers make it seem quite probable that in this method we have a new and important addition to our means of early diagnosis. All of these methods of certain diagnosis require skill in bacteriologic technic and patient careful work, but in the future medical men must not be satisfied with probable diagnoses in obscure cases so long as exact means of positive diagnoses are at hand. The fact that positive results were obtained by Dr. Cole in 5 cases before a positive Widal reaction was obtained seems to indicate that this method may be more valuable than the Widal reaction, which thus far has been considered the most important means of early diagnosis.

Journalistic Seasickness might well be the designation of a peculiar hysteric affection that is almost entirely confined to medical men. The old adage, "Physician cure thyself," also does not seem in this instance to apply. There is a strange fondness among us for starting a medical journal without taking the trouble to own it, without the business ability to manage it, and after it is set agoing we exhibit a most astonishing apathy concerning its conduct or fate. Soon it takes a header, gets wretchedly crippled, dies, or—does far worse. Then arise croaks of I-told-you-so, followed by a sort of epidemic of acute and periodically recurrent nausea. It is not the vomiting of pregnancy, however. In some cases this symptom lasts during the rest of life, with complete literary anorexia and anemia. Pathologically it is interesting, and, if disease is ever so, amusing; but a wise physician is in no doubt either as to etiology or treatment. The germ of foolish selfishness has not been isolated, and careful prophylaxis is the only treatment. To a strong man failure teaches the lesson, not of renunciation, but how to succeed, and to a good man not of disgust and pessimism, but of greater devotion to the right. If the very alphabetic conditions of journalistic success have not been complied with the proper object of disgust is oneself, and not the profession. The profession is "all right."

Heredity and Human Progress.—No reasonable person can question the influence of heredity, whether in the production of social progress or degeneracy. At the present there are many complacent individuals who are inclined to take the optimistic view and believe that the world is progressing toward an earthly paradise. In a recent book entitled "Heredity and Human Progress," Dr. W. Duncan McKim takes exception to this view. From personal observation of the present condition of things he contends that the world is degenerating because

of bad and weakly people who are surviving under conditions of misplaced philanthropy and sentimentality. Crime is increasing and becoming worse and more dangerous in its varied forms. The hereditary legacy of the past is heaping up burdens of insanity, disease, vice, and crime which society will not long be able to bear. We are keeping alive by artificial means people whom merciful nature would have killed off in earlier times and our present methods are entirely inadequate to deal with these troublesome problems.

The writer of all this is a physician who from his professional life has a chance to know more of the diseased and shady side of life than most men and he is evidently a close and careful observer. It cannot be doubted that modern city life with its unhygienic, underfed slum population must inevitably produce some such horrors as Dr. McKim outlines but his remedy for this state of affairs is hardly likely to be thought of, much less adopted. He suggests killing off by the most painless means science can suggest the weakest and most vicious part of the degenerate population. The tendency to degeneracy must be stopped and can only be stopped, McKim believes, by inflicting death on those whose burden of sin, lust and insanity cannot be borne by the healthy moral section of mankind.

Dr. McKim is right in his estimate of the danger from the degenerate classes, but it is practically impossible in the first place to draw an exact line between them and the higher classes of society. His statement with regard to keeping alive the unfit is in part true, but it cannot be questioned that even at the present many of the best and finest both intellectually and physically are taken off by the infectious diseases such as diphtheria, typhoid fever, and tuberculosis. No one would think of going back to the conditions of the Middle Ages and allowing smallpox and the plague to run their course without attempt at checking them by the methods of modern preventive medicine in order that the unfit might be weeded out, for it is certain that equally many of the fit would be taken. A remedy better fitted for those classes who are unquestionably hopelessly depraved, criminal and idiotic is that which has been several times suggested of late, namely, the unsexing of these classes and thus preventing them from producing others of their kind.

Illegitimacy in Porto Rico.—According to the latest official report issued by the Superior Board of Health of Porto Rico, the illegitimate living births almost equal those of the legitimate living births, the former being 633 for the month, and the latter 845. The still births numbered 107, and the total deaths were 4,001, or a rate of 53.3 per thousand population. Of these 1,294 were under 5 years of age. There were only 29 deaths from typhoid, 16 from pneumonia, and 133 from tuberculosis. The marriages numbered 259. Previous monthly reports showed a greater death rate, and in some months the number of illegitimate births exceeded the legitimate, indicating a peculiar condition of affairs. The population of the island is given as 953,947.

The Conservative Treatment of Bubo.—In the past large incisions and thorough cureting or the entire

extirpation of the affected glands have been commonly advocated in the treatment of bubo resulting from chancre. In one of the lectures given under the direction of the Royal Bureau of Instruction, at Berlin, Krulle (*Berliner klin. Wochenschrift*, November 12, 1900), condemns such radical measures for the treatment of ordinary cases, and expresses his belief that in many cases such treatment gives rise to permanent edema or elephantiasis. He advises the application of hot compresses after it is evident that suppuration is inevitable, and as soon as the suppurative process is well established he advises opening the abscess by a small incision, squeezing out pus, washing with distilled water and the injection of a 1% solution of silver nitrate. If several glands have broken down, each should be opened independently. Every two or three days the dressing should be changed, the secretion squeezed out and silver nitrate solution injected until the secretion becomes serous. Such treatment does not usually make it necessary for the patient to give up his occupation; it avoids the necessity for extensive operation under anesthesia and leaves a scar which is hardly visible.

This suggestion as to a more conservative method of treatment will, we believe, meet the approval of experienced men who have carefully observed the results of excisions and other radical operations in the treatment of bubo. The healing is certainly not hastened by such radical treatment. On the contrary, the extensive incisions if closed nearly always break down, leaving a large granulating surface which requires a long time for complete healing. The less extensive operation gives a better result without the necessity for the patient's giving up work, taking ether, or a prolonged stay in the hospital.

The Sequels of Gonorrhoea and their Significance in Surgery.—During the past year a series of lectures on syphilis and gonorrhoea have been held in Berlin under the Direction of the Royal Bureau of Public Instruction. For the most part these papers are of unusual merit and are worthy of the careful reading of those interested in this subject. One of the best of these papers, by Professor Franz König, with the above title, appeared in the *Berliner klinische Wochenschrift*, November 19, 1900, p. 1078. He notes with astonishment the slow progress which has been made in the knowledge of gonorrhoea, although this disease was well known long before the time of Hippocrates. Not until the specific organism was discovered by Neisser in 1879, was it understood that this infection may become general and that the gonococcus may be found in every organ and in every body cavity and may even lead to death.

He divides the sequels of gonorrhoea into three classes; the local affections in the neighborhood of the urethra, such as periurethral abscesses, strictures, etc. The ascending processes affecting the oviducts and ovaries, or the prostate and testicles, the bladder, ureters and kidneys. The blood infections, which give rise to severe acute gonococcus pyemia or the less severe forms affecting the heart, the pleura and the joints. In the limits of his paper he found it impossible to discuss these numerous forms of infection, but to indicate their practical significance he considered only some of the severe infections of the kid-

ney and of the joints. He mentions two extremely severe cases of pyonephrosis, one of them requiring nephrectomy and nearly leading to the death of the patient.

The gonorrhoeal joint affections are even more frequent and important. He discusses the symptoms, diagnosis, and treatment at some length. To indicate the frequency and severity of these affections he mentions that during the past five years 18 cases of severe gonorrhoeal infection of the hip have come under his notice. One of these patients died from a double pyelitis which existed at the same time. Of the remaining 17 patients only 6 were discharged entirely cured. In all the others there was more or less limitation of motion and in 4 there was permanent shortening. These very severe cases of joint and kidney affections are not usually recognized, as they are easily mistaken for tuberculous processes.

The fact that so many severe cases of gonorrhoeal hip disease occurred in the practice of one trustworthy observer makes it evident how important is this form of infection. Probably no infectious disease is much more common or may be followed by more serious results. Yet the gravity of gonorrhoeal infection has long been overlooked and underrated by most practitioners. It is still common to hear such matters passed off in a light way by men of experience as not more serious than a hard cold. This must be to some extent the result of neglect to keep thoroughly posted as to the results of careful investigations since the discovery of the gonococcus. No doubt it will always be impossible to get rid of this disease entirely, but if it were generally known how serious may be the consequences, the number of infections would no doubt be much less. The education of the public in this respect is chiefly in the hands of the medical profession. Have we been doing our duty in this respect? The establishment, as in Berlin, of a series of lectures by prominent men in all of our large cities, would certainly not be without great influence in the right direction.

The Humors of Christian Science have been exemplified in the hearing of the recent Brush will case in New York. The strange thing about the minds of these people is that they are entirely unconscious of this humorous element. It is a striking psychologic anomaly that the laws of the objective world can be so completely ignored as to result in belief that broken clocks can be made to go, moulting birds to cease shedding their feathers, and drooping rubber plants to flourish, by the application to them of the principles of Christian Science. To save the situation, a witness testified that the plant was watered by one of little faith at the same time that it was being "held in thought" by the healer. Mrs. Eddy herself has been forced to have recourse to the dentist for an aching molar, and in the family of a famous "healer" there are two chronic sufferers from what we call disease. Mrs. Eddy has become at last so far mindful of worldly ways as to advise her followers to indulge the silly believers in pathology by obedience to the law as to the notification of infectious diseases. There is a gleam of possible sanity in this pitying permission to us deluded mortals, that yields some comfort and hope.

The Medical Society of the State of New York has increased its membership so that there shall be five delegates instead of one from each assembly district. The object of the change is to bring the County Societies into closer and more vital relations with the parent body. As heretofore, the members serve for three years, attending two meetings of the Society at Albany, when they become eligible as permanent members. The County Society dues remain unchanged, i. e., \$5.00 to the State Society from each assembly district. The most noteworthy feature of the changes instituted is the establishment of the semiannual meeting for scientific purposes only, to be held this year in New York City early in October. Under the able presidency of Dr. Elsner an excellent meeting is expected. Prior to this time there has been but the annual meeting at Albany, and owing to the great accumulation of business matters a large portion of the allotted time has been absorbed by them. The less "business" a scientific society has, the more time it has for science. The quicker it gets through with this business the more clearly it exhibits its own unity and professional temper. It is true that the advancement of scientific medicine and the upholding of the standard of medical education, by concerted action is most important, and requires not a little time and attention, but our chief work lies in medicine itself and not in medical sociology.

Primary Tuberculosis of the Vagina is of such rare occurrence that the report and conclusions by Jorfida of Padua (*Journal of Tuberculosis*, Vol. III), are of unusual interest and suggest many points for earnest consideration. Ordinarily, tuberculous lesions of the vagina and vulva are secondary to infections higher up in the genital tract, and do not occur primarily; however, the reports of cases by Demme, Da Paoli and others, indicate the possibility of such infections. Demme has described cases in infants, in which the lesions were seated at the ostium vagina; and the primary character of the lesion was proved by the fact that these cases underwent radical cure. Schenk has described a case of primary tuberculosis of the clitoris which extended incidentally into the urethra. The patient, a child of 4, was cured by resection of the urethra and some of the anterior vaginal wall. Tuberculosis of the genital organs naturally suggests the responsibility of the physician in regard to the marriage of tuberculous individuals. If marriage takes place the tuberculous wife runs the greater risk because of the prejudicial effects of pregnancy, parturition and lactation upon the course of the disease. If the husband is the unfortunate victim then the case, reported by Murrell, of tuberculosis acquired by a woman previously healthy and without tuberculous family history, from her husband who had died of that disease, is very suggestive. The susceptibility of the female seems greater than the male, if we may judge correctly from the statistics of Weber, who followed up the fate of 68 tuberculous individuals who had married healthy men or women. Of the 29 sound males who married consumptive females only a few became tuberculous; but of 39 healthy women who married consumptive men no less than 18 became infected and the disease appeared to run its course with unusual rapidity.

Marriage in Cases of Tuberculosis must, in view of such direful consequences, be most earnestly deprecated when either individual is infected, however beautiful and sentimental may be the argument that a married consumptive gets better care and nursing than one unmarried. Another powerful argument against marriage is the inherent right of every child to be well born, physically as well as morally, and not be doomed to come into life poisoned by tuberculous toxins imbibed from the tissues of the parents, and to be the host of myriads of tubercle bacilli transmitted through its umbilical vessels. On the other hand, the drain of pregnancy and parturition exhausts the vitality of the woman so seriously that her death is frequently hastened many months, and a pulmonary disease that might have been arrested, becomes incurable. In fact, so pernicious is the influence of tuberculosis upon the course of pregnancy and upon the fetus, that Martin has agitated the question of the feasibility and expediency of interrupting pregnancy in a tuberculous woman; and Maragliano and Bossi have occupied themselves with the same subject. The following conclusions are of interest: (1) Pregnancy and parturition, by reason of the lost blood and impoverished energy, have a pernicious effect upon tuberculosis; (2) tuberculosis has a disturbing action on the course of pregnancy and upon the fetus; (3) if the fetus survives, another tuberculous unit is added to society; (4) intervention should be by the most rapid and least laborious method. Krause's method of terminating pregnancy is advised when urgency is not required, while in the opposite case the Bossi method is employed.

The chief reasons why the tuberculous should not marry are these facts: that 30% of the cadavers of the tuberculous show urogenital lesions (Posner); that gonorrhoeal epididymitis has a special tendency to become tuberculous; that such an enormous percentage of the wives of tuberculous men develop that disease; and that the offspring of such parents so often present anomalies of weight, growth and nutrition, if not decided congenital disease. Hence, without usurping the innate right of individuals to decide such questions for themselves, it is plainly the duty of the physician to explain the dangers of matrimony under such conditions, and to urge single life upon those unfortunates contemplating marriage.

One Cause of Lower Mortality Rate in Chicago over that in some of the older cities may be that the population of Chicago is to a considerable extent composed of persons who have come there from different parts of our own country and from many foreign countries. The tendency to emigrate gives evidence of unusual enterprise which is usually accompanied by a good physique. Again, the emigrants are mostly in their prime, and they come to the city after the weaklings have been weeded out by the diseases of childhood. While these causes are undoubtedly of considerable importance, the Department of Health of the City of Chicago and all in any way connected with its management are to be heartily congratulated on the excellent showing in the face of many difficulties which are always present in the rapid building up of a metropolis.

The improvement has been great, but neither the medical profession nor the public can afford to rest contented. There can be no question but that the mortality rates are capable of still greater reduction. The means of bringing about this improvement are largely in the hands of the members of the medical profession and are indicated in Dr. Reynold's summary. The public needs further education in regard to sanitary matters and the medical profession needs to make more united efforts to bring about reforms in municipal legislation which will still further improve the efficiency of medical inspection of schools, the examination of the food, the bacterial diagnosis of disease and the improvement of water supply.

A New Use for an Old Remedy.—Dr. F. C. Gram, Registrar of the Buffalo Health Department, has observed that vaccination exerts an influence on grip not hitherto noticed by medical writers. The health-authorities of that city have just concluded a general vaccination, the work being done at a time when the city was in the throes of one of the fiercest epidemics of grip which it has had for years. Dr. Gram noticed that simultaneously with the manifestations of vaccination the grip disappeared. He then experimented on himself, as well as on others, in whom grip had been diagnosed, and in each case the disease was aborted, leaving the patient without any of those annoying and persistent sequels, which are sometimes worse than the disease itself.

The Scientific Use of Hospitals.—Clinical teaching as a regular part of medical education is of comparatively recent introduction in the majority of medical colleges both here and abroad. The use of the facilities offered in the wards of large hospitals for the instruction of students is now more generally appreciated, but only in comparatively few of the very best hospitals is this material utilized to the very best advantage. In a recent paper in the *Nineteenth Century and After*, January, 1901, Sir Michael Foster presents some valuable ideas in this connection. He calls attention to the misdirected talk which we hear against hospitals being used for purposes of experiment. He insists that every touch of the surgeon, every counsel of the physician is more or less of an experiment. For neither the physician or surgeon can be absolutely sure of the result of his act. While on the other hand, he is prepared to make use of the knowledge afforded by the result. Were such experiments conducted not for the welfare of the patient, but simply for the advancement of knowledge, there would be justification for the attitude just mentioned. The analysis of the phenomena presented at the bedside and in the post-mortem room is not so complete and especially not so systematic as it might be and ought to be. Some patients of course complain of being needlessly worried, but it is only a comparatively short time since complaints were made of even the use of the clinical thermometer. The days when a test-tube, a spirit-lamp and an imperfect microscope supplied all the equipment needed for clinical study have long since passed. Every hospital should be provided with clinical laboratories thoroughly equipped with all the needed appliances of science where the most careful investigation of every feature of cases in any way

imperfectly understood should be made. The duties of the head of every scientific laboratory and of his chief assistants, Foster believes, should be three-fold: To teach beginners what is known; to carry on personal research into the unknown and to train those who are no longer beginners the way of inquiring after the truth. The output of such laboratories properly conducted consists on the one hand in the healing of the sick and on the other in the increase of knowledge, the two being indissolubly joined together.

While Sir Michael Foster very favorably mentions the hospitals and clinical laboratories of the United States in his article, there is every reason why we should not rest satisfied with what we have. It is only in comparatively few of our very best institutions that adequate clinical laboratories are to be found. While the objection which he mentions that patients do not like to be experimented upon may be considered a reason for not establishing laboratories and carrying out research, as a matter of fact, entrance is more eagerly sought to the wards of such hospitals as do possess these most advanced scientific facilities than to any other hospitals. At present there are thousands of students both graduate and postgraduate who need instruction of the kind which such well equipped laboratories are prepared to furnish and every effort should be made by those who have influence to promote this good work in every way possible.

A National Department of Health.—Is it possible that at last we have the beginning of such an organization? Every physician and every patriot must fervently hope it is true. In the last hours of Congress one of the items of the Sundry Civil Appropriation Bill passed read as follows:

"For building for laboratory, marine hospital service: For the erection of the necessary buildings and quarters for a laboratory for the investigation of infectious and contagious diseases, and matters pertaining to the public health, under the direction of the surgeon general, \$35,000; and the Secretary of the Navy is authorized to transfer to the Secretary of the Treasury, for use as a site for said laboratory, 5 acres of the reservation now occupied by the Naval Museum of Hygiene."

This enactment, giving the Marine Hospital Service the functions of a National Health Department, really only makes permanent and enlarges the scope of the work long carried on by Surgeon General Wyman. It is strange how tardily civilization and science realize the primal duty of preventing disease and of caring for the public health. We congratulate Dr. Wyman and hope that he may secure many more and much larger appropriations in the future.

The Need of Independent Medical Journals, judging from a number of the opinions we have met, does not yet seem to be clearly defined in many minds. In our American multiplicity of journals we are in danger of losing faith and of despairing of the realization of any ideal. Thus comes a confusion as to the true function of journalism, and a drifting with the tide. In a vague way we know that great circulation does not make a great journal, nor does the large number of pages. Some like to grumble at the advertisement pages, but none of the grumblers would pay twice or thrice the usual sub-

scription prices in order to have his journal without them. It is a cheap and stupid virtue to get the advertiser to pay a large part of the expense of publishing medical journals and then abuse both him and the publisher for the subscriber's parsimony. Critics are plentiful who pounce down upon the poor editor if he makes a single error in accepting or publishing a bad thing, but many do not recognize the good things, and none thanks him for the unknown heroism of rejecting a hundred temptations. The editor who refuses a bribe of thousands of dollars does not tell of it, and is not thanked, of course, but the sin of the one who accepts, if perchance he is even suspected, is soon excused and forgotten. Many like to see unprofessional conduct rebuked, but are careful not to hold up the hands of the one who does the rebuking, and if misfortune befall him, they will pity him for "always getting into trouble," etc., and will virtuously pass by on the other side.

The Touchstone of Professional Spirit is furnished by some occasions in medical evolution, so that as men range themselves upon an ethical question they may be known ever after as upholders or not of the sacred torch of professional life, which, as has been said, flashes from lifted hand to hand along the generations. It is comparatively easy to recognize the arrant knave and quack, but a large number of men are neither good nor bad, not generous nor mean, until some occasion arises that forces them to disclose and to act in accord with the dormant nature. Then suddenly the world sees the hypocrite where he belongs and one knows at last who are friends and who are enemies. Such is the blessing concealed in professional revolutions and the crises of medical evolutions.

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In brief,

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BOOK REVIEWS

A Manual of Personal Hygiene.—Edited by Walter L. Pyle, A.M., M.D. Illustrated. Cloth. Pp. 344. Price \$1.50 net. Philadelphia. W. B. Saunders & Company. 1900.

This is the first work in its field, in which the many advantages arising from the collaboration of specialists have been secured; the wisdom of the method employed is obvious when the character of the subject is considered. The object of this manual is "to set forth plainly the best means of developing and maintaining physical and mental vigor;" and it is difficult to see how the object could have been more nearly attained than has been done in this excellent work. Each chapter, prepared as it is, by a specialist, gives evidence of a familiarity with the subject and shows an easy method of treatment which it would have been impossible to expect from any single writer. We have read this book from beginning to end, with profit and delight, and have turned the last page with regret; but, with the conviction that here at last is the book so long sought by the physician and teacher; a book thoroughly sensible while strictly scientific, and so simple in its phraseology as to be easily understood; in short, a book to be recommended to young or old of either sex. The presentation of the special anatomy and physiology which precedes the discussion of the hygiene of the part involved, is accurate and adequate and much clearer than that usually found in popular works on physiology; while the subjoined exposition of "proper living upon a physiologic basis" affords authoritative advice of the highest value.

The chapters on the hygiene of the skin and its appendages, and on the hygiene of the brain and nervous system, are particularly interesting and satisfactory, though in the latter we wish that Dr. Courtenay had, in his list of out-of-door fads adapted to counteract the toxins generated by cerebral over-activity, included a stronger plea for nature studies, botany, zoology, mineralogy and geology; and that he should lend the influence of his pen to cheek, rather than to encourage, the use of the gun. Relaxation and health secured by the slaughter of bird and beast is gained at too great a cost, and the modern method of hunting with the camera in place of the gun is highly commendable. In the matter of illustration the book is not quite all that could be wished, and in future editions we hope to see more and better illustrations, together with additional chapters covering the hygiene of the reproductive system, and a special discussion of the best means for assuring that most important factor in well being—being well born.

Die Faeces des Menschen im normalen und krankhaften Zustande mit besonderer Berücksichtigung der klinischen Untersuchungsmethoden. (Human Faeces in Normal and Diseased Conditions with Especial Reference to Clinical Methods of Investigation.) By Professor Ad. Schmidt and Dr. J. Strasburger, Privatdozenten in the University of Bonn. Part I, pp. 96. Six lithographic plates. August Hirschwald, Berlin, 1901.

This, the first part of a work on coprology, designed to satisfy alike the demands of investigators and practitioners, deals with the macroscopic and microscopic appearances of human feces in health and in disease in a detailed and praiseworthy manner. The subject matter is very well arranged, the concise diagnostic remarks at the end of each chapter being especially commendable. The plates are excellent. If the good features of the first part be maintained, as they doubtless will be, in the second part, the work should certainly stimulate interest in a field of clinical research that unfortunately has been too much neglected.

The Medical Examination for Life Insurance and Its Associated Clinical Methods, with Chapter on the Insurance of Substandard Lives and Accident Insurance, by Charles Lyman Greene, M.D., Clinical Professor of Medicine and Physical Diagnosis in the University of Minnesota. Ninety-nine illustrations. Philadelphia, P. Blakiston's Son & Co. 1900.

In a handbook of 526 pages the author has written an admirable volume which we have no hesitation in saying is by far the best and most exhaustive work that has so far appeared on the

subject of medical examination for life insurance. In his preface he explains the fact that several medical colleges have introduced a special course of lectures on this topic at the request of many life insurance companies, which is undoubtedly a step in the right direction. Dr. Greene has had the advantage of having had his manuscript read by several of the most prominent medical directors and clinicians in this country who have made many valuable suggestions which have been incorporated in the book. The opening chapter is an interesting historical account of the early development of life insurance, which at first was of a purely speculative character, its statistics being based on those of the gaming table. Even in these days, the author tells us, the persistence of the solicitor was remarkable, and he aptly quotes the verse which might well apply to our own time:

"By fire and life insurance next
I'm intercepted, pestered, vexed
Almost beyond endurance.
And though the schemes appear unsound
Their advocates are seldom found
Deficient in assurance."

He gives a succinct account of the various problems that confront the medical examiner in his daily work, and offers many valuable suggestions, evidently the result of extended practical experience, as to the personal qualifications required for a successful examiner; his duty to the applicant; to the company he represents and to himself. The details of the examination blank are carefully considered, and every point in which the examiner may experience a doubt is so well explained that even the merest tyro, after studying this chapter, would have no difficulty in presenting an accurate medical report of any risk. In our opinion, Dr. Greene has pointed out what is undoubtedly a great source of annoyance and expense to all life-insurance companies and is a standing reproach to the medical profession in general. We allude to the carelessness of the average medical examiner in recording his observations on the application blank. Frequently it happens because questions are left unanswered or important facts are omitted, upon which the medical directors at the home office may base their opinions, that a delay occurs in issuing the policy to the applicant, who, in the interval, may have changed his mind or may have been approached successfully by the agent of a rival company. An analytic review of the conventional questions on the medical blank forms one of the most valuable chapters in the work. Nothing has been overlooked, especially in regard to the influence on the risk of weight and height, heredity, environment, family history, previous illness, occupation, and the use and abuse of alcoholic and other stimulants. As might have been expected from the author's recognized ability as a clinician, the chapter on the physical examination of the applicant shows much original work. We are heartily in accord with the author's plea for thoroughness, especially in the examination of the chest. He very properly insists that the applicant—if a male—should in every instance be stripped to the waist, and points out the absurdity of examinations for insurance which are made through starched clothing or heavy garments. Such examinations have no possible value as to the exact state of the applicant's heart and lungs. The author disarms criticism when he states that he had made no attempt to treat the subject exhaustively but to give in a concise form such information as will enable the examiner to act promptly and efficiently in all cases. We think, however, that the differential tests between serumalbumin and nuclealbumin might have been included in the text, especially as some of the leading companies now require their examiners to apply them in all cases. The chapter on the insurance of substandard lives (which has hitherto been confined to the English and Scottish offices) is of interest in view of the fact that some of the largest companies in the country now write this class of risks, when a few years since they would not consider them on any plan. Dr. Greene treats this part of his subject from the standpoint of the medical director, rather than from that of the medical examiner, and gives a number of statistical tables bearing on the factors which may influence the expectancy of these substandard lives. He also illustrates with the assistance of actuarial tables the methods by which the various companies seek to protect themselves

from loss in accepting this class of extra hazardous risks. In a footnote on page 315 the author sums up the subject by quoting Dr. Glover Lyons, of London, who has pointed out the fact that medical men deal in generalities only, and it must always require actuarial computation to fix the probable duration of life. Attempts to defraud life insurance companies are presented interestingly and details of many celebrated and historical cases are given. The volume closes with a special chapter on accident insurance, written by Dr. J. B. Lewis, of Hartford, Conn., a recognized authority on this subject, who presents useful hints for those who are liable to be called upon to testify in court on these "Manufactured Cases" of alleged railroad or street car injury. We have nothing but praise for the general arrangement of the volume. The marginal notes are admirable and serve to impress on the reader's mind the salient points of the text. A very complete table of contents and index are valuable features of the work which, as a specimen of book making, reflects much credit on the author and his publishers.

The American Year-Book of Medicine and Surgery for 1901. Edited by GEO. M. GOULD. A yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books, of the leading American and foreign authors and investigators. Arranged with critical editorial comments, by eminent American specialists. In 2 volumes—Vol. I, including *General Medicine*, Octavo, 681 pages, illustrated; Vol. II, *General Surgery*, Octavo, 610 pages, illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Per volume: Cloth, \$3.00 net; Half Morocco, \$3.75 net.

The issue of the Year-Book for 1900 in 2 volumes received such general approval from the profession that the same plan has been continued. This arrangement has a two-fold advantage. To the physician who uses the entire book, it offers an increased amount of matter in the most convenient form for easy consultation, and without any increase in price; while specialists and others who want either the medical or the surgical section alone, secure the complete consideration of their branch at a nominal sum, without the necessity of purchasing considerable material for which they have no special use. The volumes for the current year have been as carefully revised, and present as complete a review of the world's medical literature as have those in the past, the whole series constituting a most valuable reference-library for the busy practitioner.

Parkes' Practical Hygiene. Sixth Edition (Hygiene and Public Health). By LOUIS PARKES, M.D., D.P.H., (London University); Lecturer on Public Health at St. George's Hospital Medical School, etc.; and HENRY KENWOOD, M.B., D.P.H., F.C.S., Assistant Professor of Public Health, University College, etc. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Co.

The administration of health affairs is usually in the hands of laymen, and the authors of the sixth edition of this work have succeeded in their endeavor to furnish a practical book. That portion of public health work which it is necessary to perform in chemical or bacteriologic laboratories has been omitted, one of the evidences of common sense present throughout the entire volume; another, is the absence of unnecessary technical terms. The work is divided into 12 chapters, and the subjects treated are of vital importance to the individual or community. Chapter II on the collection, removal and disposal of excretal and other refuse, and Chapter IX on communicable diseases and their prevention, each occupy over 100 pages and are unusually complete and satisfactory. The closing chapters, on statistics and sanitary law and administration, are the least important portions of the work from our American view-point, being based almost entirely upon the conditions existing in England and naturally having much local coloring.

Diseases of Children. Taylor and Wells. P. Blakiston's Son & Co., Philadelphia. Second edition. 1901. Pp. 850.

The second edition of "A Manual of Diseases of Children," by John Madison Taylor, A.M., M.D., and Wm. H. Wells, M.D., is offered in January, 1901, 2 years after the first edition. The book is now much larger than before both in size and subject matter, being about the customary dimensions of a text book on medical subjects. The very full table of contents

shows that it covers the ground ordinarily attempted by books of that class. The work is of joint authorship; the one a medical teacher who, judged by his title, shows that he is familiar with neurology, a valuable modern qualification. The other is an obstetrician, of wide experience as a teacher in his line which includes the important branch of the care of infants and their feeding. The partnership is an eminently suitable one and the product is creditable in all respects, bearing the stamp of research and a practical familiarity with modern clinical needs. The authors claim to have thoroughly rewritten their book and to have added much new matter. A comparison with the first edition shows that some of the chapters are now shorter and clearer, notably the one on diphtheria, which in the first was rather verbose. Others are amplified somewhat and a number of short articles are inserted where the need appeared, filling out the chapters symmetrically. The arrangement of the subjects is practical rather than strictly scientific, notably in the chapter on Diseases of the Skin, where the alphabetical order is observed. This precedent is followed by most text-books on medicine and will be found satisfactory until the advances in nomenclature and etiologic arrangements can be offered in an acceptable form. The phraseology is clear and pleasing; the orthography is good, and the subject matter fairly balanced in the amount of space allotted to each. The views expressed are modern and temperate; the teaching is sound and conservative. Altogether it will fill a prominent place as a students' text-book on this important subject. The presswork throughout is of the first order and the paper unusually handsome. An excellent and full index is added.

Saunders' Medical Hand Atlases: Atlas and Epitome of Gynecology. By Dr. O. Schaffer, of Heidelberg. From the Second Revised and Enlarged German Edition. Edited by Richard C. Norris, A.M., M.D., Gynecologist to the Methodist Episcopal and Philadelphia Hospitals. With 207 colored figures on 90 plates, 65 text illustrations, and 272 pages of text. Price, \$3.50 net. Philadelphia: W. B. Saunders & Co., 1900.

This is one of the best of Saunders' Medical Hand Atlases. As stated in the editor's preface, "The value of this Atlas to the medical student and to the general practitioner will be found not only in the concise explanatory text, but especially in the illustrations." The value of any work on gynecology depends to a large extent upon the illustrations. The illustrations in this Atlas are exact reproductions of the fresh specimen, which convey at once a clear idea of the true condition of affairs, impressing the subject matter more fully upon the reader. The large experience of Dr. Norris as a clinician and teacher, pre-eminently fits him for editing a work of this kind. To Dr. W. H. Thomas is due credit for the translation. In addition to the scope of the work there is a therapeutic table giving the indications, actions and dosage of the various drugs, of value in gynecic practice. Owing to the well-prepared index, reference can be quickly made to any part of the text. The clear and concise manner in which it is written, the method of grouping, and the systematic manner of describing the various diseases, all tend to commend this work to the student and the practitioner. In the articles on treatment, the latest and improved methods only are given, little stress being laid on the operative procedures, the object being to describe the nonoperative methods which are of value.

A Text-Book of Histology: including Microscopic Technique. By A. A. Bohm, M.D., and W. von Davidoff, M.D., of the Anatomical Institute of Munich. Translated by Herbert H. Cushing, M.D., of Philadelphia. Edited with extensive additions to both text and illustrations by G. Carl Huber, M.D., Junior Professor of Anatomy and Director of the Histological Laboratory, University of Michigan. Octavo, 501 pages with 351 illustrations. Cloth, \$3.50 net. Philadelphia and London: W. B. Saunders & Co., 1900.

In these days of extensive pathological research a substantial, yes even a profound, knowledge of histology is presupposed. To keep pace therefore with demands of pathology the histologist must push forward the limits of his field both fast and far. Painstaking, full and extensive as our American text-books on this subject may be and though translations of foreign authors be many, yet none of them fully measure up to the

book before us. It is recognized as the highest authority in Germany. To it have been added, by Dr. Huber, both his own contributions in this field and those of various other American investigators. The work is also planned according to the needs of American schools and students. The division on technic is clear and lucid, never prolix. Each method advocated is clearly set forth. The diagrammatic figures add materially to the teaching value of the book. A careful selection of methods is apparent. No attempt is made to include all methods ever used whether antiquated or not. There might be room for difference of opinion regarding the omission of some agents from this department. For example, creosote is not mentioned among the clearing fluids recommended. Wisdom is shown in confining the subject of injection methods to a mere summary. A very prominent feature of the book is the extensive treatment accorded the subject of general histology. This is certainly to be commended. One hundred and sixteen pages are devoted to this section. The circulating mediums are classed as a fifth division of primary tissues. The connective tissues also are classified in a different manner than usual. The subject of nervous tissues presents the greatest advance in this department. It includes all the recent work of the editor in conjunction with DeWitt. The remaining 290 pages are devoted to special histology. The subject of blood and lymph is most carefully treated. The treatment of lymphoid tissue is deserving of high commendation. In this connection also the work of Mall on the spleen is incorporated as being one of the most notable advances in the field of histology. The cuts, illustrating the finer supporting structure of many organs, the liver for example, are exceedingly satisfactory. They tell their story as no words ever can. Those illustrating the respiratory tract are a distinct advance over any found in our usual text-books. A radical departure is noticed in the classification of the several portions of the uriniferous tubule. The former complicated nomenclature is ignored and the tube is divided into only 5 segments. The greater simplicity will appeal to all beginners. Heidenham's theory of urinary secretion is given the preference over all others. The work of Flint upon the suprarenal gland is drawn upon very fully in the treatment of that subject. The histology of both the male and female genital tracts is thoroughly treated. The treatment of the central nervous system is well in advance of anything to be found in any other histology of today. Each section throughout the work is followed by its appropriate technic. The illustrations are unusually good and add immensely to the book's value. Dr. Cushing's excellent rendition of the German text has enabled the editor to fully utilize the author's work. A faithful English version of the German foundation with the addition of our American researches and an American presentation of facts have produced a book on histology which surpasses anything of its kind now in print. The publisher's name is sufficient guarantee of the materials and workmanship employed in its production.

The Technic of Surgical Gynecology. By Augustin H. Goelet, M.D., Professor of Gynecology in the New York School of Clinical Medicine, etc., etc. Published by the International Journal of Surgery Company, Medical Publishers, 100 William street, New York. Pp. 340.

The purpose of this little volume, as indicated by its author, is to describe with sufficient fulness and clearness of detail the more common gynecologic operations, and it is devoted exclusively to operative technic, preparation for operations and after-care of the patient. No attention is paid to the indications or diagnosis of conditions present. The frequency with which the specialist meets cases in which infection has occurred at the hands of unclean or unskilled operators, or in which unjustifiable manipulations or contraindicated procedures have been employed, amply warrants such a volume as this; and we can commend it to the busy practitioner and young gynecologist as a safe volume to follow. The chapter on preparation of the patient for gynecologic operation is especially valuable. If patients were more systematically and thoroughly studied prior to operation, fewer postoperative sequels and complications would undoubtedly occur. The text is amply illustrated by the introduction of 142 figures and diagrams, which add to the value of the book.

A Text-book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Fourth revised edition. W. B. Saunders & Co., publishers. 1900.

This text-book has been deservedly popular with the profession, and has rapidly passed through 4 editions, a fifth, we understand, being in course of preparation. The treatment of the subject matter is concise and at the same time lucid and comprehensive, especial attention being paid to the etiology, pathology and differential diagnosis of diseases. The therapy is up to date and so arranged as to give the busy practitioner the needed data in the fewest words. The problem as to how much bacteriology should be included in a standard text-book of the practice of medicine seems to have been very happily solved by Professor Anders, his treatment of this much mooted subject being modern and thorough without being too copious. The book contains 56 diagnostic tables, a feature which will be greatly appreciated by the student as well as the practitioner. The illustrations are, on the whole, good—some of them excellent, especially those of the malarial parasites and of the diseases of the blood. Comparatively few formulas are given, but those present show careful selection. Taken as a whole, the work is excellent and certainly deserves a place on every physician's desk. For purposes of ready reference and comprehensive study it has no superior.

An American Text Book of Physiology, by Henry P. Bowditch, M.D.; Henry H. Donaldson, Ph.D.; W. H. Howell, Ph.D., M.D.; Frederick S. Lee, Ph.D.; Warren P. Lombard, M.D.; Graham Lusk, Ph.D., F.R.S.; W. T. Porter, M.D.; Edward T. Reichart, M.D.; Henry Sewall, Ph.D., M.D. Edited by William H. Howell, Ph.D., M.D., Professor of Physiology in the Johns Hopkins University, Baltimore, Md. Second edition, revised. Two vols., illustrated. Pp. 598 and 533. Philadelphia and London. W. B. Saunders & Co. 1901.

That a text-book on Physiology, emanating from the leading investigators and teachers of the chief medical schools of America, has proved a success is not surprising, and the appearance of a new edition gives evidence of the appreciation of a book which is the most authoritative and up to date work on the subject. The present edition appears in 2 volumes, an improvement over the bulky single volume of the first edition. The revision has been complete and the discussion of the central nervous system has been enriched by distinctly new matter. Numerous new figures and a considerably enlarged index add to the usefulness of the work.

The plan of placing the great divisions of the subject in the hands of recognized authorities in these departments of physiologic research has resulted in a uniformity of excellence as rare as it is satisfactory. Just enough attention is given to the historic development of physiologic theory and discovery to enable the student to grasp the tremendous progress that is being made by means of modern experimental methods. The myriad ascertained facts which have led to accepted theories are so arranged and presented as to lead naturally to true generalizations, and there is little danger of a student of this work being carried away by the various fads of the day. The discussion of the broader applications of the facts of reproduction, of heredity, and of sex is comprehensive and lucid; and gives the reader a clear idea of the latest views on the subject. The bibliographic references scattered through the work not only serve as guides to the more important recent monographs, but they add authority to the text and are helpful to the student in directing him to original sources.

X-Rays Without Electricity.—It was announced this week at a sitting of the Paris Academy of Science that M. Curie, a chemist, had separated a new gas from radium. This gas is intensely phosphorescent and will glow for months in the dark. It was also announced that M. Naudon, a scientist, had found means of producing x-rays without electricity by exposing a metal plate to the rays of the violet end of the spectrum.

AMERICAN NEWS AND NOTES

GENERAL.

Not a Case of Yellow Fever in Havana is said to exist at the present time.

The Lane Lectures for 1901 will be delivered by Mr. Malcolm Morris, of London, England, about the first of September.

Leprosy in the Philippines.—It is estimated that there are in the Philippine Islands 20,000 cases of leprosy. Attempts at isolation and segregation are made on each island, and steps have been taken towards the selection of one island for a leper colony to which the lepers on all the islands may be sent.

To Discuss Sea-sickness.—Rumor says that sea-sickness is to have a journal for its discussion. Any one knowing a cure or alleviation, or contribution of value is invited to contribute to this journal. A prize of \$20,000 is reported as offered for a specific. The idea of a special journal devoted to this subject originated, as might be surmised, with a Parisian.

Improvement in Cuba.—Very important results have been secured from the attention given to sanitary improvement in Cuba. A superficial view of the change since American occupancy will detect this. The death rate has fallen from 82.32 in 1898 to 19.32 in 1901. Congress demands that this work shall be continued when the island becomes independent.

Disease Spread by School Slates.—The spread of disease has been attributed to the use of the slate and pencil in schools. Boiling in a solution of sodium carbonate has been done to prevent this. The disinfection of books is more difficult, though of more importance. For this purpose the Washington Lyons apparatus is used. Lead pencils should not be used during an outbreak of contagious disease nor should any papers be carried home by the children.

Rinderpest is reported to exist in the Philippine Islands and the Secretary of War in pursuance of recommendations from Secretary Wilson has taken necessary action to prevent its introduction into the Hawaiian Islands and the United States by animals brought on government transports and has provided that special precautions shall be taken on the Pacific coast to prevent the landing of susceptible animals without their being turned over to the Department of Agriculture for quarantine, under the supervision of the Bureau of Animal Industry.

Obituary.—DENIS D. GAHERTY of Carillon, Quebec, March 24, aged 44.—EDWARD B. LIGHTHILL, of Newark, N. J., March 25.—AUGUSTUS HOELTGE of Cincinnati, March 26.—HENRY K. YEAKLEY at Fort Terry, Plum Island, March 27, aged 30.—HENRY WORTHINGTON of Los Angeles, Cal., March 12, aged 49.—WILLIAM F. CHANNING of Boston, March 19, aged 81.—JAMES W. H. LOVEJOY of Washington, D. C., March 18, aged 76.—WILLIAM FLEET LUCKETT of Washington, March 30, aged 63.—JAMES TAYLOR KREPPS of Pittsburg, March 31, aged 55.—CITIZEN SURGEON HALL of the Department of Northern Luzon, Philippines, of osteomyelitis.

The New Army Ration prepared under the direction of General Weston, chief commissary, has been approved. The principal change is in the increase of the sugar ration, being 20 pounds to each 100 rations, instead of 15 pounds, as heretofore. The vinegar component, which was 8-25 of a gill, is changed by allowing half of that amount in cucumber pickles when desired. In the fruit component 1 2-5 ounces of jam is allowed for the field ration in place of 1 3-5 ounces of dried or evaporated fruit, which is the allowance for the garrison ration. A change is made in the travel ration by allowing the canned tomatoes to be served on the first day instead of the fourth, as heretofore.

Smallpox exists in endemic form, 23 cases reported, at Thurber Junction, Texas, an eating station on the line of the Texas and Pacific Railway, and it is said to have caused great havoc among the Indians on the North Fork of the Yellow River about 15 miles from Medford. The bodies of 15 Indians were recently discovered in the snow near the camp. Cases are reported in Wisconsin from Waukesha, Manitowoc, Brillion, Kewanee, Green Bay and Merrill. The chief census commissioners throughout the Dominion of Canada have been instructed to order the vaccination of all the enumerators under them as it is believed that a mild form of the disease, "walking smallpox," prevails in different parts of that country.

Plague at Cape Town and Manila.—An increase in the number of plague cases in Manila is reported by the Marine-Hospital service for the week ended February 9. The Board

of Health has divided the city into districts, each district being inspected daily. There is also a further increase in the number of cases at Cape Town. It is claimed that the infection of Cape Town was carried by diseased rats and an active crusade is being waged against the rodents.

The bubonic plague is assuming a graver aspect. The number of European victims is increasing. Malays offer considerable opposition to the removal of plague patients, and also of the bodies of those who have died of the disease. The Government has informed these people that if this continues, the Malay community will be isolated outside the city.

NEW ENGLAND STATES.

Dr. A. P. Grinnell, of Burlington, Vt., has brought suit against Edward Weston for causing the arrest of himself and wife, damages being put at \$50,000.

Scared to Death.—Myran A. Olmstead, of South Norwalk, who was bitten by a dog on January 25, died on March 26. Fear of hydrophobia, intensified by the talk of his companions in the factory where he worked, is supposed to have been the cause of his death.

The Robinson School is the name for a new school, the establishment of which is proposed in a bill now before the Massachusetts Legislature and to which boys from 15 to 18 years of age may be sent when convicted of crime. The single aim of this school would be to make these boys into good citizens by treating them not as prisoners, but as pupils and combining a varied course of instruction with thorough manual training. The plan is approved by the Massachusetts Prison Association, by experts in penology, and by judges and chiefs of police.

NEW YORK.

Hypnotism.—The bill before the Assembly Public Health Committee to require the licensing of persons practising and advertising to teach hypnotism, mesmerism and suggestive therapeutics obtained a hearing, but was not acted upon.

The Cause of Cancer.—It is reported that Professor H. R. Gaylord, of the University of Buffalo, who has been conducting researches in the New York State Pathological Laboratory during the last 2 years, has discovered the cause of cancer, but no public statement has yet been made.

Cleanliness in School.—School teachers in Brooklyn complain that the school-rooms are not washed often enough. Sweeping and dusting as usually done is not sufficient as any marching exercise stirs up a great deal of dust endangering health and causing conjunctivitis.

Osteopathy, according to a bill before the Assembly, may be practised in New York by those who pass a satisfactory examination by the State Board of Regents in academic subjects, and who have received a license to practise from the said board. No osteopath, however, shall be allowed to prescribe medicines or drugs in treatment of diseases, or be allowed to use operative surgery, or treat contagious or infectious diseases.

Scarlet Fever in New York.—Scarlet fever has been quite prevalent in and about New York City. The strictness of sanitary requirements in the city secures a fuller report of cases, and consequent appearance of greater prevalence of the disease. The mortality is much below that of last year. English authorities agree that its recurrence may be expected every 6 years. Its impartial distribution among rich and poor, children and adults is noteworthy.

Doctors not Appreciated.—Mr. J. Luther Pierson of Wall-halla was in court a few days ago charged with having allowed his 2-years-old daughter to die without having the care of a physician. He was sentenced to jail but told the judge that his wife was very ill. When again arraigned, he told the court that he had become the father of a boy baby and that mother and child were doing well, no physician having been in attendance. The judge held him in the sum of \$1,000 to answer to the indictment. Pierson declared his determination to submit to any hardship rather than employ a doctor. His wife shares his views in the matter.

New Light on the Housing Problems.—The report of the New York Tenement House Commission is noteworthy for the thoroughness and practical character of its recommendations. The aim of the commission is to encourage commercial building of tenement houses conforming to the proper standards of sanitation and comfort. It lays special stress on housing reform through private enterprise. They refuse to recommend any legislative restrictions which would place too heavy a burden on the builder. It strongly recommends that a city tenement house department be created and charged with the sole duty of supervising dwellings.

Plan to Legalize Christian Scientists.—Assemblyman Bell, of Albany, has amended his Christian Scientist bill, and now has hopes of passing the measure. Under this bill Christian Scientists will be prohibited from practice in surgical and contagious or infectious disease cases. He thinks that this restriction will remove the opposition of the medical profession. Members of the New York County Medical Society and other physicians are much interested. Although there has been no meeting of physicians to discuss the matter, it is generally understood that they will maintain their original stand. The fight over the bill has developed the fact that the Christian Scientists have one of the most compact political organizations in the State.

Prosecution of Spitters in New York City is being undertaken more seriously than usual by some of the magistrates, and by President Sexton of the Board of Health. No less than 25 arrests have been made recently. Mr. Sexton has assigned 70 of the 100 policemen detailed for tenement house and other sanitary work to the special duty of riding about town on surface and elevated railways and arresting violators of the anti-spitting section of the sanitary code. The persons arrested are to be dealt with in the regular way in the police courts, and the officers will also report from time to time the general results of their work and observations to Dr. Roberts, the sanitary superintendent. The street railroad companies, wherever they have not already done so, are required to change the signs prohibiting expectoration in the cars so that they also name the penalty for violating the law, which is a fine of \$500. Half a year ago very few of the signs contained more than the bare statement that "spitting on the floor of this car is prohibited, by order of the Board of Health."

PHILADELPHIA.

Orator of Academy of Surgery.—DR. JOSEPH M. SPELL-188Y has been appointed orator of the Philadelphia Academy of Surgery for the year 1902.

Dr. Horatio C. Wood has been compelled by strain of overwork to give up temporarily his practice and lectures at the University of Pennsylvania.

Vaccination.—The Supreme Court of Pennsylvania has rendered a decision that school authorities may exclude from the schools those who refuse or neglect to be vaccinated.

Overheard in a Street Car.—"How is your mother?" "Oh, poor mother has been having a very serious time. She had gastrology; it went to her brain and broke out in a dreadful carbuncle on the nose. The poor dear was unconscious for nearly six weeks."

Pediatric Society.—Dr. L. Emmett Holt, of New York, will address the Pediatric Society at the meeting of April 9. Following the meeting a reception and dinner will be held at the Aldine Hotel.

Presentation of Dr. Keen's Portrait.—An oil painting of Professor W. W. Keen was formally presented to the Jefferson Medical College Thursday evening, April 4. The painting is a testimonial to Professor Keen from the students and alumni of the college and the hospital staff. Dr. J. Chalmers Da Costa delivered the address of presentation and Hon. William Potter accepted the gift on behalf of the trustees.

A Foreign Fellowship to the value of \$500 has been established by the Alumnae Association of the Woman's Medical College of Pennsylvania to be offered for the year 1901-1902 to all alumna of the college. Any candidate for this fellowship should apply to a member of this committee for the terms under which this fellowship will be granted; Dr. Bertha Lewis, chairman; Dr. R. Fleisher, secretary, Dr. Anna E. Broomall, Dr. Rachel Williams, Dr. Jane L. Hiersom, committee.

Pure Water Supply engages the attention of the New Jersey Women's Federation of Clubs, and it urges the State Legislature to enact such laws as are essential for the preservation of the forests. The value of the forest land of the State is estimated at \$41,299,199. Joseph Wharton, the largest owner in the pine belt in the southern part of the State, has preserved about 50,000 acres which contain ponds and lakes of sufficient capacity, he says, to supply the city of Philadelphia with pure water.

Pathological Society.—At the regular meeting held March 28, Dr. William G. Spiller read a paper on **Cerebellar Lesions without Cerebellar Symptoms**. Cases including tumors, cysts, sclerosis, etc., were reported. A conclusion drawn was that tumors and abscesses of the cerebellum are not proper causes from which to judge the functions of that organ, as pressure on other parts may cause symptoms not due to the cerebellar lesions. Dr. D. L. Edsall reported a case of **Malignant Endocarditis**. The diagnosis could not be made definitely until cutaneous and visceral lesions developed 5 or 6 days before death. A point emphasized was that in examining the blood for bacteria large quantities should be used. In the case

reported, a few drops of blood on agar gave no results, while 3 cc. in a tube of bouillon developed a culture of streptococci. Dr. M. B. Hartzell exhibited a pigmented epithelioma or **Alveolar Melanotic Sarcoma** and also a specimen showing marked degeneration of the epithelium in the skin bordering a chronic ulcer. Dr. W. B. Eaton read a paper on the **Histogenesis of Myomas**. A study of small spherical tumors has shown in several cases a genetic relation between the musculature of vessels and the tumor. The inclusion theory is believed to explain only a few cases.

Vital Statistics of Philadelphia for the week ended March 30, 1901:

	Cases.	Deaths.
Total mortality		532
Inflammation of appendix 3, bladder 3, brain 15, bronchi 17, kidneys 22, heart 3, liver 1, lungs 78, pericardium 1, peritoneum 7, pleura 1, stomach and bowels 21, Brain—diseases of 3, abscess 1, softening 3, congestion 4, tumor 1		172
Heart—diseases of 42, fatty degeneration 1, neuralgia 2		12
Asthma		45
Lungs—diseases of 5, edema 3, tuberculosis of 74		4
Inanition 17, debility 5, teething 4		82
Influenza		26
Scarlet fever	97	19
Measles		8
Liver, cirrhosis of 2, jaundice 3		7
Casualties		5
Carcinoma of breast 3, liver 1, face 1, rectum 2, stomach 5, uterus 1		9
Apoplexy 19, paralysis 9		13
Septicemia		28
Convulsions 15, puerperal 1		6
Bright's disease 10, uremia 11, diabetes 2, dropsy 3		16
Old age		26
Diphtheria	72	7
Whooping cough		12
Typhoid fever	47	3
Membranous croup		4
Cyanosis		2
Alcoholism 1, anemia 1, aneurysm of aorta 1, burns and scalds 2, child birth 1, cirrhosis of the liver 2, cellulitis of leg 1, diarrhea 1, epilepsy 1, erysipelas 2, extrauterine pregnancy 1, puerperal fever 1, fracture of femur 1, gallstone 1, gangrene 1, uterine hemorrhage 1, obstruction of the bowels 1, opium poisoning 1, rheumatism 1, retention of urine 1, arterial sclerosis 1, surgical shock 2, sarcoma of larynx 1, suffocation 2, syphilis 1, ulceration of stomach 1, unknown 1		3

Academy of Surgery.—At the meeting of April 1, Dr. JOHN A. WYETH, of New York, read the paper of the evening on **Amputation at the Hip-joint for Sarcoma; its tendency to recurrence**. Dr. Wyeth characterized sarcoma as the most malignant of tumors. This is true of all three varieties—round, spindle, and giant cell. Statistics of 267 cases of hipjoint amputation were given. Of these 131 were for sarcoma with an operation mortality of 6%. Satisfactory histories of 83 cases that survived operation were obtained. Of these 51 cases recurred. The location of the tumor or its relation to bone or soft parts has little to do with the safety of the patient. Dr. Wyeth then detailed his personal experience, dealing especially with the question of pyogenic or streptococic infection of the patient. One of these cases in particular was a woman with a very large fungating recurrent growth. An attack of erysipelas was induced, and the patient is now entirely healthy after a period of 16 years. In another case of sarcoma of the jaw pyogenic infection was allowed after operation, and serum from the blebs of a case of erysipelas was also used. The latter produced no infection. A virulent culture of the streptococcus of Fehleisen was then used, this producing erysipelas. The patient has been entirely well since. Dr. Wyeth's conclusions are that the streptococcus infections have an inhibitory effect on sarcomas, and that they should be used to prevent or cure recurrences. Infection should be produced at intervals of not longer than 6 months and be continued for at least 6 years. Dr. W. W. KEEN reported 4 cases of **amputation of the upper and 2 of the lower extremity**. All of them died sooner or later from recurrence. He would operate on all cases as recurrence is very often internal and is not so offensive and painful as the original growth. No operation in continuity is allowable and no case should be operated upon if the hemoglobin is below 50%. Dr. W. B. COLEY, of New York, reported 6 cases of **amputation at the hipjoint**. In 1 no after-history was obtained, there was recurrence in 4, and the last, operated on in August, 1900, has no recurrence yet. All cases should be operated upon in spite of the discouraging statistics. The toxin treatment should be instituted after all operations for sarcoma.

The patient should be allowed to recover from the operation and then receive a systematic treatment of a month or 2 at a time with short intervals for 1 to 2 years. The toxin treatment does not cure all cases or a large proportion of cases, but it does cure some. At least 4 cases of round cell sarcoma have been cured by it. Dr. WYERER stated that safety to the patient lies in early recognition of the disease and in early and wide removal of the growth. As to the question of immediate or secondary infection, the immediate may be dangerous in anemic persons. In robust individuals, as most cases who have sarcoma are, he would insist on immediate infection after operation. The subject was further discussed by Drs. Bloodgood and Young, of Baltimore, and Drs. Flexner, Harte, Deaver, Massey, Rodman and Willard.

The **Duhring Dermatological Society** has recently been formed with the following membership: Drs. L. A. Duhring, Arthur Van Harlingen, H. W. Stelwagon, J. V. Shoemaker, M. B. Hartzell, J. F. Schamberg, E. S. Gans, C. N. Davis, E. W. Stout, I. M. Koch and J. F. Wallis. Meetings are held on the third Tuesday of each month at the various centrally located hospitals. No papers are read, but cases of rare interest are exhibited and discussed. Dr. H. W. Stelwagon is chairman of the society and Dr. Jay F. Schamberg, secretary. Following are the proceedings for March 15:

Dr. MILTON B. HARTZELL presented (1) a case for diagnosis. The patient, a woman, 40 years of age, for the past 4 years has had a measles-like eruption over the entire cutaneous surface, except the face and scalp. The eruption is ill-defined, slightly scaly, dusky-red in color, and "blotchy" rather than diffuse. In winter the itching is slight, but in summer quite severe. The patient's general health is excellent. (2) **Epidermolysis Bullosa**. H. F., a boy of 7, poorly developed, has suffered from a bullous affection almost continuously since he was 3 weeks old. The bullae occur upon the hands (palmar and dorsal surfaces), the extensor surfaces of the forearms, the elbows, the ears, over the sacrum, the knees, the anterior surface of the legs, the backs of the feet, and occasionally upon the tongue and the inner surface of the lips. The nails of the thumbs, index and middle fingers have been lost. The bullae are frequently hemorrhagic. The skin of the hands and legs, where the lesions have been most frequent, is decidedly atrophic. The mother states that "whenever he bumps himself blisters appear." No other member of the family has suffered from a similar affection. At present there are several hazel-nut-sized hemorrhagic blebs upon the hands, and crusts upon the elbows and knees.

Dr. H. W. STELWAGON presented: (1) **A Case for Diagnosis**. Patient is a farmer, aged 45, in good health. First noticed in 1891 a pea or dime-sized elevation on back in lower dorsal region toward right side. This gradually enlarged and a few new elevations appeared nearby and became merged in the original spot. There were no subjective symptoms. Three years ago (1898) the area began to extend more rapidly and became infiltrated and somewhat hard, and later it began to become more or less irregular on the surface, furrowed and lumpy. The parts have felt stiff and painful in the process of bending over. At the present time there is an area of irregularly rounded shape, about 6 to 8 inches in diameter, with rounded ridged elevations and depressions, the ridges and furrows tending to radiate towards the center. Here and there over the surface and near the peripheral portion are several small, rounded papulo-pustular looking elevations, surmounting an elevated ridge which are suggestive of former openings. There is no pus, however; there has never been any discharge nor open wound or lesion. The color of the whole area is a sluggish purplish red or violaceous, with a lighter colored center. The part feels brawny and infiltrated and thickened deep in the tissues, but there is no agglutination with the ribs beneath, the whole mass being movable. There is no evidence of ulceration outlying this area. Higher up are 2 elevations purplish red in color, suggesting roughly the beginning nodes of erythema nodosum. The general appearances are suggestive of an actinomycosis, but there are no openings and no discharge, although here and there is a suggestion of possible former liquid infiltration. A section of tissue examined showed merely inflammatory changes. There is no syphilitic history. Actinomycosis, syphilis, blastomycetic dermatitis and morphea were all considered. (2) **A Case of Dermatitis**. Patient is a woman aged 34, with a pendulous skin of right elbow region. It began to form 13 years previously, and the tissues had gradually become loose in folds, finally becoming pendulous. The region involved, extending several inches above and below the joint, was covered with a thickened, dark-colored skin, upon which were apparent 50 to 100 scattered slightly projecting sebaceous gland outlets, filled with small comedo-like plugs which could be easily squeezed out. The disease spread by an advanced pigmented skin. (3) **Ulcerating Scrofuloderm**. Colored girl aged 17, with large number of old cicatrices, and several scrofulo-gummatous and suppurating glands about the lower jaw and neck, extending from the ear and involving the whole submaxillary and neck region from one side to the other. The condition began when the patient was 4 years old. Family history tuberculous. (4) **Case of Actinomycosis**. A farmer, aged 35, exhibited at a previous meeting, with actinomycosis of the chin region and lip, of 3 years' duration. Patient is gradually recovering under large doses of iodids. There are still open sinuses;

as yet it has not been possible to demonstrate the fungus. Dr. JAY F. SCHAMBERG presented (1) **A Case for diagnosis**.—A woman, aged 35, has for 6 months been suffering from lentil to pea-sized nodules upon the hands, and at times upon the feet and ears. The lesions begin as firm, deep-seated, painful, pinkish-red tubercles, which in the course of one to several weeks break down and form necrotic pustules. The patient has never suffered from frost-bite. Her general health is good, and there is no family history of tuberculosis. The members were inclined to regard the case as belonging to the group of poorly understood eruptions occurring in the "chilblain regions," and possibly scrofulous in character. (2) **Delayed Hereditary syphilis** (*syphilis hereditaire tardive* of Fournier). The patient, a girl of 15, presented upon both legs just above the ankle, a number (2 upon one leg and 3 upon the other) of half-dollar sized ulcerations. The ulcers discharged a profuse mucopurulent exudate. But slight infiltration and little or no pain present. The mother states that the patient has never previously had any eruption upon the skin, nor any manifestation elsewhere which might be construed to be syphilitic in character. The mother, however, has had 4 miscarriages. Under the use of 5 grains of potassium iodid and 1-24 grain of biniodid of mercury the ulcerations had become much less deep and one had almost entirely healed. The diagnosis lay between an ulcerating scrofuloderm and hereditary syphilis. The latter disease was tentatively diagnosed, and from the success of the treatment instituted it would appear that the affection was a delayed hereditary syphiloderm.

SOUTHERN STATES.

Dr. J. B. McCAN, a well known physician of Richmond, Va., who has attained eminent success during the active years of his professional life, has retired.

Increased Use of Absinthe.—Physicians in New Orleans find the use of absinthe increasing and means are being considered to reduce the consumption if possible.

A Smallpox Epidemic in West Virginia has become so alarming at Weston that the presiding judge of the Circuit Court has decided to postpone the sessions until the next term.

Washington Water Supply.—Preparations for providing a filtration plant are proceeding as rapidly as the circumstances will permit though no definite plan can be approved until a site has been obtained by the government, and this has not yet been done.

Quarantine Proclamation.—Governor Sayers, of Texas, has issued his annual gulf coast and border quarantine proclamation against all vessels and persons coming from districts infected with yellow fever, bubonic plague, cholera or other contagious diseases. This quarantine went into effect April 1, and continues indefinitely.

Sanitary Improvement.—One of the last acts of the Maryland Legislature at its extra session was to devote \$12,000,000 for sewerage in Baltimore. The bill was not favored by the politicians because of the influence which the expenditure of so much money would give to the Mayor, but the public necessity was strong enough to demand the measure.

A Mistaken Case of a "Bullet in the Brain".—A man recently died in Washington, D. C., who was supposed to have carried a bullet in his brain since 1857. Autopsy showed instead that the bullet must have fallen out of the single opening in the skull at the time of the accident. A piece of the fractured cranial bone 1 by ½ inch was, however, found imbedded and encysted in the cortex, and this showed traces of the lead bullet.

Physicians' Orphans' Home.—With the view of founding such an institution an organization has been effected, and building sites for its location have been considered in Asheville, N. C.; Louisville, Ky.; Colorado Springs, Colorado; Canton, Ohio, and Lookout Mountain, Tenn., but Bristol, Tenn., and Virginia, has been settled upon as the one most suitable, and an option secured on property there. To put the orphanage in operation, \$35,000 remains to be raised.

Consumptive Convicts in Texas.—Texas has an isolated farm for those convicts suffering from tuberculosis, where they receive treatment practically similar to that followed in sanatoriums and have a highly nutritious diet including stimulants. Cleanliness and the observance of sanitary measures are imperative. When able to leave their beds they are obliged to be in the open air, and they sleep in a spacious stockade. The employment is entirely in market-gardening and no one is required to work beyond his strength. This farm has returned to the State in 2 years a net profit of about \$2,500 and it is said many men who went there scarcely able to feed themselves and apparently in the last stages of tuberculosis are now quite well.

The Alabama Legislature has recently ordered a similar segregation of consumptive convicts.

The Johns Hopkins Hospital Medical Society.—At the meeting of March 18th Dr. MACCALLUM reported a curious

form of peritoneal tuberculosis. He referred to a form of tuberculosis occurring in cattle in which large nodules are formed both in the peritoneum and the pleura. These nodules are conglomerated tubercles covered by a fibrous capsule and embedded in a new formed tissue of proliferated connective tissue cells. They increase to such an extent at times that they become pedunculated from their very weight and hang suspended from the peritoneum in the peritoneal cavity. Dr. MacCallum exhibited a number of pathologic specimens from various animals and stated that such a condition is extremely rare in human beings, in fact, he had only found 1 case recorded, by an Italian in 1867. An elderly woman died at the Hopkins Hospital some time ago with symptoms of pulmonary tuberculosis. At the autopsy in addition to the pulmonary lesions tuberculous nodules were found in the spleen and liver and there was a tuberculous meningitis. The peritoneal surface itself was quite smooth but there were numerous nodules hanging from it into the peritoneal cavity. Many of the nodules had very long pedicles, and in some instances when the nodules were picked up it was possible to cause the fluid contents to flow back down the pedicle into the peritoneal tissue and even into another pedunculated nodule. Some of them had been cut off from their blood-supply until they had a strangulated appearance, and in 1 instance the pedicle had become detached and the nodule floated free in the cavity. Microscopically the nodules were found to have the character of caseous tubercles. Toward the center of the nodules the cells were necrotic and in this zone numerous tubercle bacilli could be found. In discussion Dr. WELCH referred to the long controversy that has existed concerning the resemblance of this condition so common in animals to human tuberculosis. Virchow believed that they were distinct diseases, but the prevailing opinion has been that some relationship exists and this has been strengthened by experiments which have shown them to be mutually interinoculative. Dr. Welch also referred to Theobald Smith's work on the differences between the bacilli of animal and human tuberculosis. In regard to the formation of the pedunculated nodules, he accepted Dr. MacCallum's explanation as true in part, but would suggest the possibility of another explanation for some of them. There is a circumscribed peritonitis in which a vascularized membrane forms on the peritoneum quite analogous to the membrane in hemorrhagic pachymeningitis. The tuberculous nodules could form in such an adventitious membrane and it would offer a better explanation for the appearance of some of them; for instance, where a very small nodule has quite a long pedicle it can hardly be supposed that it was formed by its own weight when associated with it were numerous very much larger nodules with short pedicles or none at all.

Dr. KNOX exhibited a specimen of *Lipomyoma of the Uterus*. He remarked that lipoma, while common in many parts of the body, are very rare in the uterus and the combination seen in this case was unusual. The patient was a woman, aged 62, the mother of 13 children, and with a good family and personal history. The first symptoms of any trouble occurred 9 years ago, when she had a slight serosanguinolent discharge which lasted for a few weeks but was not accompanied by pain. After an interval of 7 or 8 years the discharge recurred, disappeared within a brief period and then again reappeared a few weeks before admission to the hospital. On examination Dr. Kelly found a large mass occupying the pelvis and extending half way up to the umbilicus. An operation was performed, the tumor removed and the patient made a slow but uninterrupted recovery and is in good health today. For some time after the operation there was nothing in the case to suggest anything but an ordinary myomatous uterus, but when the specimen was examined on making sections, it was found that the whole surface was traversed by numerous whitish bands dividing the tumor into lobules, and on scraping the surface minute globules of fat could be pressed out, which is never the case in ordinary myomas. There were no areas of marked softening anywhere in the tumor. On microscopic examination, the mass of the tumor was found to be made up of large fat cells, enclosed in a network of firm tissues composed largely of a fibrous tissue with oval and spindle cells and a considerable amount of granular intercellular particles. The tumor was homogeneous throughout. In discussion Dr. CULLEN remarked that although they had been making a systematic examination of all cases of myomas and had examined now something over 600 specimens they had never seen but the one of this character. In only one other case was anything resembling it found, and in that instance there were only 7 or 8 small areas that looked like the tissue found throughout this whole tumor.

Dr. CHARLES L. LEONARD, of Philadelphia, read a paper on *The Advances Made in Medical and Surgical Diagnosis by the Roentgen Method*, and followed this by a very interesting stereopticon exhibition of slides, showing skiagraphs of bone lesions and of kidney calculi.

WESTERN STATES.

New Filtration-Plant for Louisville.—Louisville, Ky., will profit greatly from its new filtration-plant, in that it will have fine water for drinking and bleaching purposes.

Minnesota Legislation.—A bill recently passed by the Minnesota legislative body makes it a misdemeanor punish-

able by a fine of \$50 for any person in Minnesota to smoke a cigaret.

Smallpox in Iowa.—On March 27, Mayor Hartenbower, of Des Moines, issued a proclamation requesting that all public schools, theaters and churches and other places of public assembly be closed on account of the prevalence of smallpox.

A Large Hospital Supported by Assessments is proposed in Cleveland, Ohio, by Health Officer George F. Leick. The wage-earners are to be asked to contribute 40 cents a month, which, it is calculated, would yield \$360,000 a year. After the first year, the assessments would be 20 cents a month. The buildings are to cost \$350,000. The plan is simply an insurance against neglect and poor treatment during sickness.

The rapid disappearance of the forests in the vicinity of Lake Geneva, Wisconsin, has become a subject of serious consideration by the property owners of that section. James Jensen, in the *Forester*, says that in order to improve and cultivate the ground, the owners clear away the undergrowth and natural grasses. These act as a blanket to keep the roots of the trees warm and also hold the moisture necessary to nourish them. Thus, in the mistaken effort to improve the land is found the reason for the decline of the forest, with the consequent influence on meteorologic conditions and public health.

Vaccination.—In the mandamus proceedings brought by Joseph P. Tracy, of Ravenswood, whose 3 children were forbidden to attend school because they had not been vaccinated, Judge Dunne, of the Circuit Court of Illinois, rendered a decision that the school authorities have no right to exclude children from the public schools who have not been vaccinated unless there is evidence that the disease is so prevalent as to render rigid precautions necessary. Later after listening to evidence of the prevalence of smallpox in and around Chicago, Judge Dunne ruled that the emergency existed which justified the insistency of the authorities to have the children vaccinated.

Unsuitable Marriages.—The Minnesota State Senate has passed Senator Chilton's bill forbidding the marriage of insane, epileptic and idiotic persons, and requiring that all applications for marriage licenses shall be accompanied by a medical certificate. By an amendment, which was adopted, the marriage of any feeble-minded person more than 45 years old is permitted; by the original reading of the bill this permission was only granted to women. Local statisticians had noticed an increase in the number of imbeciles and otherwise mentally weak persons in the State, and many such cases were found to be hereditary. This marriage law is proposed as a preventive of propagation by such. The law imposes a fine on the male contracting party who is proved unfit, and also upon the person who celebrates such ceremony. The present weakness of such a law is the ease with which persons desirous of evading such restrictions can gratify their wishes in another State. For this reason the enactment must, however wise it may be, in a measure fail.

Rocky Mountain Industrial Sanatorium.—An organization of physicians and other professional men and women has recently been incorporated in Denver for the establishment of an industrial refuge for tuberculous patients of slender means, who go to mountainous states in the hope that the altitude will effect a cure, but who almost invariably succumb to the unsanitary conditions forced upon them by their poverty. This organization aims to be national in its scope and it will endeavor, through auxiliary societies, to reach these patients before they leave their homes in other States. This plan embraces the erection of a sanatorium about 20 miles from Denver, to be carried on as an industrial colony and they hope to raise the large amount of money needed by the "Cottage Endowment plan." The Young Women's Sanatorium Auxiliary has been organized and a branch will be established in every city and town throughout the United States to cooperate with the Board of Directors in securing money for the endowment of the cottages, and for library, furnishing, etc. By utilizing the labor of the patients it is believed the work of the institution will be performed, the sanatorium provisioned, and remunerative work be conducted. The incorporators of the Rocky Mountain Sanatorium are William H. Gabbert, Associate Justice of the Colorado Supreme Court; Charles Hartzell, attorney; A. Mansfield Holmes, M.D.

CANADA.

Pauper Inebriates.—The Ontario Government has now under consideration a bill drafted by the Public Health Committee of the Ontario Medical Association conjointly with a committee of the Prisoners' Aid Association, providing for the economic remedial and reformatory treatment of pauper inebriates, and proposes to deal with it as a habit which must be broken up, a disease which must be cured or a mania which must be controlled. The financial burden is to be borne conjointly by the government, by the benevolent public, by the municipalities and by the drunkard.

FOREIGN NEWS AND NOTES

GENERAL NEWS.

The Plague in Africa and India.—The plague is increasing in India. In Bengal during the week ending February 23, 4,066 persons died of plague.

Scientific Expeditions.—For the purpose of continuing his research on malaria, Prof. Koch has organized a series of expeditions to the German protectorates and other tropical regions. He will direct the work from Berlin.

Hypnotism.—The Hungarian Government has issued a mandate against the practice of hypnotism, except by physicians and under special permission. The fact that a number of offenders have escaped punishment lately on the plea that their crimes were due to hypnotic influence, has led to this measure.

Obituary.—DR. JOHN DUGAN, Consulting Surgeon to the British Legation at Peking, and Professor of Anatomy and Physiology at the Imperial College in Peking.—SURGEON-GENERAL GORE, C.B., M.D., late A.M.S.—DR. BENJAMIN BARLOW, F.R.C.S., Vice-president of the British Medical Association, March 7, aged 87.

The Sleep Center.—Observations recently made by English experimenters tend to support the view of the existence somewhere between the medulla and the brain of a center which regulates the phenomena of sleep and awakening. The idea is expressed that a certain amount of accumulated carbonic acid gas, following fatigue, acting on this center produces sleep, while an excess excites it and produces wakefulness.

Italian Red Cross Antimalarial Campaign.—During 1900 an antimalarial campaign was conducted by the Red Cross Society, in the Roman Campagna. Medicines, food, and medical comforts were provided at various stations with great economic advantage both to the people, and to the hospitals to which otherwise they should have been sent. The number of persons treated was 4,513, of whom 3,751 were suffering from malaria.

Action of Chloroform on the blood.—MM. Lambert and Garnier have shown by recent experiments that the reducing power of defibrinated blood is greatly increased by passing chloroform vapor through it. From the fact that any variation in the composition or reaction of the blood necessarily modifies the nutrition of the nerve centers, the above conclusion may explain the disagreeable, and sometimes dangerous symptoms which occasionally follow the administration of chloroform.

Alcoholism from a Medico-legal Standpoint.—In some observations made by Mr. Justice Wells to the grand jury at the Durham Winter Assizes, England, he states that after nearly 70 years on the bench he is convinced that drink and gambling are the cause of the vast majority of the crimes of violence and dishonesty. He believes that such criminals require medical treatment in a reformatory rather than imprisonment. He thinks that many cases of paroxysmal inebriety have inherited mental instability.

Sea Hospital for French Fishermen.—Under the auspices of the *Societe des Oeuvres de Mer*, a steamer has been constructed with special adaptations for medical and surgical work among the fleet of French ships engaged in cod-fishing. This is to replace the sailing vessel *Saint Pierre* which left St. Malo April 1, last year, and though dependent on sails for progression, in 6 months completed 5 cruises, embracing the whole of the fishing ground and established communication with 301 fishing boats, when all slight cases of sickness or injury among the crew were attended on board their own craft; the more severe cases, 88 in number, were transhipped into the *Saint Pierre* for treatment. It also delivered 7,261 letters among the fishermen and conveyed home to their families and friends 4,020 in return and during her cruises rescued 10 sailors adrift in 4 dories.

GREAT BRITAIN.

Cremation in Great Britain.—A bill to permit the establishing of local crematories for human remains has passed the House of Lords and is now before the Commons.

Kissing the Bible.—By the existence of the Oaths Act of 1888 whereby the oath may be administered to witnesses in the English court without their having to "kiss the book" a dangerous practice is dispensed with. It is to be regretted that all courts have not yet adopted the "Scotch fashion." It has been stated that the two Testaments in the City of London Court are kissed by 30,000 persons annually.

Port Sanitary Laws.—At a meeting of the port sanitary authorities of Liverpool, England, two unanimous opinions regarding the plague were discussed. First, its early recognition, for which a bacteriologic laboratory should be provided. Second, that they endeavor to secure more power regarding the discharge of the cargo of infected vessels. And that as rats are considered the greatest danger of importation special attention be given to their destruction.

CORRESPONDENCE

ANATOMY IN RELATION TO ART.

BY

W. W. KEEN, M.D.,
of Philadelphia.

To the Editor of AMERICAN MEDICINE:—The contributions of Americans in the higher realms of anatomy have not been very frequent. In Artistic Anatomy I recall but a single serious attempt, the very successful and beautiful atlas by Dr. William Rimmer of the Boston Museum of Art. I am very glad to notice another contribution in this field by Dr. George McClellan.* It augurs well for the development of art in this country that so handsome a contribution to its literature should be made by one who has been now for 12 years constantly teaching anatomy to the students at the Pennsylvania Academy of the Fine Arts. Dr. McClellan, like Sir Charles Bell, is not only an anatomist, but an artist as well, as has already been shown in his beautiful "Regional Anatomy," and we are very glad to welcome him in this new field of art.

Anatomy for the artist is of limited scope. It cares nothing for the viscera unless they influence the surface form. It takes little note of deep muscles which do not modify form, though they may produce important motions. On the other hand, the small muscles of the face or the large gluteal muscles and the muscles of the back are of the utmost importance to the artist. In some cases the ordinary functions of muscles are for the artist very frequently reversed. For example, the muscles of the leg and foot, for the ordinary anatomist originate from the leg and are inserted into the foot. For the artist this is most frequently reversed, since their function is to steady the entire body and retain it in the erect posture, in which case the origin is from the foot and the insertion on the leg. The nasal bones for the artist far outweigh the femurs, and the influence of the position of the arms and of gravity on the level and the shape of the female breast require his most careful observation.

Dr. McClellan's text is very satisfactory. He uses simple terms, which to the artist are much more comprehensible than the more scientific terms of medicine. His style is concise, sometimes almost too much so. I could have wished that he had pointed out the reason for the change in the mid-point of the body, which he correctly states before 2 years of age is above the navel, is lowered to the navel at 2 years of age and progressively falls further and farther below that point after 2 years. The reason for it, of course, is the very slight development of the lower extremities in the infant and the much greater development in the adult, especially at the lower end of the femur where the growth from birth to adult stature is 7.3 times, while the growth of the entire body is only about 3.37 times. A similar relation governs the proportions between the face and the cranium. In infancy the face is extremely small, but enlarges very much as the teeth develop.

One criticism that might be made is that it would have aided the artist in contrasting the male and female forms much better had Plates 1 and 3, which now present the front and profile form of the male in one plate and the female in the other, contained a front view of the two sexes in one and a profile view of the two sexes in the other. This would have drawn attention to what the plates really do show very well, the marked difference in profile not only of the female chest, owing to the great development of the breasts, but also to the female abdomen, which is so much fuller in its lower segment than that of the male.

One very ingenious method of teaching anatomy not only to art students, but also to medical students and so employed for 16 years by Dr. McClellan is shown in Plate 81. The nude model is clothed in a complete set of tights on which are painted the principal superficial muscles; the varying action of

*Anatomy in Its Relation to Art, by George McClellan, M.D. Illustrated by 388 original drawings and photographs made by the author and expressly ordered for this work. Published by the author and printed for him at the press of Alfred M. Slocum Company, Philadelphia, 1900. Square quarto, pp. 142.

these muscles in different positions show admirably on this apparently dissected, yet living, model.

The whole book is a most creditable one to its author (who is also his own publisher), to the Academy of the Fine Arts, and to American artistic literature. It deserves to be widely known.

MOLLUSCUM FIBROSUM.

BY

GEO. L. WILKINS, M.D.,

of Baltimore.

To the Editor of AMERICAN MEDICINE:—The following interesting case came under my observation at the Baltimore city jail, February 6, 1901.

Charles D., colored, very dark, well developed, fair intelligence, aged 33, born at Avondale, Ohio. First noticed the growth



about 1 year ago. No evidence of an inherited tendency, traumatism, history of syphilis, eruptive diseases, acne or pustular affections. The total number of growths is 210, and they are most numerous and perfect in their development on the back, mainly in the scapular regions. They vary in size from $\frac{1}{4}$ to 3 inches in diameter. They present a great variety in form and shape: linear, oval, cylindrical, dome-shaped, sessile and pedunculated. On the front part of the chest there are 5 or 6 elongated growths, and on the left shoulder they appear as a long broken line. In these regions they are strongly suggestive of keloid. They are largest and most distinctive in their character on the back and shoulders. In this region many are pedunculated, some coalesce and several on superficial examination slightly resemble the markings of psoriasis. To the touch some are soft, while others are firm and fibrous in their character. The skin covering the tumors was either loose or stretched. There was no pain on pressing the growths, nor was there any disturbance of the general health.

Keloid is peculiarly prone to return after operative treatment, while on the other hand fibroma molluscum may be successfully treated by removal of the growths. Accordingly this patient was sent to City Hospital for operation, and subsequently went to Johns Hopkins Hospital.

SECONDARY SUTURE OF RESECTED ULNAR NERVE, SEVENTEEN MONTHS STANDING. IMMEDIATE RESTORATION OF FUNCTION.

BY

ERNEST LAPLACE, M.D.,

of Philadelphia.

Professor of Surgery, Medico-Chirurgical College.

To the Editor of AMERICAN MEDICINE:—The following case is of more than usual interest and I desire to bring it to the attention of your readers:

On May 10, 1899, G. K., aged 16 years, fell on an axe severing the ulnar nerve at the right elbow, causing complete ulnar paralysis. Local treatment healed the wound, but nothing was

done to repair the nerve. The usual ulnar atrophy followed. On December 7, 1900, 17 months after the injury, the boy was operated upon at the Medico-Chirurgical Hospital. The lower part of the ulnar nerve was found imbedded in a fibrous mass. The upper extremity was difficult to recognize, but a dissection from above led to a neuroma about $\frac{3}{4}$ of an inch long and $\frac{1}{4}$ of an inch wide. The neuroma was resected, also about $\frac{1}{2}$ an inch of impaired nerve tissue from the lower extremity. The two extremities of the nerve were brought together by gentle and steady stretching, lasting fully 2 minutes. When the proper length was reached, 10 finest silk sutures were placed about the neurilemma, bringing the resected ends in perfect apposition. The arm was dressed in the extended position.

The hand being wrapped in an antiseptic towel during the operation, I did not observe what effect might have resulted then and there, but the next morning I was surprised to find perfect motion in the little finger, while before the operation there was complete paralysis. As no healing could yet have taken place, I concluded that the restoration of motion must have been immediate owing to the perfect approximation which allowed nerve force to pass through. Sensation was also restored, but at certain points the impression received was referred to certain other portions of the affected area. This was no doubt due to the educated sensory fibers not having in every part met their former continuous fibers above. Some, however, had met their former severed ends, and these responded accurately to their educated sense. The patient was exhibited to the County Medical Association on December 12, the fourth day after the operation, and demonstrated perfect motion and complete sensation, though not always referring the sensation to the exact spot where the impression was received.

The important points in this unique case therefore are:

1. Resection of $\frac{1}{2}$ inches of the ulnar nerve with neuroma 17 months after injury.
2. Perfect apposition of nerve ends by steady stretching and the application of 10 sutures around the neurilemma.
3. Immediate restoration of motion and sensation.

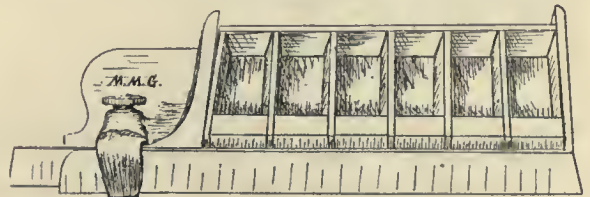
A DEVICE FOR PARAFFIN IMBEDDING.

BY

D. H. GALLOWAY, M.D.,

of Chicago.

To the Editor of AMERICAN MEDICINE:—For 2 or 3 years I have been using what I think is a very convenient device for imbedding blocks of tissue in paraffin. It is a printer's composing-stick, 6 inches long and 2 $\frac{1}{2}$ inches wide. It has an adjustable slide fastened by a thumb set-screw; this slide is set at a dis-



Printer's stick for paraffin imbedding

tance of 4 inches from one end which gives a space 4 inches long by 2 $\frac{1}{2}$ inches wide. This space is divided across by 6 nonpareil slugs $1\frac{1}{2}$ inches long. These are separated by 6 quods $\frac{1}{8}$ of an inch wide placed at the back of the stick. Lengthwise across the other end of these slugs is placed another slug 4 inches long; this divides the space into 6 small spaces or boxes $\frac{1}{8}$ of an inch wide, $\frac{3}{4}$ of an inch deep and about $1\frac{1}{2}$ inches long. In these spaces 6 separate blocks of tissue may be imbedded at once, the quods being numbered on the end so that the tissues may be identified. Of course if only 1 or 2 blocks are to be imbedded, only that number of compartments need be set up. When the tissue is ready for imbedding, a small amount of melted paraffin is poured into the compartment, the tissue properly arranged therein and the compartment completely filled with paraffin. The stick is then placed on a cake of ice or in a shallow dish containing cold water. The metal conducts the heat away so rapidly that the paraffin is hard in a very few moments. This

is far more convenient than the old method of paper boxes which most of us were taught to use. It will readily suggest itself to every one that the size of these compartments may be modified to suit the work in hand; but the size I have given has been the most convenient for my work. The accompanying drawing illustrates the device as I have described it.

DEATH FROM ANESTHETICS.

BY

F. C. GRAM, M.D.

Registrar Buffalo (N. Y.) Board of Health.

To the Editor of AMERICAN MEDICINE:—I am frequently requested to furnish mortality statistics regarding a particular causation of death, in which the inquirer happens to be interested, and in so doing I have made certain observations which I consider of interest to the medical profession.

My attention has just been directed to a statement that "the number of deaths under ether anesthesia is estimated at 1 in 75,000; under chloroform 1 in 11,000." Another authority places these figures at 80,000 and 16,000 respectively. From facts in my possession I believe I am justified in saying that these figures are inaccurate, unreliable and misleading. I have no knowledge as to their origin, but surmise that they are based on hospital experience.

During my service as Registrar of Vital Statistics for the Buffalo Health Department I have recorded over 40,000 deaths. Out of this number only 3 are certified as due to anesthetics. One is recorded as following "anesthesia administered for operation," and 2 from "uremia following anesthesia."

I have personal knowledge of more than 4 times that many deaths under anesthesia during the same period, but they were certified as due to other causes. It is not my purpose here to discuss cause and effect, but simply accuracy. Few physicians or dentists are willing to go on record as having lost a patient under anesthesia, and the death is therefore credited to heart disease, nephritis, shock and other causes, which certainly are a factor, but which would not have become such at that time without anesthesia.

So long as these conditions exist it is absolutely impossible to obtain reliable statistics on this subject.

CLIMATE AND DISEASE.

By W. H. BURR, M.D.,
of Wilmington, Del.

"Some hae meat and canna eat,
And some wad eat but want it.
We hae meat and we can eat
And so the Lord be thankit."

To the Editor of AMERICAN MEDICINE:—If it is true as some writer has said that "climate is fate," is it not incumbent upon the medical profession to devote a little more time to the scientific aspect of climatology in its relations to diseased conditions, and endeavor through a careful and judicial treatment of the subject to remove as far as possible the elements of chance and place the whole subject upon a scientific basis.

Volumes have been written upon climatology and climate (unfortunately much of the material has been contributed by or drawn from railroad folders and real estate speculators) but it is only in recent years that the haphazard method of prescribing climate formerly in vogue is happily disappearing with other medical fakes and bogies. It has been customary in past years to prescribe climate as one would castor oil to be taken at bed-time (or some portion of the day without regard to the time of the day), then wait for results. All kinds of promises have been made the unfortunates who wait upon our wisdom, even so far as to assure them of bodily regeneration equal to that spiritual regeneration, promised by the Divine Prophet of all of us.

In a paper published recently by Dr. Van Meter, of Denver, the subject of climate is fairly considered, although the position taken by the author regarding the ultimate outcome of tubercu-

losis, even under the most favorable environments, seems to me to be more radical and hopeless than facts warrant. When a physician states that 85% of all patients afflicted with tuberculosis sooner or later die as result of that disease, whatever the environment may be, I think the position taken is more dogmatic than true.

If statistical figures are relied upon to prove the assertion, then I can only repeat the old saying that nothing is more misleading than statistical figures, and as the doctor complains that the city of Denver has already been injured by misleading mortuary statistics regarding tuberculosis, it seems strange that he should fall into the same error. It may be true that 85% of all cases of tuberculosis die as direct result of that disease, but in compiling figures to show result of climatic treatment of tuberculous persons, the number only of those who seek climatic change should be taken. Then if you eliminate from this number those who have had injudicious advice in regard to climate, I think it would surprise the profession to know how many cases are cured. I do not say *arrested* but *cured*, for I do not believe that we can deny a cure in the case of a tuberculous person any more than to any other condition of disease. * * * Every one knows that "death from *old age*" is generally a misnomer, and that we all carry the seeds of some diseased condition with us which will eventually terminate in death unless we shall, as seems improbable, all accept the dietum of the Christian (?) Scientist "that there is no such thing as matter," and why one should concede arrest in 1 case and cure in another is beyond my comprehension.

I spent 3 months in Colorado last summer and met scores of persons who to all intents and purposes were cured of tuberculosis. Some of them recovered under circumstances and environments that would be considered unlikely or unfavorable. I met persons in the high towns 10,000 feet above sea-level of whom I was assured that they had been brought in on stretchers, and they were apparently hale and hearty. Others had had the same experience in the lower towns. I saw men who came into Colorado with an immediately previous history of violent pulmonary hemorrhages and who were doing the hardest kind of mental and physical labor, were hale and hearty, and the fathers of healthy families. If tuberculosis like syphilis and some other contagious diseases did not wear itself out, under favorable circumstances and environments we should expect the whole human race would annihilated within a reasonably short space of time.

REMOVAL OF POWDER-STAINS.

By J. NEELY RHOADS,
of Philadelphia.

To the Editor of AMERICAN MEDICINE:—Last summer an Italian woman came to me to have me remove powder-stains from her face. A boy a week or 10 days previously had thrown a giant shooting cracker into her face, badly and permanently blacking it. In the meantime, she had applied to a hospital and had been subjected to several long, painful treatments in futile attempts at picking the powder out of her skin. On her visit to me I, also, attempted to pick out the individual grains, but it was so tedious, and the patient objected so much on account of the pain that I began to look around me for some other way. A chemist friend suggested the use of hydrogen dioxide. I applied it at once, full strength; and gave the patient a bottleful to use at home. She came back in 2 days with the powder-stains all removed. I have been waiting for another case, but as more than 6 months have now passed without my seeing the second one I send this account to you for publication.

Smallpox.—Smallpox is reported from Clarksville, Tenn., Des Moines, Iowa, New York, Jersey City and Nashville. In Clarksville the situation is more difficult on account of the ignorant opposition to preventive measures on the part of the negroes. The same difficulty is experienced among the Italian patients of Jersey City. In San Juan, Porto Rico, and in the City of Ponce, there are some cases of a mild type. In Porto Rico the Anshantees do not regard a Board of Health and places of quarantine as necessities. A spread of the disease is not feared.

ORIGINAL ARTICLES

THE MEDICAL ASPECTS OF CARCINOMA OF THE BREAST, WITH A NOTE ON THE SPONTANEOUS DISAPPEARANCE OF SECONDARY GROWTHS.

BY

WILLIAM OSLER, M.D.,
of Baltimore, Md.

Professor of Medicine, Johns Hopkins University.

The consulting physician sees mammary cancer at two stages of its progress. Dreading the surgeon, and hoping against hope, a number of women prefer to come to him at the first detection of a tumor. But these form a small fraction of the cases. A large majority are the unhappy victims of the internal metastases after operation. For some years I have been interested in this class of cases, and have collected material bearing upon the question of these late, more strictly medical, manifestations of the disease.

Recurrence may occur in the bones and other parts at an indefinite period after the detection or removal of the primary growth. In a case which I saw with Dr. Agnew, fully 18 years had elapsed since the discovery of the breast tumor. S. W. Gross¹ reported an instance in a patient who had had atrophic scirrhus of the breast for 17½ years. Shields quotes a case of Dickinson's, in which secondary paraplegia occurred in a woman who had had an atrophic scirrhus of the breast for 14 years.

On the other hand generalization may occur with extraordinary rapidity. Case XIII in Nunn's Monograph on Cancer was a young woman, aged 27, seen in April with cancer of the left breast, which she had noticed for several months. In June she had ptosis of the left eyelid, and subsequently had paraplegia. He quotes a still more acute case. "The patient, under the care of Mr. Pearce Gould, was aged 29; had borne 4 children; after suckling the last one about 8 months symptoms of mischief commenced in the left breast and the axillary glands participated. The patient died within 4 weeks of her admission into the hospital, having a temperature of 101.8, and somewhat higher toward the end. The post-mortem showed infiltration of the left breast and a similar condition of the right breast, effusion into the left pleural cavity, the lumbar vertebrae were invaded, both suprarenals were cancerous."

The cases may be arranged into those with *cerebrospinal*, *thoracic* and *abdominal* manifestations.

I.—CEREBROSPINAL MANIFESTATIONS.

The tendency of secondary carcinoma to involve the bones, especially those of the spine, makes the complications of this group very frequent. Of 858 cases of cancer of the breast collected by Hahn (Freiburg Dissertation, 1887), 35 had metastases in the bones, 21 of these in the vertebral column, 11 in the extremities, 1 in the skull. Taking the post-mortem statistics collected by the same writer, of 554 cases, 82 had metastases in the bones.

Borner (Berlin Dissertation, 1886, Ueber Metastasen nach Mammacarcinom in der Wirbelsaule) has dealt very fully with the question of recurrence in the spine. He

quotes the interesting remark of Billroth, that cancer of the vertebral column is seen particularly in patients with the atrophic form of scirrhus, which is sometimes so trifling that patients come first under the care of the physician. He gives the statistics of the Vienna Pathological Institute, in which in 366 cases of carcinoma of the breast in 72,000 necropsies, 9 had metastases in the vertebral column.

(a) *Cerebral*. The bones of the skull are not often affected. Broca reports a case with generalized cancer of these parts secondary to scirrhus of the breast. There was facial paralysis.

Secondary cancer of the brain is rare, but a few cases are referred to in the literature.² The only instance which has come under my notice is the following:

CASE I.—Symptoms of brain tumor; old sclerotic scirrhus of the breast.

November 12, 1886, I saw with Dr. Agnew, Mrs. X., aged about 75, who had had for several months headache of great severity, and occasional attacks of vomiting. She was a small woman, moderately emaciated, but looked fairly well in the face. Within a week or 10 days she had become drowsy, and her condition was evidently alarming. There was no paralysis. She had a double optic neuritis, which, with the intense character of the headache, the vomiting and the drowsiness, were suggestive of brain tumor. Dr. Agnew then mentioned that 18 years before she had consulted him for a scirrhus of the left breast. He had not advised operation, and it had gradually become shrunken. On examination there was an old, puckered, cicatricial scirrhus, with an extreme grade of retraction of the nipple. The patient gradually became more drowsy and died in coma.

(b) *Spinal*. In many ways this is perhaps the most important of all the groups. Anyone who has had to do with the post-mortem room in a large general hospital has seen many instances of secondary involvement of the bones of the spine with compression of the nerve-roots, or compression of the cord itself. Cruveilhier describes and illustrates the condition, and to him we owe the name *paraplegia dolorosa*. Charcot in 1866 described a painful paraplegia in certain cases of cancer, and he has given a very clear account of the condition in one of his lectures.³ The main characteristics are pains of great intensity, usually about the sides and down the legs, or, if the secondary masses are situated higher, they may be in the arms. There are areas or zones of anesthesia, sometimes the so-called *anaesthesia dolorosa*; or shingles may break out. One feature of the pain, too, is very characteristic; the patient may get into a comfortable position and remain so for an hour or more; then the slightest movement of the spine gives exquisite torment. The crises of pain which these poor victims suffer are simply atrocious. There may be the most extreme feature of pressure on the nerve roots without any paraplegia. In some instances, indeed, the nerves may be involved by enlarged glands in the pelvis. When pressure on the cord begins in addition to the disturbances of sensation and the pain, there are often painful spasms of the muscles, in which the legs are drawn up, sometimes very forcibly. Ultimately there may be complete paraplegia with involve-

²Walsham, Cases of carcinoma with secondary growths in the brain, *Lancet*, 1890, II. Wilson, Case of scirrhus of the brain secondary to that of the breast, *Lancet*, 1892, I, 464. Gery, Tumor of the brain, etc., after 2 operations on the breast, *Bull. Soc. anat. de Par.*, 1892, xvii.

³Oeuvres Complètes, Tome II, p. 116.

¹Transactions of the Pathological Society, Phila., 1880.

ment of the bladder and rectum. A very remarkable fact is that in certain of these cases the spinal symptoms may disappear, and a patient from a desperate condition of paraplegia dolorosa may recover sufficiently to be able to walk about, as in Cases V and VI.

Charcot insists that in any case of painful paraplegia, particularly in a woman, one should look carefully for atrophic, indolent scirrhus of the breast, and gives a case of cervicobrachial neuralgia almost identical with Case IV of my series.

Mr. T. W. Nunn, in his monograph on Cancer (1899) states that the access of the spinal mischief is very insidious; that the pains may begin in the region of the neck and extend to the branches of the brachial plexus; one or more fingers being specially neuralgic. He says they are quite dissimilar to the neuralgia arising from implication of the intercostohumeral nerves in the scar. In many cases the patients complain of rheumatic pains in different parts, or the pains may be regarded as neuralgia, or even the symptoms may be thought to be due to hysteria. I have seen a number of cases within the past eight years, the more notable of which I here give in abstract.

CASE II.—I saw at the Hot Springs with Dr. Chapin, Mrs. Z., aged about 53 (?), who had had a scirrhus of the breast removed some months previously. For several months she had had sharp pains in the legs, with increasing disability. At the time of my visit she had agonizing pains in the lower abdomen and down the legs. No secondary masses could be felt. Gradually the picture became that of an extreme paraplegia dolorosa. I did not see her again, but heard of her death some months later.

CASE III.—The next case I saw was with Dr. Ellis, at Elkton, Md. The patient had had a breast cancer removed a year or so before, and I was asked to see her for a condition of agonizing pain in the side and down the legs. I rarely have seen any one who appeared to suffer more excruciating pain than this poor woman. She had gradual loss of power in the legs, evidently with pressure signs, as they were drawn up frequently, and the severe shooting pains down the backs of the legs and around the flanks. She died paraplegic some months later.

This is the usual type of the disease and the cases are only too common. The other cases in this group present more unusual features.

CASE IV.—*Cervical nerve-root pains; cancer of breast.*

On October 28, 1895, I saw with Dr. Pole, Mrs. C., aged about 52 or 53, who had been complaining for 5 or 6 months of severe pains in the region of the neck. They began about June, and were thought at first to be neuralgic and rheumatic, and she went to the Hot Springs. They had never ceased, though they got better at times. She had lost a good deal in weight. The pains were almost entirely confined to the neck. They shot sometimes up the jaws and up behind the ears, but not down the arms. She had no weakness of the arms, no weakness of the legs.

The patient looked well, and was fairly well nourished, though she had lost considerably in weight. There was nothing specially noticeable about her as she rested quietly in bed; in which position she had no pain. So soon as she attempted to move the head forward, as in taking anything to eat or drink, she felt the pain at once in the back of her neck. She had the greatest difficulty in getting out of bed. She had to turn on her side, get up with the help of her arms and knees, and held the neck very stiffly. She stood up and walked about quite well, but in sitting in a chair she had much more pain in the neck than in the recumbent posture. She could move the head from side to side without much pain, though not to the full extent. She could push the head backward to a slight extent, but to bend the head forward gave her at once a great deal of pain.

The head and neck were carried quite stiffly. The examination of the neck behind was negative, with the exception of pain on deep pressure upon the fourth spine. The bodies of the vertebrae examined from the pharynx were quite smooth.

It was impossible to get her to contract actively either sternocleidomastoid. There were no sensory changes; no spots of hyperesthesia. The pains did not extend down the arms. The grasp of the hands was good; no impairment of the motor power in the legs. She walked well and readily. The knee jerks were decidedly increased. She complained occasionally of pains in the side; they were not regular girdle pains.

I confess I have been a good deal puzzled by this case. She gave a very clear, matter-of-fact statement; the examination of the neck was almost negative, yet the whole appearance of the patient and the attitude, particularly the way she got out of bed and back into bed, was strongly suggestive of something more than cervicobrachial neuralgia. When she returned to bed I proceeded to examine the side, and took the opportunity to feel the breasts when I found the left one enlarged, firm, nodular, and evidently the seat of scirrhus. The nipple was not retracted; the skin over it was smooth, and the whole gland seemed to be affected. This at once threw a totally different light upon the case, and though she had no foci of evident metastases, yet the loss of weight, the existence of the tumor in the breast, and the nerve root symptoms seemed sufficient to make it quite clear that she was the subject of secondary growth in the vertebrae of the neck.

During the next month the patient gradually failed; the pains above described continued; she had a great deal of difficulty and pain in swallowing; she died December 2.

Charcot reports an almost identical case of a woman who had suffered for some months with a cervicobrachial neuralgia, which had resisted all treatment. He says, "Struck by the special characters presented by the pain, and calling to mind some of the facts which I had seen at the Saltpetriere, I asked if there was not a lesion of the breast. The reply was negative, but I insisted on examining for myself, when I found, to the great astonishment of the patient, that one of the breasts was retracted, with an atrophic scirrhus."

CASE V.—*Tumor in right breast noticed January, 1897; operation November, 1897, scirrhus; good health for a year; in September, 1898, pains in the back and down the legs; recurrence in the right eye; gradual increase of the pains in the legs; orthopnea; emaciation; recurrence in the left breast; tumor mass on sternum; effusion in right pleura. After remaining for months in a desperate condition, gradual improvement; disappearance of tumor on sternum; improvement in vision of the right eye; throughout 1900 persistence of pains to slight extent, but general improvement.*

Miss X., aged 31, consulted me October 6, 1897 for a lump and pain in the right breast, which had been first noticed in January. She had had a fall from her bicycle in November, and to it the trouble was attributed. In a few weeks she entered the Johns Hopkins Hospital, where Dr. Halsted did a most extensive radical operation. The glands in the axilla were much involved; to one of them the axillary vein was adherent, and part of it had to be excised. The case is No. 7,043 in the surgical histories of the hospital. The histological diagnosis was scirrhus. The patient improved, and returned to her home in a few weeks.

On September 24, 1898 she returned complaining of difficulty

of vision in the right eye and pains in the back and down the legs. She looked well, but I was naturally apprehensive about the condition, and, as she and her mother were on their way to Philadelphia to visit the father, who was under the care of Dr. de Schweinitz, I asked them to let Dr. de Schweinitz examine the eyes carefully. The following day he reported to me that there was a tumor in the right eye. He had not been told about the operation, and of course when informed he recognized the condition at once as a secondary carcinoma. There was no local recurrence in the ear.

Winter of 1898-99. I saw the patient again on November 31. She had shooting pains about the sides, cough, and pains in the legs. There was no pain in the right eye, the vision in which had become progressively worse. About Christmas she became confined to her bed, and the pains were so severe that she had to take morphia. She passed the winter in great distress, the condition becoming steadily aggravated. I saw her twice, and in May her condition seemed really desperate. She had become very thin; there were constant orthopnea, and paroxysms of very severe pain at night, so that the morphia had to be increased to 2 grains at a dose. The emaciation was extreme. The pains were chiefly down the legs and around the sides. There was no local recurrence, but a lump had appeared in the left breast. There was tenderness about the fourth and fifth dorsal spines. About the junction of the manubrium with the gladiolus there was a distinct tumor, which was very tender, and which looked like a new growth in the bone. There was an extensive pleural effusion on the right side.

I left for England shortly afterwards, and, of course, did not expect to find her alive on my return. She gradually improved through the summer, the dyspnea lessened, the pains became less intense, and toward October she began to get up and move about.

Winter of 1899-00. She had on the whole a gaining winter. The pains were less intense, and the morphia was reduced to about a grain 3 times a day. She improved in color, gained in weight, and was able to walk about the house and about the grounds. A remarkable change had taken place in her back. There was a distinct prominence about the fourth and fifth dorsal spines, the back was stiff, and she had a marked stoop. The kneejerks were a little exaggerated. The pains down the legs, which were formerly so excruciating, had almost entirely disappeared. The tumor on the sternum had disappeared. There were no local recurrences. The tumor in the left breast had not increased in size. The most remarkable thing was the progressive improvement in the vision of the right eye, which had been almost entirely lost. She could now recognize faces and even see large type.

During October of 1900 I saw this patient twice. She had improved in every way. She was able to do very much more. She drove a mile and a half to the station to meet me, and drove me to the station on my return. She was still very thin, but her appetite is fairly good, her color is good, she walks stiffly, but gets about with much more comfort than formerly.

I saw her again on December 9, 1900. She had had a little more pain, particularly in the right leg, the sight had not been so good, and on the whole she had been failing somewhat, though she was still able to be up and about, and her appetite was fairly good. There was no local recurrence, and there was no increase in the tumor in the left breast.

[TO BE CONTINUED.]

The Cure of Suppurative Cerebrospinal Meningitis.—Netter (*Annales de Med. et Chirurg. Infantiles*, July 1, 1900) reports 6 cases of cerebrospinal fever in which lumbar puncture gave purulent fluid containing the diplococcus meningitidis. A complete cure resulted in 5 of the cases, in 1 case the patient was left with ankylosis of 2 joints and labyrinthine disease. The author attributes his success to 3 factors: (1) The use of warm baths (100° to 104° F.) lasting 20 to 30 minutes, and given every 2 or 3 hours, day and night; (2) lumbar puncture repeated several times in the course of the disease; and (3) the systematic administration of normal salt-solution subcutaneously when the patient could not take sufficient nourishment by the mouth.

THE MORTALITY OF OPERATION FOR OBSTRUCTIVE JAUNDICE.

BY

JOHN B. DEEVER, M.D.,

of Philadelphia.

The following is the classification of causes of obstructive jaundice by Murchison (Osler)—(1) by foreign bodies within the ducts, as gallstones and parasites; (2) by inflammatory tumefaction of the duodenum or of the lining membrane of the duct; (3) by stricture or obliteration of the duct; (4) by tumors closing the orifice of the duct or growing into its interior; (5) by pressure of the duct from without, as by tumors of the liver itself, of the stomach, pancreas, kidney, or omentum; (6) by pressure of enlarged glands in the fissure of the liver, more rarely by abdominal aneurysm, fecal accumulation or the pregnant uterus; (7) to these may be added lowering of the blood pressure in the liver, so that the tension in the smaller bile ducts is greater than in the bloodvessels. In this class very probably may be placed cases resulting from mental shock or depressing emotions.

Of the above causes of obstructive jaundice I have only met those relating to calculous obstruction of the hepatic, hepatic and common or of the cystic ducts, where the stone was located at the junction of the cystic and hepatic ducts with obstruction of the latter; stricture and angulation of the common duct caused by adhesions which were making either pressure or traction; pressure on the common duct from carcinoma of the head of the pancreas, either alone or in connection with cancer of the duodenum. A condition to which my attention has been drawn upon more than one occasion is the association of attacks of jaundice with very movable kidney, and I have been inclined to attribute this in part at least to traction upon the peritoneum and consequent angulation of the common duct.

The causes of death in the cases which I have lost were consecutive and secondary hemorrhage, exhaustion and cholemia. I have, with one exception, been fortunate enough to have had autopsies in these cases and thus have been able to rule out peritonitis as a cause of death.

Mayo Robson¹ reports 22 deaths following operation for the relief of obstructive jaundice. Of these, 7 patients died as the result of hemorrhage either consecutive or secondary; 5 of exhaustion; 4 of shock; 3 of heart failure (1 of these cases was complicated by nephritis); 1 of an abscess between the liver and diaphragm which was not discovered at the operation; 2 of peritonitis; in 1 of these last a small hole was torn in the colou by the breaking up of dense adhesions, and in the other a ligature which had been used to tie off the cystic duct in amputation of the gallbladder slipped, and caused extravasation and peritonitis. It would seem, therefore, that his experience coincides with my own and that peritonitis is not a common factor in the mortality. It is a question with me if most of the cases which are fatal because of exhaustion or heart failure are not in reality cases of cholemia. Shock cannot be separated from hemorrhage as a cause of death, for it is the loss of blood either at operation or following it that causes the shock.

¹ Disease of the Gall Bladder and Bile Ducts, 2d Edition, 1900.

From the present status of surgical interference for obstructive jaundice it should not have the mortality credited to it from either of the causes mentioned, as I will try to show later on. Neither consecutive nor secondary hemorrhage should occur, and particularly consecutive hemorrhage. The latter is due, purely and simply, to the blood changes consequent upon the prolonged jaundice. The exact changes which take place in the blood I believe have not been definitely determined. It is probable, however, that there is some chemical change which inhibits the fibrin-forming element and thus prevents rapid coagulation. The ordinary blood counts indicating anemia, hemoglobinemia, leukocytosis, etc., do not account for the tendency to hemorrhage in obstructive jaundice. The effects of the bile salts on the bloodvessels must also be taken into account. There seems to be a relaxation of the arteries which interferes with their proper contraction, thus encouraging free bleeding.

I have encountered but 2 cases of secondary hemorrhage and in each of these there was a period of consecutive bleeding preceding the onset of secondary hemorrhage which was controlled only after the wound had been packed with gauze. In both of these cases the gauze packing introduced to control the consecutive bleeding was removed on the seventh day, the removal being effected without difficulty and with practically no pain. In one case, 3 days after the removal of the gauze, secondary bleeding occurred costing the patient her life. The same may be said of the second case, except that it was only by the most heroic efforts that her life was saved. Intravenous saline transfusion given by my house surgeon, Dr. Moore, upon 2 different occasions, full doses of opium, absolute rest of the stomach, nutritious enemas, etc., were the means to which we can ascribe her recovery.

I have seen but 1 death from consecutive hemorrhage alone. This patient died within 24 hours following the operation. The control of primary hemorrhage by means of the ligature is certain. I have never been unfortunate enough to wound the portal vein or any large vessel. To guard against consecutive bleeding calcium chlorid in doses of 30 grains for 3 or 4 days before, as well as after operation, as recommended by Robson, I believe good practice; yet, I am sorry to confess, I have not been able, in my comparatively limited experience, to attribute much good to it. A wider experience and greater familiarity with its use may perhaps convince me of its utility and benefits. Suprarenal extract has lately taken a place as a hemostatic and in one of the cases herein reported it was tried with seeming success.

Obstructive jaundice due to gallstones is usually due to obstruction of the common or hepatic ducts. It may, however, and in fact frequently does, occur when the gallstones are confined to the cystic duct or gallbladder. Here the obstruction to the flow of bile is due to the associated cholangitis. This is a rather favorable condition of affairs for operation, as the removal of the gallstones from the cystic duct or gallbladder will be followed by a rapid subsidence of the inflammatory swelling of the common duct. Reidel² says that two-fifths of the cases of jaundice in cholelithiasis arise in this way.

Drainage plays an important part in the above result; this is probably accounted for by the fact that the valve-like action of the reduplication of the mucous membrane lining the cystic duct is overcome by the obstruction to the flow of bile and the slow regurgitation becomes a steady flow of bile into the gallbladder and the drainage provides for the escape of the excess.

There is a class of cases in which the inflammation in and about the gallbladder is so intense that the surrounding tissues and organs become gangrenous and the patient succumbs to the exhausting effects of local and constitutional sepsis. The following case is an illustration:

C. P., aged 53, for several years prior to the present attack has had "bilious attacks" without jaundice or pain. The present attack began 5 weeks before admission to German Hospital, December 4, 1900. He had pain in the region of the gallbladder, radiating to the shoulder; he was tender over the gallbladder, but was not jaundiced. He continued his occupation for 2 weeks. Three weeks prior to admission the pain and tenderness became more aggravated and jaundice made its appearance for the first time. The jaundice had gradually increased until the present; the bowels were constipated; the gallbladder enlarged, and upon deep pressure tenderness could be demonstrated.

OPERATION.—The gallbladder was enlarged and tied to the liver by dense adhesions. It contained many large stones, pus and bile, and its walls were ulcerated and friable. The common and cystic ducts presented the same condition as the gallbladder, and contained many stones; there was 1 stone in the hepatic duct. The stones were all removed and the cavity packed with gauze and drained. On the sixth day the gauze packing was removed liberating a considerable amount of pus; the tissue about region of the gallbladder was necrosed and a large pus cavity led down behind the liver. The patient died of exhaustion due to local and constitutional sepsis. The necropsy disclosed localized fibrous peritonitis; no involvement of general peritoneum.

A careful study of the causes of the mortality of obstructive jaundice leads us naturally to the consideration of the best methods to adopt to combat the disease. Shall we treat them as medical cases with the prospect of surgical help if medical measures fail, or shall we treat them as purely surgical cases? And if the latter, how and when? If we take the 6 causes for obstructive jaundice we can see that 2, namely, inflammatory tumefaction of the duodenum or bile ducts and changes in blood pressure, produce purely medical cases; while in the others, the indications are distinctly and positively surgical.

The most common of all causes, and more common than all the others put together, is obstruction from gallstones. Parasites are so rare that they may be passed by with the mention, although the indication is distinctly surgical when they do occur. Every case of cholelithiasis that I have operated upon has given a history of repeated attacks treated medically, yet they have not been cured of the disease nor freed from its dangers. Each succeeding attack is accompanied by local and systemic changes which detract from a favorable surgical prognosis. We have seen that the most common cause of death is hemorrhage caused by changes in the blood; the next most common is exhaustion, or what we believe to be cholemia, and third most common, shock, which is a result of hemorrhage; and that these 3 causes are undoubtedly enhanced by delay or long continuance of the pathologic factors of the disease.

[TO BE CONTINUED.]

² Gumprecht Deutsch. Med. Work, 1835, No. 15.

PHELPS' OPERATION FOR CLUBFOOT WITH A REPORT OF 1,650 OPERATIONS.*

BY

A. M. PHELPS, A.M., M.D.,
of New York City.

In 1878 I performed my first operation of open incision upon a relapsed clubfoot. It was a case which had been operated upon by various surgeons and subsequently treated, and also by myself, by subcutaneous tenotomy, and the mother requested me to straighten the feet or amputate. When I proceeded with the open incision method, I was astonished to find that I had corrected the deformity perfectly without cutting bone.

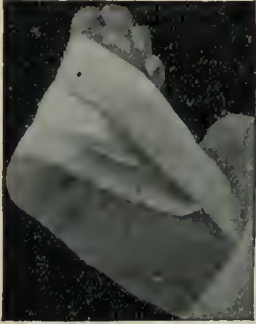


Fig. 1.

I read a paper before the Eighth International Congress which met in Copenhagen in 1884, reporting there 36 cases operated upon by myself and other sur-

geons. Subsequently I published in the *Post-Graduate Medical Journal* a report of 538 cases from that clinic. Since the first operation in 1878 I have operated on 1650 cases. In my first series of 538 cases I performed osteotomies in 17. In the last 1100 I have never resorted to osteotomy but have amputated 4 times. Over 100 of them occurred in adults varying in age from 20 to 60 years. The introduction of subcutaneous tenotomy by Stromeyer in 1835-8 was an innovation, and one of the steps in the operative treatment of clubfoot. The operation of cuneiform resection by Davy of London, and the resection of astragalus by Lund of Manchester, marked another period in the operative treatment.

I find the mortality from bone operation amounts to from 3% to 5%. Davy's operation gives a mortality



Figs. 2, 3 and 4.

of 3.5% while that of Lund gives a mortality even greater. The mortality in 1650 by open incision, 17 of which were attended with bone operations, was nil, and I have yet to find the history of a single case in which mortality was recorded.

I have urged upon the profession in America the importance of performing the operation for the following reason:

1. There is no mortality attending it.
2. Any foot at any age can be straightened.
3. The results from the operation are as good or better



Fig. 5.

than from any bone operation or mechanical treatment whatever.

The important arguments against bone operation are:

1. The resection of the tarsus means the shortening of the foot just in proportion to the amount of deformity.
2. The removal of any bone results in a shortening of the foot.
3. The removal of the astragalus, results in the shortening of the entire limb from $\frac{3}{4}$ to $1\frac{1}{2}$ inches, depending entirely upon the age of the patient.

In the series of 538 cases, I find that the relapses amounted to 6%. Those relapses were entirely due to negligence upon the part of the patient or parent.

The idea of performing tenotomy or any operation, leaving the foot in a deformed position, and afterward straightening it by mechanical methods, has been entirely abandoned in America. The application of clubfoot shoes and other mechanical devices for straightening clubfoot, requiring months and years of careful work, have also been discarded. We now believe in America that these feet should be immediately attacked and placed in a supercorrected position utilizing the weight of the body to prevent relapse, and good results are obtained in a few weeks.

The question arises as to the time to perform the operation. I beg to state that if every case of clubfoot could be treated at birth by manipulation and fixation, not more than 1 case in 10 would require any operation. But unfortunately, these cases come into our hands months after

the child is born, and nothing short of an operation, or years of treatment by mechanical appliances would be of any avail. Therefore we have come to this conclusion in America. If the foot remains deformed at the fourth month after birth, manual manipulation is employed for a short time varying from a few days to a few weeks, when it should be immediately operated upon if the mechanical treatment fails. And the plan which we follow is this; in the order which I enumerate:

*Paper read before the British Medical Association, August, 1900.

1. Manual manipulation and fixation.
2. Subcutaneous tenotomy.
3. Open incision.
4. Linear osteotomy through the neck of the astragalus.
5. Cuneiform resection from the body of the os calcis.
6. Pirogoff's amputation.

So, understanding this law which we now follow, we can readily observe that open incision stands between



Fig. 6.

subcutaneous tenotomy and osteotomy. Osteotomy should never be performed as a primary operation, and should always be secondary to open incision.

The normal foot is in a plastic condition up to birth, and it is not until the fourth year that the bones of the tarsus become ossified. For this reason, the earlier the treatment of clubfoot is begun the better. I would say, as soon as the placenta is delivered, and you have assured your

self that the mother is in no danger of postpartum hemorrhage, begin the treatment.

This consists in subjecting the foot to such manipulation with the hand as will restore the foot as nearly as possible to the normal position. The next step is to apply a number of strips of adhesive plaster in such a way as to draw the foot around towards the normal position, and hold it there. If the adhesive plaster causes irritation of the skin, first apply a roller bandage, then the adhesive plaster, and finish this simple effective dressing by another roller bandage. This is a beautiful



Fig. 7.

to the knee. The manipulation and the application of this simple dressing is continued at short intervals. If the deformity has not been overcome by the time the infant is 3 or 4 months old, it is then an imperative duty in the vast majority of cases to operate.

How shall the operation be done? My rule is to tenotomize, beginning with subcutaneous tenotomy of the tendo-achillis to bring the heel down. As the parts are put on the stretch, cut every part offering resistance.

Where the skin is short, cut it, and likewise the other tissues, and do not stay the hand until you have succeeded in putting the foot into a supercorrected position. If we stop short of this, we will produce what was formerly known as "relapsing clubfoot"—a condition which is solely due to not overcorrecting the foot, and hence allowing the weight of the body to



Fig. 8.

operate in such a manner as to cause the deformity to recur. If, however, the foot is supercorrected, the weight of the body will tend to increase the supercorrection, and therefore there will be no relapses.

Inward twist of the tibia requires osteoclasis. How much better is such orthopedic work than the old plan



Fig. 9.

of "interrupted traction"—a method in which the foot was subjected to traction 8 or 10 times every day for many years! The best orthopedic appliance ever devised is the human hand.

At the time of publishing my first paper, in 1881,



Fig. 10.

on the operation of open incision in clubfoot, and in a subsequent paper read before the Eighth International Congress, Copenhagen, in 1884, my observations were not extensive enough to enable me to speak with any

degree of authority on the subject. My convictions as to the advisability of the method, however, were strong, and upon theoretic grounds, sustained by a limited number of cases, with results, I advised the operation. Mature experience now enables me to correct, or I might say more clearly define, many points which at that time could not be made perfectly clear. I argued then for the operation. Now I desire to present a method

by any other method, are we justified in performing a primary osteotomy or resection of the astragalus? Clearly not, for the results after primary bone operations are no better. Failures are common and the mortality is about 5% whereas, in operations on soft parts there is no mortality.

And then, are we justified in treating a case by instrumental means for years, when a moment's work with the tenotome or knife would shorten the period of treatment to as many weeks, with a result equally as good? Certainly not, if the patient will consent to an operation. The tinkering and fooling with clubfoot with traction machines, covering over long periods of torture reckoned by years, with all its failures, brought orthopedics of the past into disrepute. The surgeon and patient became disgusted, and out of the chaos and wreck we saw methods devised which shortened the period of treatment, and cured cases which chagrined the orthopedist. These methods of mechanics,

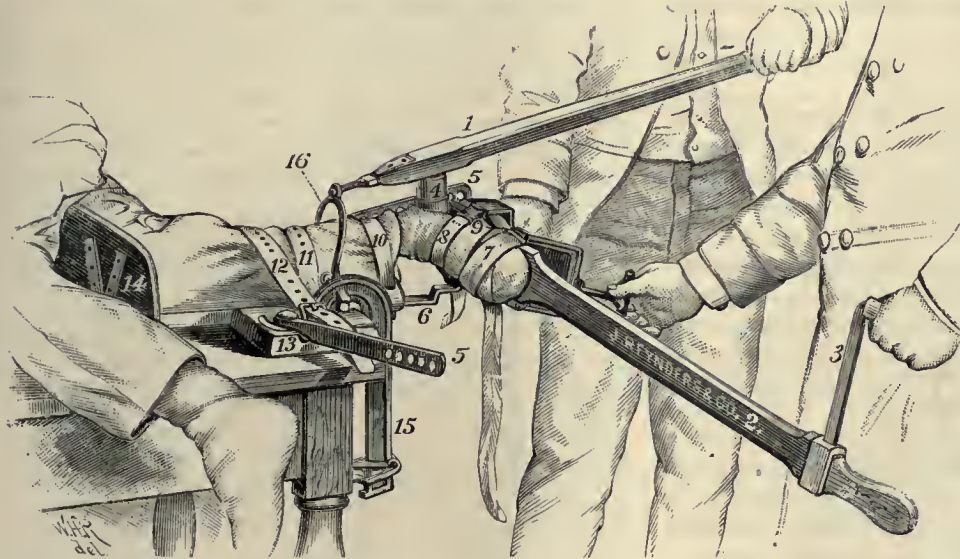


Fig. 11.

which should govern all operative procedures in club foot, giving to the operation its proper place in surgery. The difficulties which the profession have encountered have been the varied methods and operations which, from time to time, have been urged as the cure for all cases; and, only after a personal application of the method or operation urged, has the operator discovered that his ship of anticipation has been wrecked upon the rock of experience. Primary osteotomy, astragalus resection, cuneiform tarsectomy, open incision, and prolonged and interrupted traction with intricate machinery, have all run the gauntlet of observation, and the roadside everywhere is strewn with lamentable failures.

Why should this be so? Simply that method, based upon some pathologic fact and data of experience, has been ignored.

I do not at this time care to discuss the etiology and pathology of talipes varoequinus. Permit me to say, however, that in all the pathological specimens which I have examined, the distortion of the soft part has been out of all proportion to the deformity of bone; and many specimens of severe deformity which I have in my collection show but slight bone-deformity, and that is confined chiefly to the neck of the astragalus, while in other specimens the os calcis is also deformed. These distortions, added to a great dislocation of the small bones of the tarsus, with changes in their articular surfaces, and frequently an inward twist of the tibia, constitute the bone-deformity of talipes varoequinus in a very large per cent of cases occurring in children. Now, if these observations are correct, and we can with perfect safety to foot and life extensively divide soft parts, and secure useful feet in a short time, or as good results as can be obtained

when carried to extremes, as we have all been obliged to witness, degrade the orthopedic surgeon to the level of the chiropodist or mere instrument maker, and one step farther carries him, with all his good intentions, within the vale of empiricism. Again, on the other hand, the surgeon becomes impatient with his cases and devises an operation. It proves serviceable in many cases, fails in others, until he finds himself

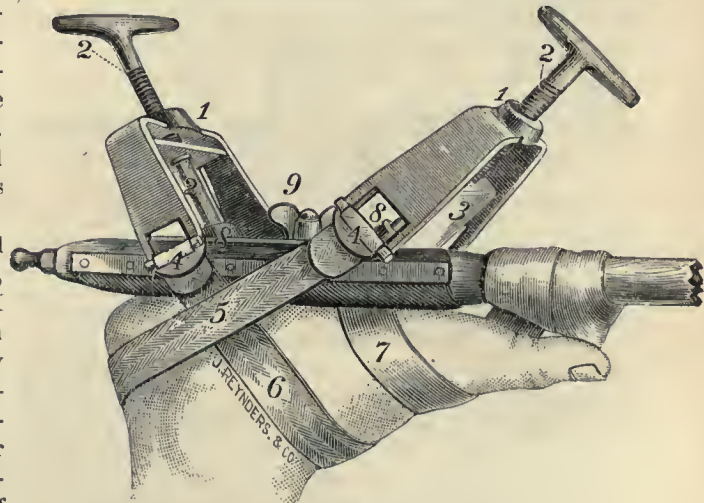


Fig. 12.

blindly following his operation and not a principle, mutilating feet unnecessarily, and finally, in disgust, he abandons his pet operation.

A remedy for all this is a method, and nearly every operation ever devised will find its legitimate place in surgery.

The method which I propose to govern the management of clubfoot, requiring operative work, is this:

1. Exclude all cases which, by manipulation or force, can immediately or in a reasonable length of time, say a few weeks, be cured; then the following rule should be followed:

2. Cut the contracted parts as they first offer resistance, cutting in the order of those parts which first contracted when the deformity was produced, beginning with the tendo-achillis open.

3. The shortened inner side of the foot and short skin indicates the operation.

The operator will then proceed, after strong manipulation or force is applied with a clubfoot machine or with the hands (see Figs. 11 and 12), to divide subcutaneously, first the tendo-achillis. If the skin is not short, subcutaneous tenotomy in the sole of the foot will usually suffice. If the skin is short, an open incision one-fourth the distance across the foot should be made, beginning directly in front of the inner malleolus, and carrying down to the inner side of the astragalus (see Fig. 6). Through this incision the following tissues can be cut, if they offer strong resistance, in the order given: (a) Tenotomy of tibialis posticus (see Fig. 3); (b) division of abductor pollicis (see Fig. 4); (c) division of plantar fascia through the wound; (d) division of flexor brevis muscle; (e) division of long flexors; (f) division of deltoid ligament, all its branches (see Fig. 7); (g) peroneus longus—posterior ligament.

4. Linear osteotomy through the neck of the astragalus (see Fig. 8).

5. Resection of a wedged piece of bone from the body of the os calcis, the point meeting the linear osteotomy through the neck of the astragalus. The foot will now swing to a straight position (Fig. 8).

This method of osteotomy is a correction of my former paper, in which the cuneiform section was taken from the cuboid bone.

[TO BE CONTINUED.]

AN OBSCURE CASE OF HYSTERIA WITH ASSOCIATED RIGHT MYDRIASIS AND AMBLYOPIA AND LEFT MYOSIS.

BY

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of Philadelphia.

Professor of Therapeutics in the Jefferson Medical College; Physician to the Jefferson College Hospital.

There are no cases which are more apt to puzzle the physician than those which present hysterical symptoms closely aping true organic disease, particularly if the ordinary signs of hysteria are absent and there is a history of injury which has been sufficiently severe in type to be capable of resulting in the changes from normal apparently present. I desire to report the following case because it was of this variety and also because it presented certain symptoms of a hysterical character not commonly met even in those who present this most varied clinical picture. There was nothing about the patient to suggest hysteria in the sense of the hysterical facies and manner; she seemed to suffer genuine pain and presented a

history which while it teems with hysterical signs as one looks back at it, seemed even more full of traumatism and organic disease as the history was gathered from herself and her friends. There can be no doubt that it is one of those cases so well described as hysteria superimposed on traumatism.

The patient is a white woman of 33 years, referred to me by my friend Dr. B. B. Levingood; a native of Pennsylvania, unmarried, with living healthy parents and 2 brothers and 1 sister, all of whom are in good health save that 1 brother has writer's cramp. She menstruated first at 11 years of age; then caught cold and did not menstruate again till 14. She had the usual diseases of childhood—measles, whooping cough, diphtheria (twice) and scarlet fever (at 15 years). She did not recover from the effects of the scarlet fever for 2 months, during which time she was confined to bed. She went out into snow while the eruption was on her. During that time she had much pain in right side and lower axillary region and in the lumbar region. After this period of 2 months she got out of bed, but has not been entirely well since, having had attacks at irregular intervals—about 2 weeks or more—of pain located as above noted, and this pain has been at times most severe and excruciating, causing her to become "black in the face." This pain radiated downward from the left renal area toward the hypogastrium. The attacks varied in length and intensity and were controlled somewhat by morphin, which was given hypodermatically 3 to 8 times per day for many weeks. The attacks came on very suddenly and without warning, and were always on the left side. After these paroxysms, stones, white, and usually about the size of grains of buckwheat, were usually found in stools. On one occasion a stone the size of a cherry was found. During a period of 5 days preceding discovery of this stone the patient was unable to move arms, legs or body, and vision and hearing were imperfect, though she was not in great pain, this being probably an hysterical state. After this her general health was poor for some time, and she had a bad attack of inflammatory rheumatism, being in bed 6 weeks. She gradually recovered from this attack but the pains in the left loin, which for a time were relieved, returned, the attacks of paroxysmal pain began again, and she was in bed for 9 months, during which time she had no menstrual periods but vomited blood at menstrual periods, which in her case was always 6 weeks. During the 5 succeeding years she had several attacks of inflammatory rheumatism, pneumonia of left lung, malarial fever, 2 attacks of intermittent fever with regular chills (tertian), also "falling of womb," from which she suffered intensely for a long while, and which was treated and corrected.

Eleven years ago while writing she found her sight deficient and discovered that one eye was entirely blind. Oculists, she says, told her she had "paralysis of the optic nerve." For the past 4 years the pupil of the left eye has been tightly contracted but the vision in that eye is better than before. The right pupil is widely dilated, giving so odd an appearance that she is in the habit of dropping eserine into that eye each day to make it myotic.

After the period of 5 years above referred to she was comparatively well for 2 years and able to be on the go nearly all the time. On April 15, 1896, she fell violently over a loose plank in a board-walk, and received a twist at the waist, after which there was a lump about the size of a lemon in her left side (not definitely located) and ecchymosis from the knee to the axilla. She was very sick and weak for a half hour, but then resumed household duties for 3 weeks. She then had an attack of bloody purging preceded by nausea and vomiting, after which the lump disappeared. Soon after soft bodies were found in her stools which a doctor pronounced gallstones, and which were very numerous. During 24 hours she "fainted 27 times" although not in great pain. She had paroxysmal attacks of pain at intervals since till July last, when she had the last one. Two years ago menstruation stopped and has not occurred since, but she has passed "bloody corruption" through bowels, and has hematuria. The hematuria first recurred at regular intervals of 6 weeks but since then irregularly. During this time she has had intense cramps in lower abdomen, the left hip and

thigh. An examination of her urine showed no blood macroscopically, but red blood-cells under the microscope on two occasions.

She has been examined under ether for genital trouble but does not know result. At another time when not under ether she was told that both ovaries were diseased and the uterus flexed. Since July she has had repeated swelling of abdomen and limbs, especially lower limbs, lasting 1 to 3 days.

When the patient came under my care December 2, 1900, she had been in bed nearly all the time since the previous July, and was suffering with severe pain in the back and left flank. The patient stated that her digestion was very good. She gives a history, however, of having had fearful attacks of vomiting in which she ejected green, yellow and black material. Her bowels were constipated when she was first seen but she had had much diarrhea.

An examination of her blood showed hemoglobin, 52%; red cells, 2,190,000; leukocytes, 9,400.

A physical examination of her right side showed that it was impossible for her to completely extend her left leg, the knee always remaining slightly flexed, and any attempt at straightening it caused elevation of the pelvis and severe pain. She could not bear any weight on the left leg and could not stand, unless supported by a nurse on either side upon whom she threw nearly all her weight, because standing on the right leg hurt her lumbar spine. At the level of the left kidney there was distinct bulging and slight fluctuation with exquisite tenderness. An eminent surgeon saw her with me and declined operation, as he did not think that there was any local trouble which could be removed by operative measures. His diagnosis was that she had had syphilis with parasymphilitic lesions which neither operation or mercury would benefit. This view seemed to him confirmed by numerous scars on the forearms and legs, which later proved to be due to hypodermic injections. A few days later another surgeon saw her with me, and the result of his examination was the following notes: There is present an abnormal fulness in the left loin where there is great tenderness. The spine is tender in the lumbar region, and there is both superficial and deep tenderness in the swollen region. The tenderness extends anteriorly in front of the iliac crest, and pain is caused by flexion of the left thigh upon the abdomen. The hip joint is not involved; neither are the vertebrae.

There was at this time constant pain with paroxysmal exacerbations, which caused her to double up and bury her head in the pillow. A skiagraph was taken with no result. She was quieted only by morphia in very large doses.

The history of a fall followed later by the discharge of pus and blood from the rectum on two occasions when the pain was particularly severe, led us to suspect a perirenal abscess which had ruptured into the colon, and this seemed the more likely by reason of the frequent appearance of blood in the urine. The other possibility considered was a kidney stone.

On December 17, lumbar nephrotomy was performed. The kidney was brought out into the wound and incised but no pus or stone was found, and a probe was passed readily into ureter. The kidney was bound down by moderate adhesions. The incision was closed with tube drainage. The erector spina muscle was severed to the extent of 2 inches during operation, and later sutured with catgut. The patient reacted well but suffered a good deal of pain, for some days requiring morphin for relief and a capsule of antipyrin and chloretone. There was for a number of days considerable blood in the urine.

On January 5, she began to complain of a headache, especially around the left eye, and nausea. She stated that as this was her only good eye she was alarmed at the loss of vision, and that there was a halo about objects. I therefore asked Dr. de Schweinitz to see her with me, and he kindly made an examination which showed that

the pain was not connected with any organic change in the eye.

Dr. Spiller then saw the case with me, and the result of our examination was as follows: Her power of smell was slightly impaired equilaterally, and the power of taste in the tongue was also markedly impaired, but there was no hemianesthesia of the conjunctiva of the arms and body. The temperature-sense in the upper and lower extremities was normal and the kneejerks were exaggerated with a tendency to repetition. The Babinski reflex was bizarre in character and was followed by an imperfect clonus of many muscles of the lower limb.

Because of the continued inability to use the left limb without great pain in the pelvis, thigh and psoas, and iliacus muscles, Dr. Hearn carefully examined her at my request but notwithstanding the fact that she seemed to suffer excruciating pain when the leg was moved, nothing pathologic was to be found. In order to make the case perfectly clear and exclude the possibility of an organic lesion in the pelvic organs, Dr. George E. Shoemaker examined the patient with entirely negative results.

[TO BE CONTINUED.]

CARCINOMA OF PYLORUS.

SECONDARY TO ROUND ULCER; PERFORATION; RESECTION OF PYLORUS; RECOVERY.

BY

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of Chicago, Ill.

Zeuker believes that most cases of cancer of the stomach originate from an ulcer base. Lebert states that 9% of cancers of the stomach grow from an antecedent ulcer or ulcer scar. Rosenheim places the percentage at 6. Hemmeter¹ quotes Kollmann's² 14 cases, in which ulcer preceded cancer, and adds that up to the present time 14 other cases have been reported. Ulcer of the stomach or evidences of the previous existence of ulcer is so commonly found in the dead house³ that it is not improbable that Zeuker is correct in the statement quoted above. The following case presents many interesting points:

A. T., male, aged 28, married, a shoe laster, German-American, came to me for examination on May 21, 1900. A paternal uncle died of "tumor" of the abdomen. Otherwise the family history was negative. He has used alcoholic drinks moderately, usually drinking beer, and has smoked daily, in moderation. He denies syphilis, but had an attack of gonorrhoea several years ago, from which a perfect recovery was made. He has never been very ill until the present trouble began, but had the ordinary diseases of childhood. He has worked hard as a shoe laster for several years, and has taken all sorts of food, usually, however, a plain mixed substantial diet of meats, bread, potato, etc.

For three years he suffered from attacks of indigestion characterized by epigastric fulness, sense of weight, bloating of abdomen, eructations of gas and constipation. The attacks became more frequent, and finally there was some pain in the epigastrium after a full meal and the stomach region became tender to the touch, and the pressure of the clothing over the epigastrium was painful. In November, 1899, vomiting occurred about once a week until February, 1900, when the attacks of

¹ Dis. of the Stomach, p. 560.

² Berlin Klin. Wochenschr., 1891, 5 and 6.

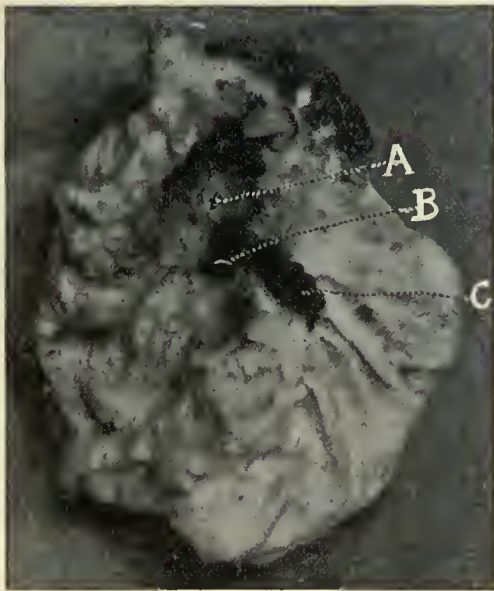
³ Welch 5%.

emesis became more frequent, and he vomited at least once a day. The vomiting usually occurred at night, and consisted of a large amount of watery, dark colored, acid fluid. The vomitus usually contained particles of food, and he often recognized food which had been ingested so long as 48 hours before.

The pain became more severe with the advent of vomiting, and it was frequently severe before the vomiting, and often was relieved by emptying the stomach. No fresh blood has been noticed, but a coffee-ground like material has been vomited. The bowels have been constipated, and at times the stools have been black and offensive. Recently pain in the epigastrium has been almost continuous, and has been aggravated by taking food. The appetite is failing. He has lost steadily in weight from 156 pounds maximum 3 years ago to 142 pounds in November, 1899, to 126 pounds at the present time. He has continued at work until November in spite of the loss of flesh and strength and the inability to take and retain adequate nourishment.

Examination showed a large frame and emaciated body. The skin had a dirty, muddy, and pale hue. The tongue large, indented, flabby and coated with a whitish fur. Teeth well preserved, breath offensive.

The chest was negative to examination and there were no



MUCOUS SURFACE OF PYLORIC MASS

- (a) Seat and bottom of round ulcer.
 (b) Perforation.
 (c) Portion removed for microscopic examination.

glandular enlargements. The radial pulse was small, with low-tension and beat 68 per minute. The temperature was 98.8° F. The abdomen was moderately round, not tympanitic, and the abdominal muscles thin and flaccid. The greater curvature of the stomach could be easily seen and peristaltic waves could be elicited in the stomach wall and seen to pass from left to right. A mass, tender and passively movable could be felt in the epigastrium, extending to the right costal border in the usual position of the pylorus. Stomach splashing was very marked.

Examination of the rectum was negative in result. The sigmoid appeared full and resistant.

A stomach tube was easily inserted and the gastric contents were expressed. The patient had taken a glass of milk 2½ hours before coming to the office.

The gastric contents showed:

A darkish fluid with a rancid odor.

Free HCl. 0.146.

Total acidity: 0.430.

Lactic acid: a trace present.

Microscopically: granules of starch (no starch taken for 20 hours, fat drops and blood pigment (i. e.: hematin crystals).

Exactly 2,000 cc. of water was put into the stomach and all

of it was withdrawn. This amount of water did not measure the full capacity of the stomach, because it was evident at the time that a good deal more water could have been added without causing pain, but the possible risk of producing some harm made us desist.

The urine (single specimen) gave a specific gravity of 1.023, was alkaline, turbid, and contained no albumin, no sugar, no blood and no casts.

The blood-examination gave: Hemoglobin 56 %; red cells, 3,200,000; white cells, 11,400.

A diagnosis of pyloric stenosis from gastric ulcer was made.

On May 22, one day later, the stomach was washed once more after a test meal. The findings were practically the same as those recorded above.

The patient was sent to the Presbyterian Hospital for observation and treatment. He was placed in bed. Nutrient enemata of peptonized milk and egg were given every 4 hours. A colonic flushing with normal salt solution was used once a day. The rectum was made tolerant by the use, twice a day, of a suppository containing a half grain of opium. The patient was allowed occasional sips of hot water, but nothing else was taken into the stomach.

From the time of admission to the hospital on May 24 to 12 o'clock noon on May 28, the patient was comfortable and happy. The epigastric pain entirely disappeared. There was no nausea and no vomiting. The temperature remained normal. The pulse was relatively slow, soft and small.

At noon, May 28, the patient complained to the nurse of a moderately severe epigastric pain. The house physician, Dr. Russell, could not detect any alteration in pulse or temperature. An hour later, however, the temperature in the rectum was 97.6°, the pulse 85, the extremities moderately cold and sweating, the epigastrium more tender, but there was no spasm of the abdominal muscles.

I saw the patient at this time and ordered an eighth of a grain of morphin hypodermically. Hot applications were made to the extremities and an ice coil was applied to the epigastrium.

The morphin gave relief and the patient remained quiet and undisturbed until 8 p.m. when Dr. Russell noted the temperature was rising to 102° F., the pulse to 100, small and rather tense, and that the abdominal muscles were rigid. The liver dulness in the mammary line was obliterated. I visited the patient and found the condition noted. Dr. Arthur Dean Bevan was called and a diagnosis of perforation of the stomach was concurred in.

The patient was rapidly prepared for operation, and at 12 o'clock midnight, 12 hours after the first symptoms, Dr. Bevan made an abdominal section.

A tumor-like mass occupied the pylorus. A perforation had occurred in the anterior aspect of the pylorus. The lymphatic glands about the pylorus, duodenum and hepatic vessels were much enlarged. The walls of the perforation, comprising the tumor mass, were friable, and closure of the perforation was not deemed possible. The large mass at the pylorus and the presence of many enlarged glands made the diagnosis of carcinoma probable. A curative operation did not appear possible. Therefore Dr. Bevan performed a rapid resection of the pylorus in a most skilful manner.

A mass about 3 inches long was removed. The duodenal and gastric stumps were closed and then a gastroenterostomy was performed with a Murphy button.

The photograph of the mass excised gives a good idea of the size of the perforation and of the carcinomatous infiltration. It shows the partially healed round ulcer of characteristic form and shape. A microscopic examination revealed histologically a typical scirrhous carcinoma.

The patient made a phenomenal and uninterrupted recovery from the operation, and by July 1 was able to leave the hospital. The appetite was good, digestion excellent, and there was a steady gain in strength and weight.

The improvement continued until December, 1900. Since then he complains of indigestion, of epigastric fullness and pain after food and of failing appetite. The weight and strength are decreasing. Nodules can be felt in the liver and there is every evidence of carcinomatous involvement of other abdominal organs.

The interesting points to be noted in the case are:

1. The age of the patient—28 years.
2. The presence of much HCl in the stomach contents 2 hours after a small amount of milk was taken. HCl is present often in carcinoma of the stomach secondary to ulcer, but not usually in the amount present in this case.
3. Perforation of the stomach with an opening the size of an ordinary lead pencil, caused but little discomfort and only slight constitutional disturbance for 8 hours.
4. Recovery after a formidable operation made hastily at night.

PUERPERAL SEPSIS: ITS PREVENTION AND METHODS OF TREATMENT.

BY

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That medicine is a progressive science is abundantly demonstrated by a comparison of our present position upon this subject with the views held but a little more than a quarter of a century since. Then the exquisitely written work of Fordyce Barker upon puerperal diseases was a recognized authority, and this substantially asserts there is a special disorder peculiar to puerperal women appropriately named *puerperal fever*, the symptoms of which are essential, and not the consequence of local lesions, a disease as distinct as typhus fever, typhoid fever or relapsing fever.

In the spring of 1875, as an Interne of the Philadelphia Hospital, I completed my term in the surgical wards where a number of cases of erysipelas were under my care and assumed charge of the obstetrical wards. My advent was followed by the usual spring epidemic of puerperal fever. Some five years later while serving as visiting obstetrician to the same wards, in searching for the cause of another sporadic epidemic of this disease, it was found that the drainage of the entire department terminated in a cellar well and not in a sewer. The well had become filled and the sewage was overflowing the cellar. In the light of our present knowledge, it is surprising that under the conditions of that day any cases should have escaped without a fatal visitation.

The now recognized similarity of this so-called disease with surgical fever or sepsis, was already dawning upon the medical horizon. Simpson and Holmes had both asserted its contagious character and the former had compared the changes upon the surface of the uterus with those which frequently took place upon the stump of the amputated limb. Hervieux and Schroeder had already denied the existence of puerperal disease as a distinct entity and the former ascribed its existence to a peculiar

miasm which is similar to that which engenders erysipelas, hospital gangrene, etc., in camps, while the latter ascribed it to poisoning from septic material from the genital organs. Today every tyro in the profession recognizes sepsis as the cause of the hydra-headed manifestation formerly designated as puerperal fever, and the majority of the laity is so well acquainted with its origin as to render miserable the life of the physician in whose practice the disease occurs.

Naturally, under the old regime midwifery hospitals were hot-beds of pestilence, and the mortality in all such institutions was excessive. Thus, Hervieux quotes 247 cases of puerperal peritonitis in one hospital. The recognition of microorganisms as the productive factor and the acceptance of surgical asepsis and antisepsis in the treatment of parturient women has so revolutionized results that from being a place to be avoided the modern obstetric hospital presents cases of sepsis less frequently than is found in general practice. The existence of sepsis in a well regulated lying-in hospital is now very rare and it is invariably accepted as evidence that some one has blundered. Such results demonstrate that the disease is avoidable. Our city mortality lists, and the frequent necessity for operation upon women for pelvic lesions directly traceable to puerperal diseases, demonstrate that many of our general practitioners are not thoroughly alert to the possible development of this disease and its subsequent serious consequences.

I do not purpose to enter upon the consideration of the pathology of puerperal sepsis, nor to any extent upon the discussion of its symptoms, but a very superficial observation of its manifestations and serious results even when the patient survives, renders it evident that the most important feature in its treatment is prevention. One would suppose the knowledge that the disease is preventable would invariably lead to the employment of the measures which ensure against its development, but to accomplish such practice requires much additional education of the profession as well as of the masses.

This education is rendered difficult because the danger is so intangible as to be unrecognized until its manifestations are present. The difference in vulnerability of a number of individuals is so variable that possibly only a few are susceptible to the infection or unable readily to eliminate it when invasion has occurred. The measures to insure against its occurrence require painstaking preparation upon the part of the physician, nurse and patient.

It requires such recognition of and belief in the possibility of infection as will keep the physician constantly on the alert to avoid carrying disease himself or to prevent the patient or her attendants from serving as avenues for the spread of contagion. I am quite aware that to carry out the suggestions I shall make for the avoidance of sepsis will impose a grievous burden upon him who practices obstetrics, but will not the assurance of work well done, the freedom from avoidable disease and death in his clientele more than compensate him?

The admission that sepsis in the puerperal woman is similar to that which occurs in wounds otherwise produced renders it evident that the more closely we can apply surgical measures to obstetrics the more gratifying will be the results.

1. It becomes evident that the event must be anticipated and preparations made to secure, if possible, a clean room and a clean bed. The clothing, bedding, and napkins should be as nearly surgically sterile as attainable. The old practice of employing the clothing awaiting the laundry about the patient should be discarded. When possible the bowels should have been swept out by a purgative and the lower bowel emptied by an enema. The external parts should have been thoroughly washed with soap and hot water. When there is any reason to suspect previous infectious disease the vagina should be scrubbed with a solution of tincture of green soap ℥ij, creolin ℥ij, to water 0ij, and afterward mopped with alcohol or a solution of formalin. A pad wet with sublimate solution should be kept over the vulva.

2. The physician and nurse should wash their hands and arms with hot water and soap, using the nail brush freely and carefully cleansing the nails. The fingers should then be scrubbed with gauze wet with a solution of sublimate in alcohol (1-500); a basin of sublimate solution (aq. 1-2,000) should be alongside the bed, and in this the hands should be immersed before every examination or manipulation. When the physician has recently been in attendance upon cases of septic or other infection he should change his clothing and in addition to the employment of the methods of cleansing designated, should wear rubber gloves.

3. The diagnosis of the size and roominess of the pelvis should have been secured at a preliminary examination prior to the occurrence of the labor, and the position and presentation of the fetus recognized by external and internal palpation so that digital examination during the course of labor is done only to observe its progress, and then always with the precautions advised.

4. The labor should be conducted in such a manner as to secure the least possible injury. Instrumental interference is desirable when delay renders it evident the patient is unable to complete the work unaided. Long pressure of an impacted head in causing contusion and loss of tissue vitality is more baneful than timely interference.

5. Labor should be terminated by the entire removal of placenta and secundines. Contraction of the uterus must be secured to avoid the retention of clots. When instrumental delivery has occurred, or it has been necessary to exercise manual investigation of the uterine cavity following delivery, the uterus should be irrigated with a quart of formalin solution (1-1500). If this solution is employed at a temperature of 110° to 115°F. it serves as a hemostatic and promotes contraction of the organ. The vagina and vulva should be carefully examined for injuries and lacerations, which should be immediately repaired with chromicised catgut suture. Occasionally it may be necessary to insert sutures in the cervix to control bleeding when large vessels have been torn. It is usually admitted that the condition of the cervix is not favorable for the primary repair of its lacerations.

6. In the after treatment the nurse must be impressed with the importance of the most rigid personal antisepsis. She should not be permitted to proceed to the use of the catheter or apply local measures without care-

ful cleansing of the hands. It was my misfortune a few years ago to see in consultation several cases of sepsis which had followed in the wake of a single nurse.

Among the poorer classes the attendant frequently has the household duties to manage as well as the care of the patient, and when she proceeds from the handling of uncooked meat to the manipulation of the patient without special precautions the infrequent occurrence of sepsis is only explainable upon the recognized greater immunity of such patients to the infection.

Not every woman who has an elevation of temperature following labor is necessarily septic, for the parturient state does not render her immune to the ordinary ills of mankind, but its existence should require close observation and careful investigation as to its cause. Blood-examination should be resorted to, to exclude typhoid fever and malarial conditions.

It should not be forgotten that septic infection may enter through a fissure of the nipple as well as by the genital canal. Sepsis may be simulated by putrid intoxication resulting from the decomposition of retained clots or secundines. This condition is recognized by digital examination and the removal of the offending material.

When careful examination excludes other causes and digital exploration reveals an empty uterus, the presence of high temperature justifies the suspicion of sepsis.

TREATMENT.—When we admit that the Protean manifestations of this disease are due to the influence of microorganisms, it becomes evident that the treatment should consist in the employment of such measures as will, first, promote the resistance of the individual to their baneful effect, and second, will aid in their elimination. In our present knowledge it is advisable to institute measures directed simultaneously to the attainment of both these objects. The intestinal canal should be swept out and kept open by saline purgation, the nutrition sustained by readily digested food, the temperature moderated by sponging, cold packs, and the local application of ice-bags.

Heart depressants, as the coal-tar preparations, to reduce temperature, should be employed with the greatest caution, and their use should not be prolonged. The tendency is to rapid asthenia, and the flagging powers should be sustained by strychnin, digitalin and atropin, preferably given hypodermically. This tendency may also be combated by the alcoholic preparations, but not so early nor in so large doses as usually administered.

Upon the efficacy of the employment of the antistreptococcic serum there is much diversity of opinion. Much difficulty necessarily exists in determining the particular organism responsible for the infection, and it can readily be recognized that the serum would not be efficacious in affording relief against other forms of bacteria.

In my own experience when the associated erysipelatous manifestations render it evident that the streptococcus was the probable microorganism to be combated, the serum has been exceedingly beneficial. In its employment, care should be exercised to secure fresh serum. This seems to me an explanation for the failure and even adverse results of the Marmorek serum in this country.

The quantity of serum to be employed, and the frequency of its administration will depend upon the

virulence of the attack; 10 cc. to 30 cc. can be given twice daily as the conditions demand.

OPERATIVE PROCEDURES.—The operative procedures may be palliative, or radical.

The procedure most frequently employed is that of curetment. While the use of the curet is indicated in cases of sapremia or putrid intoxication, its employment when the uterus is empty as in cases of sepsis, must be considered of doubtful propriety. The microorganisms have already passed beyond the structures which would be removed by the instrument. In all cases, however, I believe irrigation of the uterus with hot normal salt solution, or formalin solution, will be advantageous in disinfecting and removing decomposing detritus which would otherwise add to the elevation of temperature and increase the labor of elimination through its absorption.

Of the radical procedures, hysterectomy is most frequently advised, but the mere existence of sepsis does not indicate hysterectomy. While it is true that the uterus is most frequently the avenue through which infection enters, its removal can only be considered advisable when the organ is the seat of localized accumulations which serve as secondary foci for the spread of the disease. The infection may enter through lesions of the vulva and vagina, involving the bloodvessels, lymphatics, and cellular tissue, without the uterus being diseased. Some years ago, I was in consultation with three other physicians over a woman who had undergone an extensive laceration of the pelvic floor as well as of the cervix. Hysterectomy had been advised. Examination led me to believe that the febrile symptoms were induced by the retention of decomposing accumulations caused by perineal sutures. Their removal and frequent irrigation of the surface resulted in subsidence of the symptoms and the recovery of the patient.

Not infrequently the infection passes through the uterine cavity to the tube or an ovary, while the uterus escapes with but slight involvement if any.

In 1892 I operated upon a woman in this city who had been confined 2 weeks before, from whom the left tube and ovary were removed for a pus-collection. This patient has since given birth to a child. A patient of Dr. McCormick, of Williamsport, developed a high temperature which subsided following curetment and uterine irrigation. Three weeks later a persistent return of the high temperature in the absence of any recognizable cause led to an incision of the abdomen for exploration. No disease of the uterus was recognizable, no adhesions were found, but the left ovary was the size of an unhulled walnut and was covered upon one side by a flake of greenish exudate. After its removal the ovary was found to contain a half-ounce of greenish yellow pus. The patient had an uninterrupted convalescence.

While, by citing these cases I wish to demonstrate that hysterectomy is not the operation *per se*, I by no means desire to disparage its importance in selected cases.

When by the persistent enlargement of the organ, marked tenderness over its surface, and the maintenance of septic symptoms it is evident the uterus is the seat of disease, it should be removed even though the condition of the patient may seem desperate.

Dr. D. P. Rettew, of Coatesville, asked me to see a woman in the city hospital who had been confined 4 weeks previously. A prominent gynecologist a week before had declined operation. Although she had a temperature of 104° and a pulse of over 120, I felt that an operative procedure afforded her the only hope. A pus-collection occupied the left tube and side of the uterus. Hysterectomy was done. In endeavoring to remove a mass of exudate over the bladder the latter organ was ruptured, allowing a pint of urine to escape. The cavity was irrigated and gauze packed over the bladder opening, the tissues being too friable for sutures. A catheter was retained for 10 days and the patient recovered.

The treatment of sepsis may be summarized as follows:

1. Prevention by the exercise of the most careful asepsis and antisepsis.
2. The accurate study of each puerperal case to recognize the cause of high temperature and eliminate other factors than sepsis.
3. The maintenance of the vital forces and the promotion of elimination by the administration of diet and remedies to meet indications.
4. The employment of serum injections when streptococcal infection can be recognized or justifiably inferred.
5. Resort to operative procedures must be governed by the local manifestations. Curetment is rarely justifiable in pure sepsis. Peritonitis or localized cellular inflammation in the pelvis should indicate vaginal incision and drainage. Hysterectomy is indicated whenever the uterus can be recognized as the seat of localized collections. When the ovary or tube only is involved, it should be removed. The recognition of a pus-collection should indicate its evacuation or the extirpation of the organ in which it is situated.
6. The continuance of symptoms of sepsis when local manifestations are not recognized will justify incision to determine the presence of secondary sources of infection.

ON THE ANATOMY OF THE RENAL VESSELS AND PELVIS OF THE KIDNEY IN RELATION TO DIGITAL EXPLORATION OF THAT ORGAN IN THE OPERATION OF NEPHROTOMY.*

BY

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It is the custom of the surgeon in operating for renal calculus, should he fail to feel a stone in the extrarenal portion of the pelvis of the kidney, to puncture the organ with a needle in the hope of striking the stone. Should he not by this means find the stone, he does not hesitate to make an incision into the convex border and to explore the whole pelvis and infundibula with his finger. It is, at first thought, astonishing that in pursuing this bold course, he meets only venous hemorrhage, which, though profuse, is easily controlled; and that the kidney may be explored, a stone or several of them

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extracted, the organ stitched up with catgut and that no after-hemorrhage or leaking of urine take place. On the other hand, I have seen the kidney cut into on the dorsal surface with disastrous results.

As an anatomist I had difficulty in understanding how this could be done, for the examination of the kidney by the ordinary method of dividing it vertically into

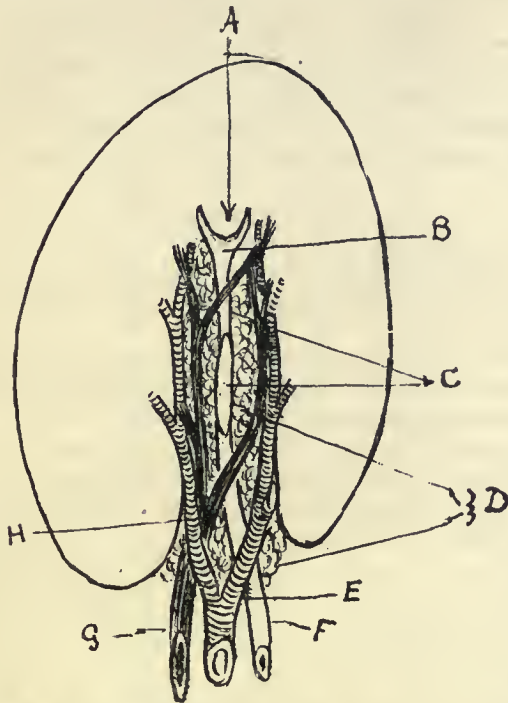


Fig. 1. Diagrammatic cross section of the kidney. A. Line of safety in opening kidney. B. Calyx. C. Infundibula. D. Fat of the renal sinus continuous with the perirenal fat. E. Renal artery dividing outside the renal sinus. F. Ureter. G. Renal vein. H. Renal vein, dividing within the renal sinus.

halves did not clear up the difficulty. This year a method of dissecting the vessels and ureter out of the kidney substance suggested itself to me, which made such unlooked for revelations that I venture to lay the dissection before my professional brethren as adding something to our anatomic knowledge, and putting a hitherto empiric operation upon a sound anatomic basis.

The subjects in my dissecting-room are first preserved by being injected slowly with 10 gallons of a fluid containing 2.5% formalin, 2.5% carbolic acid and 10% glycerin. Such subjects keep indefinitely with very little care, are pleasant to dissect, and demonstrate many points in visceral anatomy hitherto very imperfectly understood by students supplied with bodies preserved by other methods. At any time after 1 week has elapsed from the date of the preservative injection the arteries are filled with a hot mass of gelatin and lead chromate, which sets when cold and is permanently solidified by the action of the formalin, and which is so perfect that in many cases the finest arterial anastomoses are made perfectly evident. In successful cases the kidneys are beautifully injected, sometimes even with capillary minuteness. It occurred to me to pick away the renal substance from the vessels with my forceps and thus trace the arteries into the interior of the organ, and

the pursuit of this method brings out a series of anatomic facts which I have not seen sufficiently described.

Examination of a number of kidneys shows that while at even a short distance from the renal pelvis the renal vein lies in front of the artery, and the artery in front of the ureter, so that these structures lie in the order of vein, artery, ureter, from before backwards, yet at a variable distance from the pelvis, usually about an inch (see Fig. 1), the artery divides into a dorsal and a ventral trunk. These pass respectively to the dorsal and ventral side of the renal pelvis, and the vein, at first ventral to the trunk of the artery, lies dorsal to its ventral branch, that is between the artery and the pelvis (Fig. 1.). In addition to these, a branch of the artery usually passes to either end of the organ, and one or the other of these, usually the lower, is frequently a separate artery, given off from the aorta some distance below the renal. The lower branch is so often independent as to be called the inferior renal.

The vein does not divide as soon as the artery; but close to or within the hilum gives off 2 or more great trunks in a vertical not a horizontal plane. These first great venous trunks lie wholly in front of (ventral to) the pelvis and infundibula, thus differing very markedly from the arteries which, as I have said, assume at once a ventral and dorsal (anterior and posterior) relation to the pelvis (Fig. 1.).

If now the kidney substance be carefully picked away from the vessels, the arteries will be found to maintain

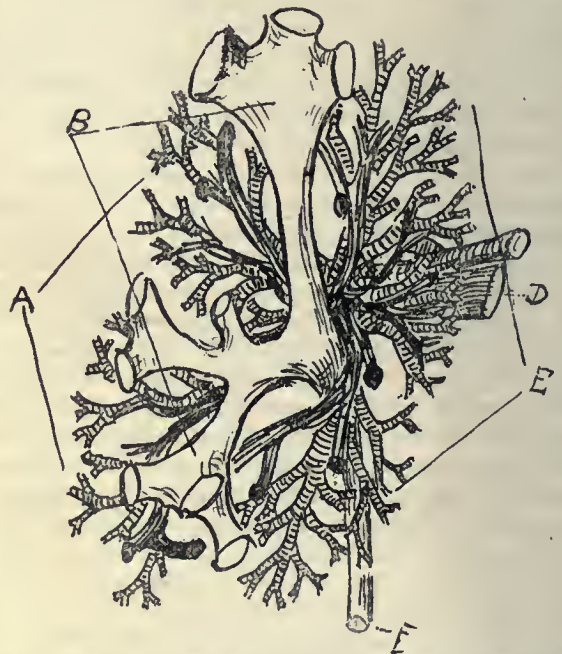


Fig. 2. Diagram of the vessels of the kidney after the renal parenchyma has been dissected away, and they and the pelvis have been separated into 3 leaves, as described in the text. A. Leaf of dorsal vessels. B. Middle leaf of the infundibula and pelvis. C. Renal artery. D. Renal vein. E. Leaf of ventral vessels turned aside. F. Ureter.

throughout the whole kidney substance a ventral and dorsal relation respectively to the pelvis and infundibula, so that when the dissection is finished the kidney can be split up as it were into 3 leaves, a ventral leaf consisting of vessels, a dorsal leaf consisting of vessels, and between these a leaf composed of pelvis and infundibula (Fig. 2).

Between these leaves, and uniting them somewhat loosely, is fat-laden areolar tissue. The veins at first all lie between the ventral arteries and the pelvis (Fig. 1), and from these large trunks, each as large as the superficial radial or median vein at the wrist, join the arteries which supply the dorsal segment of the organ, some of these

crossing proximal to the main divisions of the pelvis some distal to the division of the pelvis into infundibula that is crossing between the infundibula or even between the calyces. As is well known the renal arteries are terminal; that is there is no anastomosis between the branches, hence no anastomosis takes place between the arteries which lie dorsal to, and those which lie ventral to the pelvis and infundibula. This arrangement explains why a surgeon can make an incision into the convex border of the kidney and with his finger split it up almost from end to end without causing any marked

arterial hemorrhage. It will be seen, however, that several large veins will be cut or torn across, hence the free venous bleeding. But the pressure in the inferior vena cava being almost nil, such hemorrhage is easily controlled by pressure and suturing.

On the other hand, a short vertical cut on the dorsal flat surface of the kidney will sever one or more large arterial trunks. Should an incision be necessary on the dorsal surface, it should radiate toward the hilum, and not approach too near the hilum lest one of the larger vertical trunks of the artery be injured. It is noteworthy that more particular examination of the renal vessel shows that the artery in addition to its dorsal and ventral branch gives off what we may describe as a suprapelvic and an infrapelvic branch to the upper and lower ends of the organ respectively, and this renders resection of either end, or even wedged-shaped resection of the middle of the kidney, say for a tumor, a feasible operation. This has been done experimentally on dogs by Bradford, the remaining part functioning satisfactorily. I think it could be most safely done by cutting through the renal substance with a strong catgut ligature. Such a ligature would cut through the parenchyma but compress the vessels. This method has been used in removing segments of the liver.

While on the subject of the renal vessels I desire to call attention to the frequent occurrence and occasional large size of an inferior renal artery. It may arise from the aorta over an inch lower down than the renal, and be as large as the ulnar artery at the wrist. It should certainly be looked for in a nephrectomy and if found, ligated separately. No vein accompanies it. While I have not any exact data to go upon I should judge that a well marked inferior renal artery occurs in at least 10% of all cases. The renal artery may also be replaced by a third, fourth, or fifth vessel, arising anywhere between

its normal origin on a level with the first lumbar vertebra and the internal iliac.

Let us now glance at the pelvis and infundibulum. In his incomparable anatomic notes in his "Manual of Operative Surgery," Mr. Treves says that the "calyces are too narrow to admit of the introduction of a finger for exploration." Yet surgeons lead one to believe that it is possible to explore the interior of the infundibula and pelvis by incision through the convex border. On examination of specimens as to shape and actual size of the radicals of the ureter, you will notice that the more branched specimens are the more usual types (Figs. 3, 4, 5). It will also be seen at once that no finger can be introduced through the normal infundibula into the pelvis of the kidney. At the hilum the capsule of the kidney is folded round the parenchyma and thus bounds a large sinus about 1 inch in depth and 2 inches long. Here the capsule lining the sinus is pierced by the branches of the renal vessels and blends with them and the calyces. The infundibula and larger vessels are here imbedded in fat. A finger introduced through a cut in the convex border will probably enter one calyx, split to a variable extent the corresponding infundibulum and thus enter the renal sinus, and may palpate the outside of the remaining calyces, the infundibula, and the pelvis, and thus detect a stone, which may be then removed by cutting into the containing infundibulum. It must be very rarely possible to pass a probe from such an exploratory incision into the ureter. Any attempt to do so will only thrust the probe into the perirenal connective tissue. It



Fig. 3.—Pelvis, infundibula, and calyces of the kidney, actual size



Fig. 4.—Pelvis, infundibula, and calyces of kidney, actual size

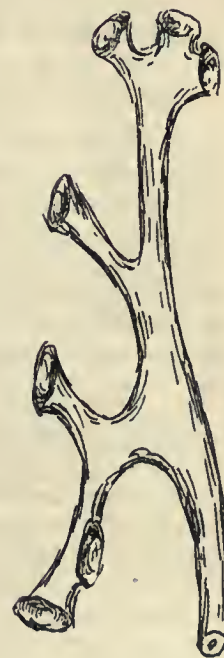


Fig. 5.—Pelvis, infundibula, and calyces of kidney, actual size

must be remembered that a pathologically dilated pelvis may nevertheless be easily entered by the incision under consideration.

Before closing let me glance at the technic of renal exploration for calculus. Having got the kidney well into the usual dorsal wound and steadied there with 2

fingers of the left hand on its anterior surface, the whole surface of the organ should be palpated, then the pelvis may be examined by introducing a finger along the pelvis into the renal sinus, remembering that a large artery lies in your way. Failing to find a stone there and remembering that the more expanded infundibula are on the upper and lower ends of the organ, these ends and finally the center may be explored with a needle. Should a stone be found, an incision along the convex border will be the safer route to it, unless it be very near the surface when an incision radiating towards the hilum may be preferable. Failing to find a stone by puncture, a vertical incision 1 inch long and $\frac{3}{4}$ of an inch deep should be made into the convex border of the kidney, the finger introduced and pushed gently on. It will then lie in the connective tissue of the renal sinus and may be dorsal or ventral to the pelvis. The middle, lower and upper infundibula should be examined in the order named, avoiding as much as possible splitting the ends of the organ, as at either end there is a good deal of interlacing of large vessels. The withdrawal of the exploring finger will be followed by free venous hemorrhage, readily controlled by pressure of the supporting fingers and subsequently by deeply buried catgut sutures through the parenchyma. As considerable damage will be done to at least one infundibulum, the lumbar wound should be packed, as urine may leak out, and an enormous amount of hemorrhage may be completely concealed should the wound be closed.

A RARE FORM OF EXTRAUTERINE PREGNANCY.

BY

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AND

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On February 28, 1901, Dr. Goldsborough was called in by Dr. I. N. Tannar of Vienna, Maryland, to see what the doctor supposed to be a case of obscure pregnancy. The patient had 1 child 9 years ago. In April, 1900, she missed her period and since then presented the usual signs of pregnancy; nausea, enlarged breasts, increase in size of the abdominal girth. In August, while lifting some boxes, something suddenly gave way in her left side. This occasioned severe pain and she had to remain in bed until November 1. About the middle of September there was a bloody uterine discharge, and accompanying it was considerable pain and nausea. Subsequently, she had several similar discharges which may have been menstrual periods. During the month of November she was able to be out of bed, but had to return in December. Throughout the entire illness she has had a good appetite, has been fairly well nourished. When seen her temperature was 101.5°; her pulse 140. Immediate removal to the Cambridge Hospital was advised, and on the following day she was driven 23 miles.

On examining the patient under anesthesia the abdomen is seen to be very prominent. There is, however, no bulging in the flanks. The umbilicus is converted into a tumor fully 5 cm. long by 3 cm. broad (Fig. 1). The skin over this appears to be much thinned out and at one point has given way. From this abraded area a chocolate colored fluid is escaping. This is exceedingly offensive. Around the umbilicus the tissue is markedly indurated and pits on pressure. On vaginal examination the cervix is found to be intact, but it is impossible to

outline the uterus. Nothing can be detected laterally. After cleansing the abdomen as far as possible, an incision was made just below the sternum and continued down almost to the pubes. The abdominal cavity proper was not exposed; that is to say, none of the abdominal contents came into view. Filling the cavity was a large quantity of chocolate-colored fluid; a fetus between 6 and 7 months and a large placenta. The placenta was attached low down in the pelvis, was exceedingly friable, but came away without producing any hemorrhage. The walls of the sac were about 4 mm. in thickness and excessively friable. They reminded one very much of granulation-tissue. It is impossible to determine where the pregnancy took place, as the pelvic organs were entirely walled out. It is probable, however, that the uterus ruptured and that the fetus with its membranes intact escaped into the abdominal cavity. The fetal membranes have then become attached to the abdominal wall and to the surrounding structures. After removing the fetus and the placenta, this large sac which extended almost from the sternum to the pubes and laterally filled the entire anterior portion of



Fig. 1.—The drawing of course is somewhat diagrammatic. It represents a longitudinal section of the body. The fetus with the fetal membranes are lying immediately beneath the abdominal wall and are attached anteriorly to the peritoneum almost from the sternum to the pubes. (B.) At the umbilicus the fetal sac bulges into the hernial opening and at the most prominent point this hernial sac has given way, allowing the fluid to escape externally. At A the numerous granulations have formed on the inner surface of the sac. The fetus is well preserved, appears to be about 6 months old and shows slight maceration on the face, on the arms and legs. The site of the placenta is roughly outlined by the dotted lines. The cervix is seen to be normal but on account of the marked distortion, the presence of the abdominal tumor and the oedema it was impossible to outline the uterus or appendages, hence their relation is left hazy. The bladder and rectum are in their normal positions. As will be seen from the drawing a median incision in the abdominal wall would open directly into the sac and in no way involve the general peritoneal cavity.

the abdomen was thoroughly washed out with salt solution and loosely packed with iodoform gauze. The upper half of the incision was closed, the lower half left open to insure thorough drainage. At the time of operation the patient's pulse was 140. The operation occasioned no shock. The anesthetic was given by Dr. John Mace, and assisting the operator were Drs. Brice Goldsborough and Guy Steele.

Following the operation the temperature ranged from normal to 101.5° for the first 4 days, since which time it has shown no elevation. The pulse was weak and irregular for 6 days, but since then has regained its normal tone. The pack was removed on the seventh day with the escape of moderate amount of discharge. A light gauze drain was then inserted. On March 13 the

abdomen was perfectly flat and all evidence of edema had disappeared. On removing the drain there was a slight discharge. On bimannual examination it was now possible to outline the uterus to some extent. The organ was about the size of a 2 months' pregnancy and situated directly behind the pubes. It was slightly movable.

Pathological Report (Gynecological Pathological Number 4,744). The specimen consists of a foetus with its accompanying placenta. The foetus when folded upon itself is 17 cm. in length. The distance from the occiput to the heel is 29 cm. The child is well formed, shows no external abnormality and is a female. There is a moderate quantity of hair but the skin has to a great extent macerated and the pigmented layer is readily peeled off. The umbilical cord appears to be about 8 cm. in length. It shows nothing of interest. The placenta is approximately 16 x 10 x 5 cm. It is very friable. In some places it presents the usual appearance, in others, especially in the depth, the tissue is somewhat homogeneous, is hemorrhagic and suggests breaking down.

Histological examination of sections from various parts of the placenta show that it consists almost entirely of necrotic tissue and canalized fibrin. The contours of the villi are everywhere visible but the nuclei of the epithelial cells as well as those of the stroma of the villi have entirely disappeared. The central portions of numerous villi are partially filled with calcareous plaques. At 1 point are a moderate number of disintegrated polymorphonuclear leukocytes. Otherwise the entire tissue is devoid of nuclei.

This complete necrosis of the placenta accounts for the ease with which it was peeled off and also for the absence of hemorrhage during its removal.

THE EARLY DIAGNOSIS OF INSANITY.*

By

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The fact that in a vast majority of cases of insanity the responsibility of recognizing its existence in the first instance devolves upon the family physician, renders the importance of the subject indicated by the title of this paper to the general practitioner at once apparent and furnishes a justification, if one were needed, for its presentation to this society. Moreover, the importance of the subject is amply attested by the fact that insanity is a disease which invades all classes of society and from which no one can claim exemption; that in effect it is more serious and far-reaching and involves a wider range of interests, whether as regards the welfare and happiness of individuals, of families or of communities, than any other malady known to mankind. To the individual it involves during its existence a loss of man's highest attribute, reason, and in a large majority of cases a loss of that priceless boon, personal liberty; it also involves a disturbance or destruction of his social and business relations, a loss of control of his property and affairs, and, if

the disease happens to take an unhappy form, great mental anguish and distress, amounting in many cases to "a living death" which may endure for many years, and finally death itself. To the family it frequently involves great anxiety and distress and in many instances personal danger; also a removal of the loved one from the family circle to the care of strangers with its attendant expense and possible loss of source of income, if the victim happens to be the head of the family; and finally, it involves the stigma which unfortunately and wrongfully still attaches to families known to be tainted with mental disease. To the community it involves the safety of life and property and an enormous expenditure of public funds for provision for the care and treatment of the dependent insane—the State of New York today having in round numbers 22,000 insane persons in custody, with an outlay of \$20,000,000 for hospital plants and equipments, and an annual expenditure of \$5,000,000 for the care and treatment of their inmates.

It has been well said that there is no disease which on its first invasion of the family circle creates a profounder sense of distress and helplessness than that of insanity; nor is there one which is more likely to be mismanaged in the initial stage, the friends of its victim being unable usually to comprehend its importance or even to realize its presence; or realizing it, they are at a loss to know what course to pursue, and in their stress and anxiety they naturally turn to the family physician for advice and assistance. Then too, a considerable proportion of cases, especially among the wealthier classes, have to be treated at home for a time, particularly in the early and most important stage of the disease as regards its curability, while a certain number of cases may properly and safely be treated at home throughout the disease, provided they are in competent medical hands.

It may be said, in passing, that the study of insanity presents nothing that is new or incomprehensible; that its phenomena on the mental side consist largely of modifications of the natural characteristics or tendencies of the individual, whether in the direction of perversion, exaggeration or diminution of those qualities, these modifications being merely the outward expression or symptom complex of diseased conditions, functional or organic, of the brain—conditions which are due, directly or indirectly, to moral or physical causes.

In other words, insanity is a disease or disturbance of the intellectual areas of the brain which is marked by derangement, partial or complete, of the mental faculties; a derangement which manifests itself by a prolonged departure from the methods of thinking, feeling and acting which were usual to the individual when in a state of mental health. From this it will be seen that there is no common standard of sanity departure from which constitutes insanity, as otherwise all mankind would be more or less insane, inasmuch as no two individuals think and feel and act precisely alike. Hence no man is insane because he is different mentally from other men. On the contrary, every individual has his own standard of sanity which may differ widely from that of every other person, and it is only when he differs from himself, when he is departed from his normal mental state, or is in a state of mental alibi, so to speak,

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or when, in common parlance, he is "out of his mind," that he may be regarded as insane.

Thus it appears that insanity is a relative condition, a comparative state; and that the standard of comparison in each instance is to be found within the individual himself. Hence, as before remarked, a man is insane only when he differs from himself, and in order to declare him so we must exclude all other men from consideration and compare the condition in which we find him at the time of the examination, as indicated by his conduct, manner and speech, as well as by his physical state—especially as regards the performance of his bodily functions, including the state of the circulation, the tongue, skin, pupils, appetite, the state of the bowels, the condition of sleep, motor symptoms, etc., with his normal mental status as determined by his heredity, his birth, his mental development, disposition and temperament, affections, education, moral sentiments, habits and environment, in order to determine wherein and to what extent he is departed therefrom. For instance, an individual of so-called excitable temperament may exhibit, from trivial causes, mental exaltation or the opposite, mental depression, which up to a certain degree would be clearly within the range of physiologic mentality; whereas, similar manifestations from similar or even widely different causes, on the part of another whose organization, temperament and mental habit are of a different order might very properly stamp him as insane. That is to say, two individuals may exhibit precisely similar mental symptoms and one be of sound mind while the other would be a pronounced lunatic.

Such being the case, it becomes of the utmost importance in the diagnosis of insanity, especially in obscure or doubtful cases, to institute a careful comparison of the individual with himself. It is only when the physiologic limits are passed and the man enters into a psychopathic state that he may be regarded as insane. Nor is it always possible to say just where health ends and disease begins, so gradually, in most cases, does the one state merge into the other. Insanity, like most other diseases, does not suddenly enter the system at one door while health departs at the other; and while in rare instances the disease may make a rapid onset, usually its approach is gradual and the prodromal stage, which is aptly termed the stage of alteration, in contradistinction to the later stage of aberration, may cover a period of weeks or months or even years before the so-called established stage, that is, the stage of actual aberration, is reached.

The significant diagnostic factor to be sought for in the early stage of the disease is evidence of the prolonged departure to which reference has been made, that is, a change in the mental characteristics of the individual. In fact, any prolonged change in the mental or moral tone of an individual should at once excite suspicion of approaching insanity, especially if he descended from insane or neurotic stock. The watchful eye of affection is usually quick to discern a deviation from bodily health in a member of the family circle, long perhaps before the occurrence of serious or structural disease, but when foreshadowings of disease begin to appear upon the mental horizon how frequently it occurs that friends and rela-

tives, either through ignorance of their true significance, or through consciousness of an inherited taint and dread of the odium which attaches wrongfully thereto, close their eyes to mental vagaries, absentmindedness, eccentricities of conduct and other functional disturbances, mental and physical, which usually mark the approach of mental disease and which should have aroused their anxiety. The histories of many of the chronic insane in custody today would reveal the sad fact that in the beginning of their malady these prodromes, these danger signals, were unheeded and the disease allowed to proceed unchecked until it had reached a state of hopeless chronicity.

Prominent among the premonitory symptoms of insanity are disturbances of the bodily functions, morbid emotional manifestations and alterations in the mental characteristics of the individual. Somatic functional disturbances express themselves in various ways, such as *pavor nocturnus*, insomnia, headache, tinnitus, vertigo, clammy extremities and other vasomotor disturbances, anorexia, indigestion, constipation, etc. It should be said in passing that while these phenomena, especially insomnia and constipation, are frequently observed in the prodromal stage, they may one or all occur in persons who never become insane; hence, they are not to be regarded as pathognomonic, nor singly, perhaps, even diagnostic, of mental disease.

If the tendency is to mental exaltation, or mania, the emotional changes usually take the form of unnatural buoyancy, loquacity, undue levity and morbidly quickened mental operations, the patient frequently appearing to be unnaturally bright. If the tendency is to mental depression, or melancholia, there are gloomy forebodings, morbid introspection, hyperconscientiousness, senseless self-condemnation, a morbid aversion to friends, morbid suspiciousness, irritability and frequently a vague sense of impending evil of some kind. Marked alterations of character are seldom wanting in this stage of the disease. Thus, for instance, the devout person may become profane, the refined, immodest and disregardful of the proprieties and decencies of life; the staid individual, capricious and vacillating; the social, unsocial; the good-tempered, irascible; the industrious, indolent; the temperate, intemperate; the cheerful, sullen and morose, and the levelheaded, conservative business man embarks in senseless enterprises. These symptoms, being in striking contrast to the individual's normal mental status, are indicative of a departure therefrom, and when observed they should always excite suspicion of impending insanity; and while they may vary as regards number, order of occurrence and intensity, their presence is always significant as danger signals, especially when they occur in persons who are predisposed to mental disease by reason of inheritance, neurotic diathesis, previous attacks of insanity, head injury, alcoholism, drug addiction, syphilis, mental shock, prolonged mental strain and worry, general ill health, etc.

It should be borne in mind that insanity is rarely due to a single cause, whether predisposing or exciting. If careful investigation to discover the etiologic factors be made, it will be found in most cases, when reliable data are obtainable, there exists a combination of causes, all

of which are conducive, directly or indirectly, to cerebral malnutrition, which after all is the immediate exciting cause of all insanities. In other words, any disease or condition which impairs the bodily nutrition or alters unfavorably the quality or quantity of the blood-supply, or which seriously disturbs the normal reflex excitability of the nervous system, is capable of becoming either a predisposing or exciting cause of insanity, especially when it occurs in an individual having a psychotic taint, whether inherited or acquired. This would include in the etiologic category all forms of disease, whether local or general, acute or chronic, and all manner of functional disorders; and inasmuch as the etiologic importance of any of these conditions depends upon their potency in producing malnutrition of the brain, it becomes important to fix in mind at the outset the fundamental fact that insanity of whatever type is directly due to functional or structural derangement of the cortical substance of the brain.

Hence in estimating the relative importance of any class of causes, whether predisposing or exciting, we must take into account the part they play in rendering the brain unstable through its denutrition, and thus preparing it for a mental breakdown. In other words, the functional integrity of the mental faculties depends entirely on the healthful activity of the physical system; hence there can be no unsoundness of mind, in a medical sense, without unsoundness (disease) of body.

In connection with the subject of the diagnosis of insanity, it should be borne in mind that, as already intimated, the range of normal mental action is by no means a narrow one. That is to say, the mental operations of the brain may be disturbed temporarily by causes of a transient nature, such as variations in the quality or quantity of the blood-supply, overwork, excessive emotional excitement, reflex irritations, etc., and yet not transcend the limits of physiologic mentality. For instance, if a man under the influence of wine, or on the receipt of exceedingly good news, should exhibit signs of mental exaltation quite unusual to him we would not call it mania, or if he evinced mental depression on account of bad news or misfortune we would not call it melancholia. It is only when the physiologic limitation is passed and the individual enters into a pathologic state, mentally, that we may consider him insane. In other words, whenever an individual is found to have undergone a *prolonged* departure from his normal mental state and the departure is unexplainable on any other ground, such as drunkenness, delirium, the effect of narcotic drugs or other toxic agencies, a diagnosis of insanity will usually be warranted. Alcoholic intoxication and delirium tremens do not constitute insanity in a medical sense, although the law recognizes the latter as an excuse for crime, and some writers have classed it among the so-called toxic insanities.

It should be borne in mind, too, in the diagnosis of insanity, that the patient's statements regarding himself are often unreliable and misleading owing to delusional ideas or misinterpretation of what actually took place, even though in other respects he may be perfectly truthful. Again, the truth or falsity of certain statements made by the insane can only be determined by evidence

from other sources; hence we should not regard every unusual or extraordinary declaration of a patient as indicative of delusion. For instance, a man may assert that he is the victim of a conspiracy, or that his wife is unfaithful to him; or a woman, that she is pregnant, all of which may be true or it may be delusion, so that before determining the diagnostic value of such declarations, corroborative evidence should be sought for from sources other than the patient himself, as by so doing we may avoid the humiliating predicament in which a medical friend of mine once found himself through certifying that an allegation of pregnancy made by a young woman was an insane delusion, when she was in fact pregnant, as an examination would have disclosed had he taken the precaution to make one.

On the other hand, many of the delusions and hallucinations expressed by the insane are so manifestly irrational as to need no further corroboration, as, for instance, when a man declares that he is a king or the Saviour, or that his legs are made of glass and he refuses to walk lest he may break them, or a woman that she is the Virgin Mary or a queen or an empress, etc. Again, we occasionally meet insane persons who are capable of concealing their delusions for a time, realizing that the exhibition of them may result in their being declared insane and deprived of liberty and the control of their affairs; but the deception in such cases rarely fails of detection at the hands of a skilled observer, if time and suitable opportunity for observation be had. Dangerous patients, suicidal and homicidal cases, frequently endeavor to conceal their intentions and their delusions relating thereto; and while cases are occasionally met in which for the time being the most careful scrutiny fails to disclose the existence of any definite or verbally expressed delusion, I have yet to find a case of insanity proper that did not at some stage of its progress reveal the presence of delusion or a *delusional state*, as evinced by the declarations, manner or conduct of the individual. It need scarcely be said that the most common delusion among the insane is that they are not insane.

In the diagnosis of insanity it is important to take into account certain negative symptoms, as reticence, obstinacy, sullenness or stupidity, any of which may be significant with reference to diagnosis, especially if such condition is not natural to the individual. Note should be taken also of the facial expression, the contrast in facial expression in mania and melancholia is in itself a lesson in diagnosis, the expression of the eyes and their pupillary reactions to light and accommodation, the speech, writings, motor functions, reflexes, etc., any of which may in themselves be indicative of certain forms of mental disease. The pulse and temperature should also be observed, as persons laboring under the delirium of fever, meningitis, etc., have occasionally been committed to institutions for the insane through inattention to these points.

Other conditions which have been mistaken for insanity are prolonged intoxication, delirium tremens, the delirium of meningitis, and of the various continued fevers, sunstroke, hysteria, injuries of the head and the delirium which sometimes precedes death in certain diseases, and in old age. Most frequent among

the prodromes of mental disease are insomnia and constipation. In fact, so common are these symptoms in the onset of acute insanity that the experienced observer comes to anticipate their presence, and to expect an affirmative answer to his interrogations respecting them in substantially every case that comes before him.

Thus I have attempted to portray briefly the most frequent and most important mental and physical indications of the onset of mental disease. These indications may not present in the order mentioned, nor will all of them be observed in every case, but more or less of them will be found in most cases if carefully sought for, and the physician must be prepared to recognize and define the particular departure from the normal state so distinctly and clearly as to satisfy himself and the friends of the patient that the deviation actually exists and that the case has reached a point at which the good of the patient and the welfare of the family and of the community render medical interference imperative. It is doubtless true that an impending attack of acute insanity could frequently be warded off if the prodromes, which I have characterized as danger signals, were promptly recognized and timely measures for their relief applied. Prevention is better than cure, and to recognize mental disorder in its incipiency will often enable us to adopt remedial measures at the most, opportune time for arresting its progress.

The importance of promptly instituting measures for the relief of insomnic states whenever met with in practice, and particularly if the insomnia, as frequently happens, is associated with slight mental depression and constipation, can scarcely be overestimated. The insomnic habit, like many other habits, is easily acquired, and if allowed to go unchecked tends to produce brain malnutrition and consequent mental disease, especially in individuals who are predisposed thereto.

DUST AS A FACTOR IN DISEASES OF THE UPPER RESPIRATORY PASSAGES.*

BY

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The subject of dust as a factor in disease is of interest not only to the hygienist, but also to the physician, and particularly to those who give especial attention to diseases of the respiratory passages. No one will dispute the fact that air is more important to the perpetuation of human life than water or food; for while cases are on record in which persons have lived many days without water, and even for weeks without food, we know that the cessation of respiration for even a few minutes is fatal to life. In spite of this, though we hear constantly of the measures taken to improve the water supply, and of legislative enactments to prevent the adulteration of food, the purification of the air which is so important for our comfort and health, is rarely referred to. We are becoming so careful in regard to our water, that many will drink only of that which is especially distilled, and

so particular about our food that we will eat only such as is prepared by men of special reputation for cleanliness and purity, but we take into our respiratory passages without a thought, air vitiated with millions of particles of dust:

Before studying its effects on the upper respiratory passages, let us first investigate the composition of the substance which we know as "dust." Microscopic examination shows that it is made up of vegetable, animal and mineral particles, which vary in size from those which may be seen only with the highest power of the microscope to those of considerable size which are thrown into the air by winds of high velocity, the quantity as well as the size of the particles being dependent not only on the material available for dust formation, but also upon the strength of the wind. While this dust is principally made up of substances which accumulate on the streets, it is largely augmented from the chimneys of factories and private houses, while all forms of manufactories add their quota to the accumulation.

The effects, as far as the organs of respiration are concerned, may be divided into the following heads: Mechanical, traumatic, chemical and pathogenic. While these divisions are made for convenience of study, it is more common in actual practice to find 2 or more of these effects present at the same time. The actual injury done to the respiratory organs will of course be influenced by the amount of dust present in the air inspired as well as by its composition, while the normal or abnormal condition of the respiratory passages, especially of the nose, will have a most marked bearing on the result.

While the entire absence of dust from the air is a condition difficult to attain, as shown by Tyndall in his most delicate experiments, still there is a great difference between this and the dust-laden air of most of our large cities. When only the mechanical effect of inhaling this dust be considered, we find that when these foreign particles come in contact with the delicate mucous membrane of the nose, they tend to produce congestion and hyperaemia, which easily leads to intumescence and hypertrophy; and when the normal condition of the nose has once been disturbed, it is not long before the effects are found in the organs below.

When we have added to the mechanical the traumatic effects, such as are produced by the inhalation of particles of glass, stone, iron and other sharp particles which are frequently found in the air, the effects are much more rapid and injurious than those described above. The chemical effects are most frequently observed when the dust from shell-roads, which contains a large proportion of calcium carbonate, is inhaled. I have seen a considerable number of patients in whom the diseased condition of the respiratory passages was due to the dust from shell-roads, and the possibilities from this are so marked, that shells should never be used for road purposes unless every precaution is taken to see that they are watered properly. The chemical effects of dust are also observed in the manufacture of certain drugs and of chemicals and of such articles in the preparation of which chemicals are largely used. In this category may be included the alkaline dust which is found in certain portions of the United States. The irritation produced by dust, largely

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composed of particles having chemical effects upon the mucous membrane of the respiratory passages and its secretion, is much more marked and rapid than those already described, and even atrophy of the mucous membrane, a condition most obdurate to treatment and injurious in its effects, is frequently due to the inhalation of such dust.

The pathogenic effects of the inhalation of dust is the most important which we have to consider. The ordinary dust of cities contains a large amount of various forms of bacteria, but in the majority of cases the mucous membrane of the nose is protective against these, and they act simply as mechanical impurities. Some of the pathogenic germs, however, have so strong a vitality that they resist the action of the upper respiratory passages, and it is undoubtedly in this way that many of our infectious diseases are contracted.

In normal respiration, the nose not only warms and moistens the inspired air but also frees it from mechanical impurities, thus acting as a barrier between the larynx and bronchi and the atmospheric air. The large percentage of cases of abnormal conditions of the nasal chambers has been the subject of remark by rhinologists ever since this branch of medicine has been carefully studied, and it is my opinion that dust is an important etiologic factor in a large number of these cases. Accepting, however, the fact that abnormal conditions of the nose are of frequent occurrence, we can easily understand the injurious effects of dust not only on the delicate mucous membrane of the nose itself, but also on the remaining portion of the respiratory tract which the nose protects when in its normal condition.

While pathogenic germs may be found in almost all forms of city dust, they are especially frequent in rooms or hospitals in which patients with infectious diseases have been careless with the disposition of infectious materials. In the houses of tuberculous patients, in which care is not taken to destroy the sputum, the bacillus of Koch has been found in large numbers in the sweepings from the floor and in the dust scraped from the walls, and a similar condition has been found in cases of diphtheria and other infectious diseases. Tuberculosis heads the list in this direction on account of the long duration of the disease and the abundance of the sputum which contains the infectious material. When this is allowed to dry, particles are blown into the air from part of the dust of the infected room. In this way not only is the room infected, but eventually the house, and if a sufficient number of such foci of infection exist, it will be easily understood why the bacillus of tuberculosis should be found in the ordinary dust of our streets.

Nature has given us various defences to protect us from the impurities of the air which we inhale; First the vibrissae which guard the entrance of the nostrils, and exclude the larger particles contained in the air; then the secretion which covers the mucous membrane of the respiratory passages, and especially the nose, which in its normal condition, has been found sterile to the cultivation of microorganisms, and to which even germicidal properties have been ascribed by some bacteriologists; the movements of the ciliated epithelium, the action of the leucocytes, and even the peculiar conforma-

tion of the nasal chambers which oppose the direct entrance of air; but these can be relied on only when the local parts and the general system is in its normal condition to protect us against the danger of contracting disease from the inspiration of infectious dust.

There are certain occupations in which the dust has especially injurious effect upon the respiratory organs, as in cigar and cigaret makers, grinders of metals and glass, workers in stone, coal miners, etc., but the limit of this article will prevent me from going into these in detail, and I simply refer to them as illustrating the danger to the respiratory organs from the inhalation of dust. In his investigations of this subject, Peacock (Schmidt's *Jahrbuecher*, Bd. CXVI, p. 57,) found in a London factory, in which grindstones were made and incident to which a large quantity of very fine dust was constantly present in the air breathed by the workmen, that 40% of the employes died of tuberculosis. What more striking example can be found of the injurious effect of dust upon the respiratory organs?

[TO BE CONCLUDED.]

Disposing of One's Own Corpse.—The Supreme Court of California has decided that a man cannot by will dispose of his corpse. A man requested the managers of a medical college, in the hospital of which he had been treated, to allow him to bequeath them his body to be used for scientific purposes. When he died the administrators proceeded in the terms of the will to take possession. The nearest of kin, however, claimed the body, and applied to the courts for an injunction restraining the medical college from taking the cadaver. The kinsfolk won; the court holding that the custody of the corpse and the right of burial belongs to the next of kin instead of the administrator.

Investigating Arsenical Poisoning.—All the witnesses examined by the Royal Commission agreed that in the recent outbreak of arsenical poisoning in England and Wales beer was the means by which the arsenic was conveyed. One witness suggested as preventive measures: (1) "That no glucose or invert sugar should be made with sulfuric acid unless it was made from sulphur and not from pyrites, and that the brewer should have a guarantee to that effect; (2) that the inland revenue should instruct excise officers to see that such guarantees were given and to collect samples of brewing materials for analysis, and (3) that additional powers for local authorities to seize contaminated beers should be given."

Smallpox Epidemic in Scotland.—Official reports show that since the outbreak of smallpox in Glasgow in April last there have been 1,435 cases with 167 deaths. The work of revaccination is being rigorously carried on among the people of the poorer districts where the greater number of cases arise. Other measures adopted by the medical and sanitary officials for the limitation of the disease are being actively executed and are attended with hopeful results. Five cases supposed to have arisen from Glasgow have occurred in Edinburgh. Evidence is wanting to prove that any of these patients have ever been adequately vaccinated.

The Mosquito Nuisance.—The mosquito having been adjudged guilty of spreading disease, the problem is to get rid of him. It is easier to kill him in the egg, than on the wing. General Wood has been giving attention to the matter in Cuba. Kerosene oil is put into or upon the pools during the hatching season, in the hope of killing the egg. It is also believed that the odor of the eucalyptus tree will drive away mosquitoes, so these are being planted. By some the castor oil plant is regarded as a remedy for the pest. But whether the two latter are effective remedies or not, the use of oil undoubtedly is, and there should be no quarter given to an enemy that has so little claim to benevolent consideration.

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A. A. STEVENS, M.D.

Incompatibilities of Heroin and Heroin Hydrochlorid.

—According to the *Therapist* (January 15, 1901), the only incompatibilities of heroin and the hydrochlorid worthy of special mention are the alkalis, such as sodium bicarbonate and ammonium carbonate. On the other hand, salts of neutral reaction, such as potassium iodid or ammonium chlorid, may be used in the same mixture, and this also applies to acid salts, such as the hypophosphites or acid phosphates. The vegetable expectorants, as ipecac, squill, senega and sanguinaria, are entirely compatible with heroin and its hydrochlorid. Although many physicians employ heroin without admixture, very desirable results have been reported from combinations with potassium iodid, ammonium chlorid, and the vegetable expectorants. Owing to the insolubility of heroin in watery solutions it is necessary to add a few drops of some acid, acetic or hydrochloric, in order to affect its solution. This may be entirely obviated by using the hydrochlorid, which is freely soluble. The large doses at first recommended are no longer advocated by most authors, the average dose ranging from 1-24 to 1-12 of a grain in adults, and 1-120 to 1-60 of a grain in children. It is advisable not to employ larger doses until the smaller ones have been given a trial. Furthermore, many physicians now resort to the hypodermic use of the hydrochlorid in cases in which it is desirable to obtain an immediate effect, and especially in the treatment of spasmodic conditions, such as asthma, care being taken in the preparation of solutions not to add the drug until the water has partially cooled.

The Relation of Scurvy to Recent Methods of Artificial Feeding.—J. P. C. Griffith (*New York Medical Journal*, February 23, 1901) reports 16 cases of infantile scurvy which support the generally accepted view that the patented foods often produce the disease, and some of which show that recovery may follow the withdrawal of these foods without other treatment. Two of his cases throw suspicion on barley water. The cases indicate, too, that the sterilization of milk has an undoubted power to produce scurvy, but that this is a less prominent etiological factor than the last. In fact, one of the most striking features which the cases illustrate is that scurvy can readily develop on a diet of milk which is not long heated, or which is even raw. In some such instances we are led to suspect the action of a low percentage of proteids. Some of the cases also show that the beneficial action of fruit juice may begin and continue without any change in the food whatever. This is a valuable point, because in 379 cases collected by the committee appointed by American Pediatric Society (1898) there were only 3 which illustrated this fact. It is also important because it teaches that we must not always hasten to change the diet which has seemed to agree with a child with weak digestion, because symptoms of scurvy are appearing. Better far in most cases the danger of the development of a disease generally easily curable, produced possibly by a low proteid percentage, than to incur the far greater danger of a wasting diarrhea or other digestive disturbance, the result of overstrong food.

Analgesia from Spinal Subarachnoid Cocainization.

J. B. Murphy (*Journal of the American Medical Association*, February 9, 1901,) has collected 631 cases in which this method of inducing analgesia was employed. Of these the method was successful in 596, partially so in 14, while in but 21 cases did failure result.

Operation for the Relief of Ascites Due to Cirrhosis of the Liver. C. H. Frazier (*University Medical Magazine*, February, 1901,) reports the case of a middle aged man with hepatic cirrhosis in which a favorable result was obtained from opening the abdomen, rubbing the parietal peritoneum vigorously with a gauze pad, and suturing the thickened omentum to the parietal peritoneum and the edges of the wound. The incision was closed without drainage. Subsequent to the operation the patient was tapped twice within 36 days. After second tapping there was no reaccumulation, and the patient left the hospital at

the end of 4 months very much improved in general health. The reports of 13 other cases in which this operation has been performed are now on record. In some instances the operation has been carried out in cases in which the diagnosis was incorrect and in other instances unavoidable complications developed which materially affected the mortality. Excluding those cases of failure for which the operation should not be held accountable, we find 8 cases remaining in which the mortality was nil; of these, 6 patients were living and free from ascites at periods varying from 3 to 26 months. One was living and improved, 1 was living but unimproved. Thus recovery ensued in 100%; in 12% improvement followed, and in 12% no improvement.

The Treatment of Exophthalmic Goiter.—Nestor Tirard (A Text-book of the Medical Treatment of Diseases and Symptoms, 1900) writes as follows: Many remedies have been recommended for this condition, but in my hands the best results have been afforded by the conjunction of arsenic with digitalis or strophanthus, to check the rapidity of the heart's action. The amount of anemia frequently necessitates the use of iron. The success of the treatment is, however, extremely uncertain; and the remedies above mentioned must be continued for long periods, both with the view of curing the anemia and of maintaining a steady control over the rapidity of cardiac action. It is not advisable to increase the dose of digitalis or of strophanthus in the hope of obtaining a pulse of physiologic rate, since an increase in the amount of these remedies may produce irregularities of action and perhaps dangerous syncope. It is better to employ only moderate doses, and to be satisfied with general reduction in the rapidity of the pulse-rate. Occasionally I have used with some satisfaction ammonium or potassium bromid, with the view of controlling the nervous symptoms which are frequently so distressing in this disease; but with those drugs also it is desirable to employ only moderate doses, since although the irritability of temper may be diminished, the depression is certainly sometimes increased.

Sodium cacodylate.—W. Ewart (*Polyclinic*, October, 1900), states that sodium cacodylate is an arsenical organic compound which in the last 2 years has been introduced into therapeutics by French physicians. In it arsenic can be administered in enormous quantities without the usual risks. But how far large and long-continued doses are free from danger is not known. It contains 48% of arsenic and is relatively free from irritating and poisonous properties. In sodium cacodylate all odor and virulence are lost. This is a soluble, deliquescent, tasteless solid. In dilute solutions it is well tolerated by the stomach. Sodium cacodylate may be given by the mouth 3 or 4 times daily in half-grain doses, which may be increased. It may be given in pills or in solution, but as it is very hygroscopic the pills must be specially prepared. The rectal method of administration is much advocated abroad as less liable to give rise to reduction products which impart an odor of garlic to the breath. In chorea $\frac{1}{4}$ grain may be given in this manner dissolved in 1 to 4 drams of water. The hypodermic method of administration is the most scientific as the complications arising from possible reaction in the alimentary canal are avoided. One-third of a grain dissolved in 10 minims of water is a fair initial dose, and may be increased to 1 grain or more. By this method the writer has given the drug in cases in which its full powers are required—pernicious anemia, Graves' disease, etc. The maximum dose has not yet been determined. The drug may be given for long periods. The metabolic properties of arsenic being apparently increased, the uses of sodium cacodylate are manifold. Those in depressed health from a variety of causes soon after beginning a course generally feel refreshed and invigorated. The drug has been recommended as of much value in cancer, particularly of the stomach. It seems to be more efficient than arsenic in most conditions in which the latter is a specific, particularly in pernicious anemia, chorea, malaria, and Graves' disease. In tuberculosis, according to reports from abroad, cacodylate gives better results than have been obtained under any other medical treatment. In a case treated by the writer the tendency to hectic was checked, the cough and expectoration were greatly diminished, and the general condition of the patient rapidly improved.

The Action of Tellurium Compounds.—W. J. Gies (*Phila. Medical Journal*, March 23, 1901) from his experiments on dogs concludes that large but nontoxic doses of tellurium compounds do not materially affect metabolism in dogs brought to a state of nitrogen-equilibrium, even when dosage is continued for a week. These substances appear to stimulate proteid catabolism only slightly. They increase somewhat the weight of dry matter in the feces, and diminish, in a small degree, the absorption of fat. They render the urine dark brown in color, but do not affect it otherwise. Excessive doses induce somnolence and severe gastroenteritis. Tellurium compounds, even in small proportion, markedly arrest the secretion of the acid in the stomach—the direct cause, probably, of the indigestion brought about not only in dogs, but also in man. Tellurium is eliminated in metallic form in the feces; as methyl tellurid in the breath, urine, feces and epidermal secretions, and in a soluble form, in small quantity, in the urine and bile. Neusser, Pohorecki, Combemale and Dubiquet have found sodium and potassium tellurate in daily doses of $\frac{1}{3}$ to $\frac{2}{3}$ of a grain highly effective in controlling the night-sweats of tuberculosis. The experiments of Gies indicate that the alliaceous odor imparted to the breath is about the only objectionable feature constantly following the use of therapeutic amounts of tellurates.

Acute Catarrhal Rhinitis.—C. P. Grayson (*Therapeutic Gazette*, February 15, 1901), recommends as a local treatment in the early stage the spraying upon the engorged tissues of a few drops of a 2% solution of cocaine, followed in a minute or 2 by one of the alkaline sprays, such as Dobell's solution. Later, after the nose has been thoroughly cleansed, a solution of chloro-ton and suprarenal capsule is recommended. This last solution has the advantage of being both stable and nontoxic, and its effect combines the vascular constricting action of the suprarenal extract with the anesthetic action of the chloro-ton. Unlike cocaine, it is perfectly safe for home use. On the third or fourth day, when the secretion has become mucopurulent in character, cleansing of the nose may be succeeded by a spray of distilled extract of hamamelis, 1 part to 3 of water. This exerts a mildly astringent action. In a day or 2 more, when the active hyperemia has disappeared and left in its wake a sluggish, venous congestion, which is apt to be slow in departing, a stimulant, like Boulton's solution, may supplant the astringent. Boulton's solution has the following formula:

℞ Compound tincture of iodine 1 dram.
 Carbolic acid (crystals) 18 grains.
 Glycerin 2½ ounces.
 Distilled water 2 ounces.
 Mix. Place in a water-bath of 100° in tightly corked bottle until colorless. Filter. May be used as a spray or by means of the cotton-tipped applicator.

Oil preparations should be used only with or after some alkaline cleansing solution. One of the most generally useful of these oil formulas is that of Douglas:

℞ Thymol 10 grains.
 Menthol 20 grains.
 Eucalyptol 20 drops.
 Oil of eucalypt 40 drops.
 Benzoinol 6 ounces.

Oxycyanid of Mercury in Practical Antisepsis.—Deguy (*Journal des Praticiens*, November 3, 1900,) recommends mercury oxycyanid as a substitute for corrosive sublimate for general antiseptic purposes in the same strength solutions as the latter salt. The product employed by him is a yellowish-white, inodorous, crystalline powder of a neutral reaction and should never be acid. This is readily soluble in cold water, differing in this respect from other salts which vary according to the mode of preparation and to the proportions of the mixture of the oxid and cyanid and also to the purity of the salts. The advantages claimed for this oxycyanid are: that it does not alter instruments placed in its solutions, it can be made into compressed tablets and is not so irritant to the hands or other tissues while its antiseptic properties are equal to the same strength sublimate solutions.

The Real Value of Quinin in Labor. Fussell (*Therapeutic Gazette*, January 15, 1901,) thinks quinin is not so frequently used as it should be in cases of labor. It has never found it to fail when the labor pains were slow and inefficient from simple uterine inertia. Given in 15-grain doses the drug causes an increase of force and frequency of uterine contractions exactly resembling normal labor pains. Cinchonism did not occur in these cases and the employment of the drug frequently obviated the use of forceps.

Iron Cacodylate.—Gilbert and Lereboullet (*Le Mois Therapeutique*, September 30, 1900) have used iron cacodylate in chlorosis and chloroanemias, especially tuberculous chloro-anemia, with good results. Used hypodermically in the strength of a half grain in each cubic centimeter of water, of which 2 cc. or 3 cc. was used at each injection, the drug was well tolerated locally and produced no untoward symptoms. By the stomach the dose ranged from 2 to 4 grains daily although when administered in this way it proved less active than when given hypodermically.

Early Operation in Typhoid Fever With Intestinal Perforation.—Osler (*Lancet*, February 9, 1901) says that 50 % of deaths in typhoid fever are due to asthenia, 25 % to perforation, and 25 % to hemorrhage and other accidents. He believes that from 30 to 40 % of the perforative cases can be saved by early operation. Of 11 cases operated on in Johns Hopkins Hospital since January 1, 1900, 5 recovered. In doubtful cases he believes that the patient should be given the benefit of the doubt.

Treatment of Tuberculosis by Cinnamon.—Krompecher (*Ann. de VInst. Pasteur*, November 25, 1900, and *British Medical Journal*, 5, 1901) has conducted a series of experiments to test the value of Landerer's treatment founded upon Richter's researches. Cinnamic acid, according to Richter, caused the tubercles of inoculated rabbits to show fibrous transformation and a tendency to cure, instead of undergoing the usual course of caseation and softening. Krompecher inoculated animals with cultures of varying virulence, and, after an interval, injected soda cinnamate into the veins. He also investigated the question of preventive action by beginning treatment with the drug some days before the inoculation with tubercle. In all cases untreated animals were inoculated at the same time for purposes of comparison. Soda cinnamate was found to cause a temporary leukocytosis 3 to 4 hours after administration, with hyperemia of the bone-marrow. The stroma of the lungs was appreciably increased by a succession of injections, owing, it is believed, to mechanical irritation. Preventive treatment was found to give no immunity against infection by virulent tubercle-bacilli; and suitable animals inoculated with virulent bacilli died from tuberculosis, in spite of the treatment with cinnamate of soda, as rapidly as the animals used for comparison. The only animals inoculated for Richter's control experiment lived for 7 months afterwards. Hence it is likely that for his experiments cultures of small virulence were employed, and that the healing was merely due to natural tendency to recovery.

Tracheal Injections in Tuberculosis.—T. M. Murray, (*New York Medical Journal*, February 9, 1901) has treated 40 cases of pulmonary tuberculosis with tracheal injections. Every one was benefitted. For a period of from 4 to 8 hours after the injection there is no cough at all, and if given at bed time the whole night may be passed without a single paroxysm of coughing. The expectoration is reduced in quantity and becomes less offensive. The author uses Mundell's solution, the formula of which is as follows:

Oil of thyme } of each 80 minims.
 Oil of eucalyptus }
 Oil of cinnamon }
 Sterilized olive oil 3½ ounces.

Of this 45 minims are injected 3 or 4 times in succession.

The method of administering the injections is simple. The curved canula of the syringe is passed between the vocal cords, and the fluid is slowly injected into the trachea. The first effect is usually a slight explosive cough but the author has never seen glottic spasm follow even the first injection.

THE WORLD'S LATEST LITERATURE

British Medical Journal,

March 16, 1901. [No. 2098.]

1. The Causation of Cancerous and Other Newgrowths. J. GEORGE ADAMI.
2. On the Occurrence of Pyrexia in Cancer and Other Diseases of the Liver and in Cases of Gall Stone. C. O. HAWTHORNE.
3. Digestion Leukocytosis in Cancer of the Stomach. CARSTAIRS DOUGLAS.
4. The Palliative Treatment of Carcinoma Uteri. GERALD R. LEIGHTON.
5. The Application of Romanowsky's Stain in Malaria. MAJOR W. B. LEISHMAN.
6. The Influence of the Dwelling Upon Health. JOHN F. J. SYKES.
7. Idiosyncrasy to Gelsemium. THOS. H. AMYOT.
8. Congenital Menstruation, Ovulation, Lactation and Congenital Puberty. W. ROGER WILLIAMS.
9. Turpentine Poisoning. F. S. STANWELL.
10. Case of Malignant Endocarditis: Recovery. J. HEPWORTH.
11. Case of Ovarian Cyst: Repeated Tapping. J. B. GILLAM.
12. Case of Diffuse Scleroderma. ROBERT BLEASDALE.

1.—Will be treated editorially.

2.—Hawthorne, discussing the occurrence of pyrexia in carcinoma and other diseases of the liver, and in cases of gallstone, refers first to the generally recorded opinions regarding the infrequency of fever in ease of malignant disease of the liver, and reports a number of cases of carcinoma of the liver in which fever was one of the clinical symptoms. Referring to cases of liver disease with jaundice, he states that neither a distinct degree of pyrexia nor the occurrence of rigors and intermittent febrile attacks is by any means conclusive against the existence of malignant disease, and he illustrates his statement by mention of cases under his own observation and reference to others in the literature. Mentioning hepatic intermittent fever, he quotes Charcot to the effect, that while the fever is most likely to occur in cases of dilation of the bile ducts in which the bile ducts contain mucus or mucus in a state of stagnation, fever may also occur in any case in which there is prolonged or permanent obstruction of the bile duct, as in fibrous stricture, carcinoma of the head of the pancreas, etc. From the occurrence of intermittent febrile attacks and jaundice, with physical signs of enlarged liver, both in malignant disease and impacted gallstone, the differential diagnosis of the 2 conditions becomes an important practical question, especially as modern surgery has rendered the relief of one of them a comparatively secure undertaking. The differential diagnosis is detailed. Finally reference is made to the occurrence of fever in hepatic disease other than carcinoma, gallstone, and abscess, such as bursting of a hydatid cyst, the entrance of lumbricoid worms into the biliary passages, and cirrhosis of the liver. [A. O. J. K.]

3.—Douglas, after a discussion of the nature and occurrence of digestion-leukocytosis, details his observations on digestion-leukocytosis in carcinoma of the stomach. In 11 cases examined digestion-leukocytosis was absent in 6 (54.54%), present in 4 (36.36%), and inconstant in 1 (9.10%). These figures coincide closely with those recently published by Osler and Maerea. Douglas concludes that digestion-leukocytosis is a broken reed on which to lean in the diagnosis of carcinoma of the stomach, and he concurs in the opinion of Marchetti, that digestion-leukocytosis depends essentially upon the digestive and absorptive powers of the stomach, and that it may or may not occur in carcinoma of the organ, according to the degree of impairment of its function. [A. O. J. K.]

4.—Leighton describes his treatment of a case of inoperable carcinoma of the cervix, his aim being to make the patient's life as long and comfortable as possible. Hemorrhage was always controlled by ergot administered internally or in a few cases of excessive flooding, by subcutaneous injection. For the offensive discharge in the early stages he used a solution of sulphate of zinc, but later a carbolic douche (1 to 40) was found more satisfactory. To relieve the pain which became constant

and severe 6 months after the first diagnosis, morphin giving only evanescent relief, Leighton remembering the remark of an old teacher, "If everything else fails the best thing you can do is to turn your patient into an unconscious opium eater," began the use of opium. The tincture of opium administered internally was found to have the most lasting effect. Under its use the patient was able to obtain refreshing sleep and showed a marked improvement in her general condition. The dose, however, had to be constantly increased until in the course of nearly 2 years, from 3 to 5 grains daily it became 200 and 300 grains per diem. He believes that this use of opium undoubtedly prolonged her life more than a year and that the last 18 months were far more comfortable than the preceding 12 had been. She never knew that she had taken any opium. [Very frequently ergot will prove absolutely useless in the control of hemorrhage from cancer of the cervix because of the character of the neoplasm, and nothing but the application of astringents directly to the ulcerating mass, or packing with gauze or cotton saturated in a hemostatic solution, will prove effectual. w.k.]

5.—Leishman thus summarizes the chief advantages of Romanowsky's stain in malaria: The specific action of the stain upon all red corpuscles infected with the tertian parasite; the greater certainty of the detection of very young intracorpuscular forms of all varieties of the malarial parasite; the facility with which the occurrence of a "mixed" infection may be detected; and after a little practice, the ease of its application and the certainty of the results obtained. For details and a slight simplification of the stain and an illustrative plate, reference must be made to the original. [A. O. J. K.]

6.—Sykes, in his concluding lecture, discusses the effects of construction and misconstruction of dwellings on health, and the effects of usage and misusage of dwellings on health. [A. O. J. K.]

7.—Amyot reports an instance of unusual idiosyncrasy to gelsemium—that of a woman, aged 22 years, who after a dose of 10 minims of the tincture experienced blurring of sight, headache, giddiness, and a feeling as if drunk. After 2 hours she passed into a semiconscious condition from which she could be roused to speak without incoherent speech. There were dilation of the pupils without response to light, drooping of the eyelids, feeling of numbness about the mouth, slight spasmodic quivering of the abdominal muscles, and when attempting to walk, a staggering gait. While there were no cardiac symptoms, the pulse was slow and feeble. After an emetic and a night's rest, the patient had fairly recovered. [A. O. J. K.]

8.—Williams thinks that though transitory vaginal hemorrhages in newborn children have hitherto been generally regarded as accidental occurrences, they may be more correctly considered as prototypes of the menstrual flux. This view is supported by the fact that mature Graafian follicles, corpora lutea, and recent ovarian cicatrices have several times been met in the ovaries of newborn children, and even prior to birth, so that congenital ovulation may be regarded as an established fact. [w.k.]

9.—Stanwell records a case of a woman, aged 46 years, who drank a half pint of turpentine without evidence of serious turpentine poisoning following. A half-hour after the ingestion of the turpentine, a stomach-tube was passed and almost all of the turpentine was recovered. The only clinical evidences were slight redness of the fauces, slight epigastric uneasiness for a short time, and a violent odor to the urine, which was otherwise normal. [A. O. J. K.]

10.—Hepworth records the case of a man, aged 42 years, who complained of irregularity of the cardiac action, precordial distress, pain in the left side, dyspnea, which with a pleural friction led to the diagnosis of pleuritis. About a week later he was suddenly seized with intense pain in the right side, rapid breathing, fever, expectoration of blood, and examination revealed a patch of tubular breathing. This was attributed to pulmonary infarction. Later there occurred several similar attacks. At the end of a month the patient suddenly collapsed, but finally rallied. Later there occurred marked edema of the right leg, and then of the left leg. Ultimately he improved and was able to resume his occupation. The interesting points in the case were the entire absence of cardiac murmur, the insig-

nificance of the physical signs in comparison with the symptoms, and the recovery of the patient. The diagnosis seemed to narrow itself to **malignant endocarditis**, as it was otherwise impossible to account for the numerous symptoms evidently due to embolisms. [A.O.J.K.]

11.—Gillam reports a case of a woman, aged 73, suffering great difficulty in breathing because of a **large ovarian cyst**. As she positively refused any radical operation, relief could be obtained only by tapping, to which she at length consented. In the course of 4 years this was repeated 151 times and about 1,500 pints of fluid were drawn off. There was undoubtedly adhesion between the cyst wall and the abdominal wall at the time of the first tapping which minimized the risk incurred. This instance shows that in such cases, when operation is refused, paracentesis for relief of tension may have to be performed an almost incredible number of times; and that, despite the dangers run in such a method of treatment, life may be prolonged in comparative comfort for a considerable period. [W.K.]

12.—Bleasdale reports the case of a man, aged 23 years, suffering with **diffuse scleroderma** of 5 years' duration. The trouble commenced with rheumatism in the hands and feet, accompanied with considerable swelling about the knuckles. At the end of several weeks it was noticed that the skin of the arms and legs was becoming hard and tense. At the time of observation the clinical picture was typical, the skin being firm, devoid of wrinkles, and tightly drawn over the bony prominences, where there was marked tendency to the formation of unhealthy-looking ulcers. The patient ultimately succumbed to pulmonary tuberculosis. [A.O.J.K.]

The Lancet.

March 16, 1901. [No. 4046.]

1. Topographical Anatomy of the Abdominal Viscera in Man. CHRISTOPHER ADDISON.
2. The Treatment of Tuberculous Peritonitis. I. BURNEY YEO.
3. Some Personal Experiences of the Epidemic of Enteric Fever among the Troops in South Africa in the Orange River Colony. H. H. TOOTH.
4. Clinical and Pathological Relations of the Chronic Rheumatic and Rheumatoid Affections to Acute Infective Rheumatism. ARCHIBALD E. GARROD.
5. Toxicological Detection of Arsenic and the Influence of Selenium on Its Tests. WILLIAM HENRY WILLCOX.
6. Septic Disease in Graduated Attacks in the Same Patient. J. SNOWMAN.
7. Parotitis after Abdominal Section. BERTRAM ADDENBROOKE.
8. Dorsal Dislocation of the First Phalanx of the Little Finger. EDWYN M. RIDGE.
9. Serum Treatment of Diphtheria on the Fourth Day of the Disease. RALPH S. MCD. PULLEN.
10. A Case of Recurrent Appendicitis Complicated by General Serous Peritonitis and Effusion. W. G. SPENCER.
11. A Case of Lateral Lithotomy successfully Performed in a Small Boy for the Removal from the Bladder of a Stone of Unusual Dimensions and Weight. T. VINCENT JACKSON.

1.—In view of the well-established fact that for operations of surgery on the abdomen any method of determining the position of the viscera and their relation to each other should be as simple as possible and applicable to a body of any size or position, Addison presents a system of careful **mapping-out of the abdominal viscera** in their relation to clearly defined, uniformly-proportioned surface lines in order to demonstrate the manner in which the abdominal viscera alter their position or are displaced when they or the neighboring parts are enlarged or atrophied. [O.L.]

2.—Yeo, in a lecture on the **medical treatment of tuberculous peritonitis**, directs attention to the fact that primary tuberculous peritonitis is probably not so infrequent as is commonly held, and suggests that it may result from the ingestion of infected milk or infected meat, the bacilli being absorbed by the superficial lymphatics of the intestinal mucous membrane and attacking primitively the serous membrane. He reports 3 rather acute cases, occurring in young persons (between the ages of 10 and 20 years) 1 of which is believed to have been traced to the use of infected milk. The patients were given a

pill consisting of a quarter of a grain of iodoform and a half minim of creasote thrice daily, and an ointment consisting of equal parts of iodoform ointment and cod-liver oil was rubbed on the abdomen twice daily. The treatment was persisted in (in 1 case for 3 months), with recovery in each instance. He values highly the surgical treatment of tuberculous peritonitis (to which 1 of the patients was subjected) but he believes that it is inappropriate in some cases, and may be undertaken too early in other cases; the medical treatment, on the contrary, cannot be begun too early. He believes that when iodoform is rubbed on the skin of the abdomen iodine enters the blood, and if the former be regularly applied the latter is continuously eliminated by the secretions, including the secretions of the serous cavities. As these do not pass out of the body as the secretion of the kidneys does, they must in the course of time become somewhat richly charged with iodine compounds, at any rate sufficiently so to act as antitoxic to the tubercle toxin or antibacterial to the tubercle bacillus. This opinion is supported by clinical and laboratory investigations. He suggests that in our enthusiasm concerning antitoxins of animal origin we should not neglect the study of those to be found in the mineral and vegetable world. [A.O.J.K.]

3.—Tooth, in detailing some personal experiences of the **epidemic of enteric fever among the troops in South Africa, in the Orange River Colony**, discusses the origin of the epidemic, the dissemination of the disease, the general precautions taken to limit the spread of the disease, preventive inoculation, and the treatment in hospital. The disease is believed to have originated in the Modder river camp as the consequence of drinking contaminated water, that may have become infected from Kimberly. The dissemination of the disease is attributed to infection of the drinking-water, sandstorms, the agency of flies, and possible personal infection from man to man. Comment is also made of the probable effects of diseases antecedent to typhoid infection, as the onset of many of the cases of typhoid fever appeared in the course of dysentery. To prevent the spread of the infection certain well-known sanitary measures were adopted. Some interesting and encouraging statistics relative to preventive inoculation are given, but it is admitted that the procedure has not yet had a fair trial and its value is undetermined. With regard to the treatment, it was found advantageous as well as necessary in some cases to permit a more liberal diet than milk alone; alcohol was used most sparingly; digitalis and strychnin were of the greatest value. Headache and insomnia were usually relieved by phenacetin; for the insomnia, however, morphia was sometimes necessary. For the diarrhea, bismuth carbonate or bismuth salicylate and chlorodyn proved the most useful drugs, supplemented if necessary by suppositories of $\frac{1}{2}$ of a grain of morphia. [A.O.J.K.]

4.—Garrod, in a discourse on the **clinical and pathologic relations of the chronic rheumatic and rheumatoid affections to acute infective rheumatism**, pleads for a more exact use of the terms, rheumatism, rheumatoid, etc. He details what he understands by rheumatoid arthritis or osteoarthritis, under which are included 3 or 4 clinical entities, of which he relates instances, and which are probably distinct in nature the one from the other. He discusses the resemblance of rheumatoid arthritis in children to the fusiform variety of the disorder as it occurs in adults, and then speaks briefly of the results of certain postmortem examinations. Relative to the question whether or not rheumatoid arthritis, or the diseases included under that name, stands in any direct relation to acute rheumatism, while admitting the occurrence secondary to acute rheumatism, gonorrhoeal rheumatism, and even gout, of a chronic joint-affection clinically indistinguishable from the fusiform variety of rheumatoid arthritis, he believes that in the great majority of cases rheumatoid arthritis of any form appears as a primary malady and presents its characteristic features from the onset and that more often than not the patient has not suffered from any troubles that are suggestive of a truly rheumatic origin. With regard to the abarticular manifestations of rheumatism, such as endocarditis, pericarditis, etc., he believes that they are not more likely to be encountered in those the subject of rheumatoid arthritis than in those not thus affected. With regard to the nature of the disorder his opinion is well summed up in the

statement that of one thing only is he certain, and that is that he knows far less about the pathology of rheumatoid arthritis than he thought he did 10 years ago. [A.O.J.K.]

5.—Willecox, in a discussion of the **toxicologic detection of arsenic and the influence of selenium on its tests**, considers some points of importance in connection with the Marsh and Reinsch tests and the influence of selenium on them. He writes on the nature of the white deposit formed during the Marsh test, the prevention of the white deposit, the influence on the delicacy of the Marsh test when substances are introduced into the heated portion of the tube (within the clay chimney), and the influence of selenium on the Reinsch and Marsh tests. As the result of his investigations, he believes that the cases of arsenical poisoning recently found to be due to contaminated beer from Manchester, England, could not have been due to selenium primarily and arsenic secondarily, as has been suggested. [A.O.J.K.]

6.—Snowman reports a case of **septic disease in graduated attacks** in a woman, aged 34 years, at the time of first observation. She was then lying-in with her sixth child and had 3 or 4 severe rigors between the third and sixth days—her temperature rising to 105°F. Convalescence, however, was established normally, and the case was regarded as one of puerperal pyrexia of uncertain origin. About 2 years later the patient again became pregnant and aborted at the seventh week. She was again affected with rigors, high temperature (104°F), profuse sweats, and suppuration of several local bruises. Following curetting and irrigation of the uterus and incising of the suppurative foci, recovery ensued. At the end of a year and a half she again became pregnant but aborted at the end of the fifth week. There followed a repetition of the septic manifestations and in addition suppurative processes in different parts of the body, including several of the joints. Eventually, however, she recovered. It is thought that the patient's tissues possessed the faculty of producing an antitoxin inimical to the streptococcus; on the first 2 occasions this was produced sufficiently rapidly to overwhelm the coccus. On the last occasion, however, this was not the case, and general infection ensued. [A. O. J. K.]

7.—Addenbrooke makes a few supplementary remarks concerning several cases of **parotitis occurring after abdominal section** previously reported by Elder and himself. [A. O. J. K.]

9.—Pullen reports briefly a case of **nasal and pharyngeal diphtheria** occurring in a child, aged 4 years, and treated successfully by the administration of antitoxin some 96 hours after the invasion of the disease. [A.O.J.K.]

10.—Spencer records a rare case in which the diagnosis made was **general septic peritonitis following recurrent appendicitis and perforation**. An iliac incision revealed nothing abnormal outside the peritoneum. On incising the peritoneum there was a copious flow of a straw-colored serous fluid. The appendix was found freely floating over the pelvic brim and was not thickened. The appendix was excised and a rubber tube passed through the wound down into the pelvis drained serous fluid away freely for 3 days; the tube was removed on the fourth day. The pulse reached 130 on the first day, but became normal on the fifth. The patient had an attack of basic pneumonia 13 days after the operation and 1 month after was discharged apparently quite well. There was nothing found to account for the general serous peritonitis unless the attack of pneumonia indicated an individual predisposition to catarrhal inflammation. [O.L.]

11.—Jackson confirms by experience and observation in operative treatment of **vesical calculi** the surgical dictum that every stone weighing 2 ounces and over should be regarded as a large stone and treated by **lithotomy** rather than by lithotripsy. [O.L.]

Journal of the American Medical Association.

March 30, 1901. [Vol. XXXVI, No. 13.]

- Recent Advances in Dermatology which are of Service to the General Practitioner. L. DUNCAN BULKLEY.
- Hyperacidity a Cause of Skin Disease. W. R. INGE DALTON.
- Acute Suppurative Folliculitis of the Scalp. WM. S. GOTTHEIL.
- Operations for Injuries to the Median and Ulnar Nerves. R. BRINDLEY EADS.

- Pathological Conditions found in Meat Inspection. D. E. SALMON.
- The Treatment of Prolapse of the Rectum. JOSEPH M. MATTHEWS.
- Sanitary Conditions of Peking. JOHN INGLIS.
- Thyroid Tissue in the Larynx and Trachea. OTTO T. FREER.
- Open Treatment of Suppuration of the Kneejoint. W. J. MAYO.
- Quantitative Tests for Proteolysis. A. L. BENEDICT.
- The Rage for Rapid Operating and the Importance of Saving Time in Surgical Operations. JOHN S. MILLER.
- Veneral Disease as a Social Problem. W. C. GATES.
- Circumcision in Restricting the Spread of Syphilis. HAROLD N. MOYER.
- Report of the Special Committee of the Section on State Medicine of the American Medical Association Appointed to Inquire Whether and When the Gonorrhoea may be Permitted to Marry, and Whether the Matter is a Proper One for Regulation by Statute.
- Purulent Otitis—Its Treatment and Prevention by the Family Physician. H. GRADLE.

2.—**Hyperacid chyle** cannot be rendered sufficiently alkaline in the duodenum for physiologic metabolism. Fermentative changes culminate in cellular stasis, cutaneous obstruction and peripheral atrophy. The duodenum's close relation with the skin is shown in ulceration following cutaneous burns. It is the paramount reflex center. Eczemas are healed by intestinal antiseptics in combination with drugs acting more directly on the skin. [H.M.]

3.—The variety described is pyogenic in character, universal in distribution, with complete loss of hair but not resulting in atrophy. There are but two other instances in literature, designated as **impetigo pustulosa**. [H.M.]

4.—One case of injury from **pressure of cicatrix and 4 from traumatic division of the median and ulnar nerves** are cited. The main conditions of successful operation are a sufficiently long incision along the nerve's course, freshening of the ends until healthy fibrillae are reached, accurate approximation by chromicized catgut with fine silk for the sheath, relaxation suture or position to overcome tension, nerve stretching or flap operation for loss of substance, strict asepsis with avoidance of the irritation of antiseptics when possible. Tables show the majority of operations are followed by cure and the majority of the remainder bring improvement. [H.M.]

5.—**Federal meat inspection** has been in operation 9 years. Condemnations per 10,000 are: cattle, .48; sheep, 8.1; swine 37. The ruling as to tuberculosis is more stringent here than abroad and the disease is less frequent. There are fewer tubercular swine than cattle but the disease is more generalized and carcasses must be more carefully scrutinized. Not only injurious but repugnant meats are rejected, i. e., those having non-transmissible diseases and those advanced in pregnancy. No microscopic examination is made. Of trichinosis cases in Germany 51% come from inspected meat. Non-prevalence of the disease here is due to different methods of curing and cooking the flesh. All butchers of a town should slaughter at the same place and offal feeding should be abolished to prevent the propagation of the echinococcus. [H.M.]

6.—**Fowler's method of amputation** is described, and **Noble's colopexy**. Matthew's operation for an old and large prolapse with much hypertrophy of tissue was a 6 inch incision in the left inguinal region, the reduction of the mass by an assistant whose fingers lifted and held the bowel taut against the abdominal wall while a 3 inch running suture of chromicized catgut was inserted, anchoring the gut to the wall. The operation was permanently successful. [H.M.]

8.—Freer reports the tenth recorded case of **extension of thyroid tissue to the larynx or trachea**. In his own case the swelling was diffuse and subglottic. Only partial operation for removal was submitted to; tracheotomy was performed for dyspnea. [H.M.]

9.—Reference is made to C. H. Mayo's case of **open treatment of suppurating kneejoint** reported in 1895. Ankylosis does not follow in all cases, sometimes from 15% to 60% of normal motion being retained. As ankylosis is inevitable without this operation, its possibility is never a contraindication. When compared with other methods the subsidence of the phlegmonous process is astonishing. [H.M.]

12.—The solution of the problem lies in the attainment of

social purity through more thorough education in sexual hygiene and physiology in medical schools and of children in their homes, and in making the breeding of offspring not an incident of sexual gratification, but the object of intelligent desire, thus changing the character of inherited tendencies in the race. [H.M.]

13.—Statistics are given showing the frequency of chancre on prepuce and furrow and the comparatively low percentage of syphilitics among Jews. Circumcision is devoid of mortality and will lessen syphilis by 50 to 75%. [H.M.]

14.—The report specifies the questions sent to gynaecologists as to the proportion of cases of sterility and pelvic inflammation due to gonococci and records the widely divergent answers. There is unanimity among the genitourinary specialists as to the curableness of gonorrhoea, but diverse opinions as to the time required. All agree that tests to determine cure should be searching and repeated. Sentiment as to legal restriction on marriage is divided. Those in favor are not agreed as to methods. Public sentiment is not ready to enforce regulations and needs education on sexual matters by able physicians. This is best given privately. The committee emphasizes the necessity of every physician treating each case thoroughly until cured and cultivating general intelligence as to the insidious, remote and most grave consequences of the disease. [H.M.]

15.—Paracentesis should be performed promptly during the serous stage to prevent pus-formation. Before operation the meatus should be sterilized by watery carbolic solution and after puncture drainage established by a strip of gauze powdered with boric and salicylic acid and retained by a gauze pad and adhesive plaster. Retention of adenoids and enlarged tonsils, misuse of the nasal douche and snuffing up of fluids are frequent causes of otitis media. [H.M.]

Boston Medical and Surgical Journal.

March 28, 1901. [Vol. CXLIV, No. 13.]

1. Embryological Basis of Pathology. CHARLES SEDGWICK MINOT.
2. New Method of Treating Fractures. LEONARD F. HATCH.
3. Mumps in Pneumonia. Boroglyceride. CHARLES W. DULLES.
4. Brief Summary of 9 Cases of Lobar Pneumonia Treated by Ice Pack. GEORGE L. COLLINS.

1.—Minot, in an able paper read at the Middleton-Goldsmith lecture, presents some of the more important conceptions derived from embryologic study in regard to the processes of cell differentiation and suggests the bearings of these conceptions on the problems of pathology. It is impossible to review the paper adequately in our limited space. [G.C.C.H.]

2.—Hatch, in the treatment of fractures, adopts as principles; first, to convert all compound fractures into simple ones and second, to operate on simple fractures, making them compound and then apply the first principle, making them simple. In his cases he has used drainage only once, in a compound fracture of the thigh. Fractures treated by the operative method are comparatively devoid of pain. The sharp spicules of bone sticking into the soft parts and the swelling are the principal causes of pain, and both of these are avoided by operation. In operating hold the extremity in a vertical position for a few moments, then apply a rubber constrictor. Fit a sterile anterior and posterior splint of any suitable material. The points of selection for the incision are, for the tibia along the crest, for the femur on the outer side of the thigh, for the radius behind the supinator longus, for the ulna along the ulnar side of the arm where the bone is most superficial, for the humerus along the outer side of the arm. Make a good free incision, wash out all clots and debris, removing shreds of soft tissue and fragments of bone. Secure perfect coaptation, removing all bone that might interfere. Apply one splint before closing wound; use catgut sutures without drainage; apply second splint and bandage. On seventh or eighth day apply ambulatory splint or plaster cast. The procedure shortens the repair process at least a week; reduces chances of deformity and nonunion to a minimum; relieves pain and swelling, etc. [G.C.C.H.]

3.—Dulles praises boroglycerid in inflammatory swellings especially in incipient boils and carbuncles. [G. C. C. H.]

4.—Collins summarizes 9 cases of lobar pneumonia treated by the ice pack and concludes that the treatment had no particular effect in either shortening or prolonging the duration of the physical signs, these clearing up the fourteenth day. In only one case did the pack cause discomfort, and in no case was the crisis accompanied by dangerous collapse. The pack has been used to abort beginning cases, in cases with well marked signs and in cases showing resolution. Contemporary signs of bronchitis were not considered contraindicatory. High temperature and not physical signs was the indication for application and lowered temperature for removal. The white count invariably fell with the temperature but reached normal in no less than one week after the temperature was normal. [G.C.C.H.]

Medical Record.

March 30, 1901. [Vol. 59, No. 13.]

1. Some Fallacies of Therapeutics. GEORGE L. PEABODY.
2. Ionization in Its Physiological and Pathological Relations. MARTIN H. FISCHER.
3. Creasote in Pneumonia: A Resume. J. L. VAN ZANDT.
4. Orchid Culture in Its Relation to a New, Improved and Completely Effective Method of Disinfection. J. M. W. KITCHEN.

1.—Popular opinions as to certain drugs are disputed. Peabody believes bitter substances in pills are inert and aid appetite and digestion only by their effect on taste and the secretion of saliva and through the alcoholic vehicle. Boric acid is too much despised. Though not antiseptic, bacteria cannot develop in 2.5% solutions and it is useful in infected wounds, especially when germs have penetrated beyond reach of bichlorid and carbolic acid as it is more diffusible and less poisonous than these. Tannin in weak solution causes swelling of organic tissues and in any solution, dilation of capillaries by direct action on the walls. No diminution of secretion is observed, nor stypitic effect after absorption. There is no proof that ergot contracts pulmonary vessels and, as it increases pressure, it is contraindicated in pulmonary hemorrhage. Lithium is valueless as a uric acid solvent. Arsenic in ordinary lethal doses is not preservative, but aids decomposition through inflammatory changes. Calomel is a hepatic sedative. It does not aid the removal of inflammatory products of serous membranes; neither will potassium iodid, which is useless in arthritis deformans, gout and lead poisoning. Creasote benefits in tuberculosis only by improving intestinal digestion. [H.M.]

2.—The article begins with a review of the gradually developed theory of the dissociation of electrical conductors when in solution into radicals with opposite affinities. The second part sums up the evidences that in dealing with the action of dilute solutions of inorganic on organic substances we deal with the action of anion or kation alone or with these in conjunction with an undissociated remainder. The theory is exemplified (1) in the action of electrolytic products on germinating seeds; (2) on muscle tissue in relation to absorption of water; (3) in the analogy of (2) with the combination of water with soaps; (4) in the discovery that striped muscle fiber contracts rhythmically only in solutions of electrolytes; (5) in the toxic effect on protoplasm of ions, even those of NaCl, when present in pure solution, protoplasm being probably a proteid in combination with several ions; (6) in the occurrence of salt-albumin compounds whose stability is explainable only by supposing combination with both ions of a given salt. Electrical conductivity in living tissue is dependent upon migration of ions. The taste of a solution of an electrolyte depends upon the contained ions, and upon the development of the latter hangs the germicidal action of mercurial and other salts. The characteristics of dissociable organic compounds apparently at variance with the laws of ionization is explained by their supposed transformation in living tissues into compounds in harmony with those laws. [H.M.]

3.—Van Zandt gives his own experience and a resume of the literature of creasote administration in pneumonia, showing rapid control or abortion of symptoms and physical signs, with relapse on too early discontinuance of the drug. [H.M.]

New York Medical Journal.

March 30, 1901. [Vol. LXXIII, No. 13.]

1. Congenital Dislocation of the Shoulder, with Report of 2 Cases of Dislocation Posteriorly. DANIEL W. MARSTON.
2. The Pathology of Intrauterine Death. NEIL MACPHATTER.
3. The Comparative Pathology of the Jews. MAURICE FISHBERG.
4. The Causes and the Significance of the Obstetric Hemorrhages. J. CLIFTON EDGAR.
5. Tropical Dysenteries. STEPHEN M. LONG.
6. A Dressing for Colles' Fracture. CHARLES L. DEMERITT.
7. A Requisite to Increase the Usefulness of Ambulances. FREDERICK GRIFFITH.

1.—Marston concludes his article on congenital luxation of the shoulder as follows: It is of the utmost importance to distinguish between cases of dislocation and true obstetrical paralysis. The treatment of the former condition is immediate reduction; by manipulation if possible, otherwise, operative. Every infant should be carefully examined at birth, for it is at this time that reduction is easiest performed. From the facts that a fracture of the glenoid cavity has often been found, and that the history of nearly all cases shows difficult labor, he is led to believe that these cases are not of paralytic origin, or due to nondevelopment, as affirmed by Scudder, but are due to traction made in the axilla by the finger or vectis, or to the arm being caught in some unusual position and dislocated by the contraction of the uterus. Paralysis may be coincident, but it cannot be a primary factor in causing dislocation posteriorly. The prognosis of the operative treatment is excellent. The earlier the operation the more hopeful the outlook. Like congenital dislocation of the hip, these cases of the shoulder are little benefited by mechanical treatment. [G.C.C.H.]

2.—Will be abstracted when concluded.

3.—Will be abstracted when concluded.

4.—Edgar divides obstetric hemorrhages into antepartum, intrapartum, and secondary postpartum hemorrhages. In the first he enjoins careful confirmation of diagnosis from examination of symptoms since treatment must vary widely with the cause. Intrapartum hemorrhages may be caused by premature separation of the placenta, rupture of uterus or cervix, fibroid tumors, malignant disease, uterine inertia, lacerations of genital tract, insufficient contraction of lower uterine segment, partial or complete inversion, etc. Postpartum hemorrhages he defines as those occurring between 6 hours after the completion of the third stage of labor and the completion of the normal period of involution, 6 weeks. They depend almost wholly upon the management of the second and third stages of labor and on the care the woman receives during the first few hours or days of the lying-in state. The article is very synoptic and should be read in the original for a knowledge of all the points. [G.C.C.H.]

5.—Long holds that dysentery is a disease that should be well studied since there is embraced in this vague term 4 or 5 or more different types, and as a war and famine disease it has for centuries been one of the deadliest enemies any people can encounter, as may be seen by comparing the records of deaths from wounds and those from dysentery in war statistics. He gives a brief description of the etiology, symptoms, pathology, sequels, etc., of 5 types seen in the Philippine Islands and considers (1), the fulminating catarrhal dysentery, the most fatal, as no treatment has availed to save the patients, who die in 4 to 7 to 11 days. Its causation has been ascribed to Shiga's bacillus and the disease is confined to the large intestines, the entire tract of which on autopsy presents one homogeneous necrotic mass. The solitary glands are abolished and no ulcers visible macroscopically; (2) simple acute dysentery often associated with malarial fever and in the beginning easy to cure; (3) the anebic type which is prone to cause liver abscesses and is due to the ameba, to *Trichomonas intestinalis*, *Cercomonas intestinalis* complicated with the presence of *Bacillus pyocyaneus*, *Staphylococcus aureus* and *S. albus*; (4) chronic dysentery; (5) gangrenous and diphtheric—which is generally fatal from perforation, peritonitis or from toxemia. The sequels are many and grave. In his opinion alcohol should not be regarded as a prophylactic but rather the reverse. The proper treatment of dysentery requires not only an extended

knowledge of the action and nature of drugs but also of the different types of the disease and this calls for an acquaintance with the use of the microscope and the methods of identifying bacteria and infusoria, but he mentioned the 4 drugs easily carried and procurable in any part of the world which in his experience have been most effectual—calomel, magnesium sulfate, bismuth subnitrate and ipæcaquanha, and gives a detailed account of their administration. [O.L.]

6.—DeMeritt describes a simple splint for Colles' fracture, which can be made in a few minutes with materials and tools that can be found anywhere and possesses the advantage of being always an exact fit. [O.L.]

7.—Griffith suggests a thermometer and heat appliance as necessary in the equipment of an ambulance with a view to combating shock, especially in cases demanding immediate operation. He details several methods in which this may be done. [G.C.C.H.]

Medical News.

March 30, 1901. [Vol. LXXVIII, No. 13.]

1. Report of the Committee of the Medical Board of Bellevue Hospital, Appointed January 2, 1901, to Investigate and Report Upon Questions Relating to the General Administration of the Hospital.
2. Vaccination, Clinically Considered. FRANK S. FIELDER.
3. The Method of Preparation of Vaccine Virus in the Vaccine Laboratory of the New York City Health Department. J. H. HUDDLESTON.

1.—The Committee of the Medical Board of Bellevue Hospital finds the reception office utterly inadequate and that attendance there by the house staff seriously interferes with their duties elsewhere. The death-rate is increased by ambulance cases from other hospitals but while the average mortality of all the city hospitals is 9.44% that of Bellevue is 7.08%. The insane pavilion should be under the care of a qualified and paid physician with a paid assistant. Pupil nurses are not fitted for care of the insane. The alcoholic wards are overcrowded. Repeaters should be sent to the workhouse. Epileptics, cases of surgical mania, etc., are assigned for lack of room to the alcoholic wards. Recently completed pavilions have serious errors of design and construction. The building for lying-in cases is utterly unfit. Those in charge of the dispensary are unfit for the position; a paid superintendent of this department should be appointed. Proper food for convalescents is lacking. Nursing outside the insane and alcoholic wards is satisfactory. The defective execution of laws is due to division of authority. The superintendent should have supreme control over nurses. The pay, accommodations for and character of the "help" should be improved. The quarters of the house staff should be enlarged. The per capita allowance should be increased. [H.M.]

2.—The clinical course of vaccinia with variations and complications is described, and statistics as to immunity conferred to smallpox and vaccination are given. Methods of inoculation are discussed. Fielder believes natural immunity to vaccination is practically unknown; atypical primary cases are due to poor virus; a dark purple areola is due to mixed infection; generalized vaccinia, aside from autoinoculation is rare; the duration of immunity to smallpox is extremely variable, but one immune to smallpox may be successfully vaccinated; revaccination should always be performed in an epidemic; the protective power is in proportion to the quality of the scar, and is as effectual as smallpox itself against subsequent attack; the virus before issuance should be tested on human subjects previously unvaccinated, and retested monthly; vaccination shields are often harmful; infected sores should be treated by the physician. [H.M.]

3.—Female calves, healthy and with good quality of skin are chosen. An autopsy follows vaccination, and if this shows disease the virus is rejected. Tuberculosis and skin diseases are the most important. The posterior abdomen and inside of the thighs are shaved, cleansed and washed with alcohol, stronger antiseptics roughening the skin too much. Linear incisions $\frac{1}{4}$ inch apart over the shaven area are made and humanized virus or bovine glycerinated virus at least 2 months old is rubbed in. The virus is collected on the fifth to the seventh day and emulsified with diluted glycerin, tested on children and sealed. [H.M.]

Philadelphia Medical Journal.

March 30, 1901. [Vol. 7, No. 13.]

1. **Atmokausis: Its Value in the Treatment of Severe and Uncontrollable Uterine Bleedings (Uterine Arteriosclerosis.)** SAMUEL W. BANDLER.
2. **The Coexistence of Carcinoma and Fibroma in the Corpus Uteri.** W. A. NEWMAN DORLAND.
3. **Shock in Abdominal Operations.** FENTON B. TÜRK.
4. **A Practical Modification of the Phenylhydrazin Test for Glycosuria.** ROBERT N. WILLSON.
5. **How to Prevent Stammering.** G. HUDSON MAKUEN.
6. **Bell's Palsy Associated with Complete Anesthesia in the Territory of the Fifth Nerve.** JAMES HENDRIE LLOYD.

1.—Bandler advocates the use of **atmokausis**, since the results in his own experience have been uniformly excellent. He says, however, that the limits and absolute indications for this method are not yet defined. The generally accepted indications are those followed by Fehling, who has obtained good results in bleeding due to endometrial changes, and in climacteric bleedings. On the fourth to sixth day after curettage he uses atmokausis for 5 to 20 seconds at a temperature of 110°–115°C. This method was used in the clinic of Dührssen generally for uterine bleedings, not controlled by the curet and by local treatment. The procedure in treating patients with this method is as follows: A positive diagnosis of the condition at hand must be made in all cases. Dilatation of the cervix is an all important preliminary for many reasons. It permits the examination of the uterine cavity with the finger. If no local changes are present, and if there is no retention of fetal membranes, not infrequently vaporization suffices without previous curettage. Retained membranes and malignant changes must be excluded before using this method. Only the finger can prove absolutely that the uterus is empty, and only curettage aided by examination with the finger makes it certain that we have removed those portions of the endometrium which are abnormal, and which are to be examined for malignant changes. In addition, dilatation of the cervix changes the three cornered uterus into a circular canal so that subsequent use of steam affects all parts of the lining equally. In addition, dilatation of the cervix permits of the use of a larger uterine tube, so that when the metal catheter, through which the steam passes, is introduced there is sufficient room in the uterine tube for the exit of the liquefied steam, and coagulated blood and serum. Lastly and equally important is the fact that a dilated cervix permits of a readier natural drainage of the uterus during the subsequent period. A necessary preliminary, then, not alone for the sake of a positive diagnosis, but for the other reasons mentioned, is dilatation of the cervix, for which, in all cases when feasible, laminaria are used. For performing vaporization narcosis is never necessary, since the uterus loses its sensitiveness on the contact of steam. It is only when this is applied to the cervix that some pain is experienced. While the value of atmokausis in other conditions is still a question of personal experience, there is no doubt that uterine bleedings, especially the bleedings of climacterics, and the uncontrollable hemorrhages occurring at this period, and in earlier years, are positive indications for its use, especially when curettage and other local methods are of no avail. [w.k.]

2.—Dorland reports an interesting case of the **coexistence of carcinoma and fibroma in the corpus uteri**. He performed a hysterectomy upon the patient primarily for the relief of carcinoma of the fundus uteri, the diagnosis having been made from a microscopic examination of the scrapings removed 2 weeks before the major operation. The uterus at the time of the abdominal section was found to be infiltrated with small, nodular, fibromatous growths, one of which, submucous in situation and projecting well into the uterine cavity, had become involved in a cancerous process. He presents the result of the pathologic examination of the specimen which was made by Drs. Kirkbride and Deal, reviews the literature of cancerous degeneration of uterine fibroids, and sums up the histology and pathology of uterine fibromas and myomas, concluding that it is possible for fibroma and carcinoma of the

uterus to coexist 3 distinct ways: (1) Fibromyoma of the corpus uteri with carcinoma of the cervix; (2) fibryoma of the corpus uteri with the associated adenocarcinoma of the endometrium; and (3) true cancerous degeneration of the adenomyoma. [w.k.]

3.—Türk claims that 2 important factors have not been sufficiently investigated. One is the **decreased resistance against infection when shock is present**. The second is increased resistance against infection produced by the internal application of heat within the stomach or abdominal cavity. To determine the changes of the blood during shock, the serum of animals in shock was injected into healthy animals. Experiments on 30 animals showed that the ones thus injected soon manifested the symptoms of shock. The conclusion reached is that shock is connected closely with the phenomena of altered metabolism. [A.G.E.]

4.—Willson describes 2 original modifications of the usual **phenylhydrazin test for glycosuria**. Both are considerably shorter than the older methods and the author claims equal if not greater sensitiveness. In the first method, which is a modification of Williamson's, instead of placing the tube in the rack after boiling for 2 minutes, a drop of the mixture is placed upon a slide where it is allowed to cool and then examined under a low power. Typical crystals of phenylglucosagon are seen to form if the reagents have been thoroughly mixed and dissolved before boiling. In the second method the author prefers to boil the solution in a test-tube, using a beaker containing water as a water-bath. After boiling from 5 to 10 minutes a drop of the solution is examined under the microscope as before. [H.H.C.]

6.—Lloyd reports a case of **Bell's palsy complicated by complete anesthesia** in the region of the fifth nerve, the former being due to a neuritis and the latter probably to hysteria, since the anesthesia extends beyond the territory supplied by the fifth nerve. [H.H.C.]

Sundry German Journals.

1. **The Surgical Treatment of Carcinoma of the Stomach.** KONRAD BRUNNER (Correspondenz-Blatt für Schweizer Aerzte, February 15 and March 1, 1901).
2. **The Treatment of Tuberculosis of Joints.** O. HILDEBRAND (Correspondenz-Blatt für Schweizer Aerzte, January 15, 1901.)

1.—Brunner gives his experience during the years 1896 to 1900 in the **treatment of carcinoma of the stomach**. During this time he had under observation 47 cases of carcinoma of the stomach and he has performed 8 resections of the stomach and 9 gastroenterostomies. With regard to resection of the stomach he states that in none of the cases had an early diagnosis been made; that is to say, the growth in all cases was extensive, almost to the limit of possible operation. In 2 cases carcinomatous glands were removed; in one case the abdominal wall and the mesocolon were affected, although not extensively; in another case the disease had extended far into the duodenum; in still another case the lesser curvature was affected high up. One patient was reduced almost to a skeleton, and was operated upon in 2 stages; 1 patient was suffering from chronic bronchitis. One of his fatal cases was in a woman aged 67 who had atheromatous arteries with a very irregular pulse. The conditions for operation were decidedly unfavorable in all except 2 of the cases. The operations were by both Kocher's and Billroth's method and the time required was from 2 to 3 hours in each case. Of the cases that survived operation, 1 died of recurrence a year later. In 1 death followed a half year later and the cause was unknown; in a third the patient died after a year and 3 months from metastasis; in a fourth case probably from recurrence though no necropsy was made. One patient is living and well 5 months after the operation and 1 is perfectly well 2½ years after the operation. This patient is a woman who was 42 years old at the time of operation. More than half the stomach together with carcinomatous glands were removed. Brunner believes that this case demonstrates the possibility of successful operation even in case the disease is considerably advanced. That the recovery will be permanent in this case is not certain, but with the entire impossibility for successful treatment by any other means and with 2½ years of complete health the operation cannot be considered unsuccessful. Brun-

ner also refers to 2 cases operated upon by Kocher, 1 of whom is living 10 years, the other 5 years after operation and a case operated upon by Czerny with the patient living 7 years after operation. He believes with Kocher that the time has come when we can say that permanent and satisfactory results are possible and that operative treatment is indicated in these cases. The patients in whom gastroenterostomy was performed were all suffering from decided pyloric stenosis at the time of operation and would have scarcely lived a month without operation. In 5 of the cases Wölfler's method was used with 4 recoveries. In 1, death resulted from persistent vomiting after the operation. The 4 remaining cases were operated upon by von Hacker's method and of these 1 died from collapse the day after the operation during an attempt to wash out the stomach and a second died 15 days after the operation without any apparent cause. The gain in length of life in these cases is not very great. None of the patients lived more than a year. However, Brunner considers the operation justifiable in cases in which distressing symptoms of stenosis are present. In other cases he does not favor the operation and believes that it is too frequently performed at the present time. A thorough review of the literature of this subject is given. [M.N.T.]

2.—The treatment of tuberculous joints is quite different in children from that in adults. In children the more conservative methods of treatment are usually advisable because of the possibility of disturbance of growth which may result from more extensive operations. Hildebrand believes that experience has shown the value of iodoform injections. It has a certain influence in inhibiting the growth of the bacilli and by its irritating effect tends to develop the blood vessels and scar tissue, thus limiting the action of the bacilli. He speaks favorably also of formalin injection, but believes that it is too early to say definitely what the ultimate results will be. The formalin destroys the tuberculous tissue and the bacilli and by its caustic action promotes healthy granulation but it is extremely painful and should be preceded by the free use of cocaine. The method of producing venous stasis as was first suggested by Bier is also mentioned favorably. In case the bone is primarily affected these methods are ineffectual. In advanced synovial disease extirpation of the joint-capsule may be necessary. In a large percentage of cases, however, comparatively permanent healing may be secured with a good functional result by the conservative means of treatment. In case these methods fail resection is justifiable but it should be almost never performed at the knee because of the great disturbance in growth; in the wrist, the elbow and ankle very seldom. On the contrary, it may frequently be beneficial in case of severe forms of hip-joint tuberculosis affecting the acetabulum. Amputation and exarticulation are very seldom required in children. Orthopedic treatment is extremely important among the conservative measures. In the treatment of joint tuberculosis in adults the conditions are quite different. The economic standpoint must be considered. A conservative treatment should not be long continued for resection even in the less severe cases gives a certain result with a short confinement under treatment and an excellent functional result. In adults he strongly favors operative treatment and believes that successful results are obtained in from 70 to 80% of the cases. In connection with the local treatment, fresh air, careful attention to nourishment of the patient and the use of certain remedies, particularly tonics, creasote and guaiacal is recommended. In a discussion of this paper Koehler said that a cure in the sense of removing every possibility of subsequent general tuberculous invasion cannot be reached through purely conservative methods. Numerous instances have shown that frequently a long time after conservative treatment with apparent health resulting, operation is demanded because the disease lights up anew. He speaks more favorably of Bier's method of treatment than that by iodoform injection. The only treatment which will produce a radical cure is operative and consists in the complete elimination of the entire tuberculous deposit. This must usually be done by an atypical operation. In the beginning of the treatment operative measures should at least be suggested. The permanent results of total resection of the joints are very favorable, and unfavorable results usually occur because operative treatment is undertaken late, after the disease is far advanced. [M.N.T.]

Bulletin of The Johns Hopkins Hospital.

February, 1901.

1. Preliminary Note of a Case of Infection with *Balantidium Coli* (Stein). RICHARD P. STRONG and W. E. MUSGRAVE.
2. Hyperextension as an Essential in the Correction of the Deformity of Pott's Disease, with the Presentation of Original Methods. R. TUNSTALL TAYLOR.
3. Two Examples of Bence-Jones Albumosuria Associated with Multiple Myeloma. LOUIS P. HAMBURGER.
4. Report of a Case of Fulminating Hemorrhagic Infection due to an Organism of the *Bacillus mucosus capsulatus* group. GEORGE BLUMER and ARTHUR T. LAIRD.

1.—The authors give a brief historic sketch of the occurrence of the infusorial parasite *Balantidium coli*, Stein., of which some 20 cases only are on record. The case observed by them had a history of continuous diarrhea, growing steadily worse for a period of 4 months. For some days before death each drop of the patient's feces contained over 100 of the parasites. [C.S.D.]

2.—Taylor describes in an illustrated article two recumbent **kyphotones** adapted to carry out the same mechanical principles of **hyperextension** as secured by his original apparatus, presented to the American Orthopedic Association in 1899. Both of the later devices meet the need of acute or early cases or those with external pachymeningitis with paraplegic symptoms, in which it is detrimental to even sit up momentarily. The article is accompanied by a list of the recent bibliography of Pott's disease. [C.S.D.]

3.—Blumer and Laird describe a fatal case of a relatively rare disease, **fulminating hemorrhagic infection**; due to an organism of *Bacillus mucosus capsulatus* group, of interest on account of the proliferative changes in the lymphatic apparatus of the intestine and on account of the exceedingly rapid course. The organism isolated failed to produce gas in saccharose bouillon and in this respect differed from all those previously described. [C.S.D.]

American Journal of the Medical Sciences.

March, 1901. [Vol. CXXI, No. 347.]

1. The Surgical Treatment of Ascites due to Cirrhosis of the Liver with Report of two Cases. FREDERICK A. PACKARD and ROBERT G. LE CONTE.
2. Splenic Myelogenous Leukemia with Pulmonary Tuberculosis. HENRY L. ELSNER and WILLIAM A. GROAT.
3. Hemorrhagic Typhoid Fever. AUGUSTUS A. ESHNER and T. H. WEISENBERG.
4. A Study of Congenital Sarcoma of the Liver and Suprarenal. WILLIAM PEPPER.
5. A Case of Sarcoma of the Thigh, for which Disarticulation was Performed Through the Hip-joint, with the Formation of a Posterior Flap. JOHN CHALMERS D'ACOSTA.
6. Stereognosis and Allied Conditions. CHARLES W. BURR.
7. Clinical Study of Acute Myocarditis. BEVERLEY ROBINSON.

2.—Elsner and Groat, commenting upon the rarity of the association and referring to the literature on the subject, report a case of **splenic-myelogenous leukemia with advanced pulmonary tuberculosis**, occurring in a man, aged 40 years. Symptoms referable to increase in the size of the spleen and liver were the initial manifestations and were present almost a year before the advent of cough, expectoration, and other pulmonary symptoms. Examination revealed consolidation of both lung apices, a tuberculous ulcer of the pharynx, tubercle bacilli in the sputum, and great enlargement of the spleen and liver. The hemoglobin varied at different examinations from 49% to 64%, the erythrocytes from 2,680,000 to 3,320,000, the leukocytes from 121,500 to 320,000. Myelocytes varied from 16% to 38%, the average being 26%; lymphocytes varied from 4.1% to 7.5%, eosinophiles from 3.5% to 6.5%, polymorphonuclear neutrophils from 55% to 64%, and basophiles from a few to 4.5%. While the blood retained the characteristics of splenic-myelogenous leukemia as the tuberculous process advanced, there was a gradual and steady decrease in the total number of leukocytes, but an increase in the percentage of polymorphonuclear neutrophils, a decrease in the number of myelocytes, and an increase in the number of lymphocytes. There was a decided increase in the elimination of uric acid by the patient. The authors discuss the changes occurring in the lungs in

leukemia and the resemblance they bear to tuberculosis. [A.O.J.K.]

3.—Eshner and Weisenberg report 2 cases of **hemorrhagic typhoid fever**. The first was that of a man, aged 39 years, who on the twenty-eighth day of an attack of typhoid fever, exhibited a hemorrhagic eruption of the legs. The same day the eruption extended all over the body, the blotches being bluish in color, irregular in shape, and from $\frac{3}{4}$ to $1\frac{1}{2}$ inches in diameter. There occurred also an extravasation of blood into 1 cornea, and blood was passed from the bladder and bowel. The man died the following day. The necropsy, in addition to the usual lesions of typhoid fever, revealed hemorrhagic extravasations into practically all the organs and tissues. The second case was that of a man, aged 28 years, who toward the close of the second week of an attack of typhoid fever, developed a peculiar, dark, rusty-red, papular eruption on the chest and abdomen. By the following day it covered the entire chest and abdomen and had spread to the arms and legs. The only other hemorrhagic manifestation was bloody tube-casts. Death occurred the third day after the onset of the eruption. Necropsy revealed the usual lesions of typhoid fever, but no internal hemorrhagic extravasations. It is suggested that possibly the cases represent a type of hemorrhagic purpura occurring in the course of, and perhaps predisposed to, by the typhoid fever. [A.O.J.K.]

4.—Pepper reports a case of **congenital sarcoma of the liver and suprarenal** in a female child aged 6½ weeks at the time of death. A review of the literature revealed reports of 5 cases of striking similarity. The points of interest and similarity are the occurrence of symptoms at or very soon after birth; the early death of the patients, none living longer than 16 weeks; the extreme rapidity of the tumor growth; the sex of the patients—5 being females and the sex of the other not being mentioned; the clinical manifestations—abdominal distention, wasting, absence of ascites, of jaundice, of marked pain, of fever, and of evidences of syphilis; infiltrative proliferation of the sarcoma tissue with practically complete destruction of the entire normal liver tissue; the hemorrhagic character of the growth in the suprarenals; and absence of involvement of any other organs or tissues by the tumor formation. In the case reported as well as in another case the diagnosis was lymphosarcoma; in 3 cases, round cell sarcoma; and in 1 case, myxosarcoma. In 3 cases the tumor was thought to have originated in the liver, in 2 in the right suprarenal. A table of 46 cases of primary sarcoma of the suprarenal is appended by way of contrast; these tumor formations are entirely dissimilar from those the subject of the detailed report. [A.O.J.K.]

6.—Burr, after a thorough discussion of **stereognosis and allied conditions** and the report of 2 illustrative cases, concludes as follows: (1.) The ability to recognize objects by handling them depends upon the integrity of the afferent nerves, the cortical sensory area, and the cortical perceptive area; (2.) disease of either of these will make it impossible for the patient to recognize objects by handling them; (3.) we may dismiss from consideration here the inability to recognize objects because of disease of the sensory nerves or of the sensory tracts in the spinal cord, medulla, and pons. Such inability is due to anesthesia of one or more types; (4.) there is a distinct area of the cortex in which sensations produced by handling objects are grouped together to form tactile memory images, the tactile perceptive area, in the parietal lobe, which is not the same thing as the sensory area, though it may be located within the boundaries of the latter; (5.) it would be well to limit the term stereognosis to cases in which the inability to recognize objects by contact is due to some failure of sensation caused by brain-disease either in the cortical sensory area itself or in the fibers going to it; (6.) tactile amnesia includes the case in which, on account of disease in the tactile perceptive area, the tactile memory images are destroyed. It is not infrequently associated with mind-blindness, and, indeed, it is probable that always in recognizing objects by handling them we recall from memory a more or less faint recollection of the visual appearance of the object. Auditory memories are less frequently recalled, because less frequently needed to make a complete percept, and those of smell and taste quite rarely. (7.) The form of sensation most necessary for the recognition of any given object depends upon

the qualities of the object. Tactile anesthesia, if sensibility to stronger pressure is preserved, causes little or no difficulty. The space sense, the localizing sense, and the sense of position, are probably the most important, for by them we learn the form of objects—the most important element in recognition. (8.) When in the cerebral palsies of children there is inability to recognize objects in the paralyzed hand, it is often caused, as Oppenheim states, by the fact that tactile memory images were never acquired. (9.) Granting that the tactile perceptive area is not the same as the cortical sensory area, such cases as the second reported can be explained upon the hypothesis of a lesion cutting off the fibers joining the 2 areas. [A.O.J.K.]

7.—Robinson discusses in detail the clinical phenomena of **acute myocarditis**, especially as it occurs in certain infectious diseases, notably diphtheria, typhoid fever, and pneumonia. In the treatment, he has seen the best results from the administration of strychnin and inhalation of antiseptics, especially creasote. Drugs such as digitalis and strophanthus should be given cautiously and their action guarded with nitroglycerin or the nitrites. The iodid of potassium is a very serviceable remedy even in the very acute stages. In cases of pneumonia benefit may accrue from the local application of cold. The changes that follow influenza and the means of recognizing and properly treating a concomitant endocarditis or pericarditis are pointed out. During convalescence from acute myocarditis the Schott treatment judiciously carried out meets the indications. It is thought that acute myocarditis in children does not differ much from the same condition in the adult. The prognosis, however, is better in the young. [A.O.J.K.]

McGuire, *Charlotte Medical Journal*, December, 1900, deals with **retrodisplacements of the uterus** from a practical standpoint. He is favorably impressed with the **Alexander operation**, employing it in all uncomplicated cases. The advantages of this operation are less risk; it is to be preferred from the standpoint of pregnancy; it seeks to support the uterus by its natural ligaments, and forms no intraperitoneal adhesions which may be a source of danger. The disadvantages are, 2 incisions are required; the risk of hernia is increased; the operation proper is limited in its application to a mobile uterus; in cases associated with marked descent, while the operation cures the version, it does not lift the uterus to a higher or to the normal level, thereby falling short of the indication for an operation; in ovarian prolapse especially if the ovarian ligaments are long, it cannot be depended upon to raise the ovaries to a normal position; the possible absence or attenuation of the ligaments. [F.C.H.]

THE PUBLIC SERVICE

Changes in the Medical Corps of the U. S. Navy, for the week ended March 30, 1901:

- LEDRETTTER, R. E., assistant surgeon, detached from the Constellation, April 1, and ordered to the Chicago, via the Dixie, April 3, as relief of Assistant Surgeon J. R. Whiting.
- CRAWFORD, C. A., assistant surgeon, detached from the Dixie, March 28, and ordered to the Constellation, April 1, as relief of Assistant Surgeon R. E. Ledbetter.
- WHITING, J. R., assistant surgeon, detached from the Chicago, upon reporting of relief, and ordered to the Dixie.
- PICKRELL, G., surgeon, detached from the naval hospital, Mare Island, Cal., and ordered home.
- DAVIS, E., assistant surgeon, detached from the naval hospital, Mare Island, Cal., and ordered home, with permission to delay en route.
- McCLANAHAN, R. K., assistant surgeon, ordered to the Asiatic Station, via the Solace, April 12.
- MERRITT, W. A., passed assistant paymaster, detached from the Hartford, April 15, and ordered to the bureau of supplies and accounts, Navy Department.
- DECKER, C. J., surgeon, order detaching from the Monocacy and ordering to the Oregon, revoked; ordered to the Newark.
- LEACH, P., surgeon, order detaching from the Oregon and ordering to the Monocacy, revoked.
- HIBBETT, C. T., surgeon, detached from the Newark and ordered to the naval hospital, Cavite, P. I.
- SPEAR, R., passed assistant surgeon, detached from the Isla de Luzon and ordered to the Concord.
- EVANS, S. G., passed assistant surgeon, detached from the Concord and ordered to the Monocacy.

GROW, E. J., assistant surgeon, detached from the Glacier and ordered to the Isla de Luzon.

Changes in the Medical Corps of the U. S. Army for the week ended March 30, 1901:

COWPER, Captain HAROLD W., assistant surgeon, is relieved from temporary duty at the Presidio and will report to the commanding officer third battalion, 10th infantry, in camp on the Presidio reservation, for duty with that battalion.

BAILEY, Captain GUY G., assistant surgeon, is relieved from temporary duty at the Army general hospital, Presidio, and will report to Colonel Philip I. Ellis, 24th infantry, commanding provisional battalions, for duty with the first battalion, 30th infantry, in camp on the Presidio reservation.

MULLINS, THOMAS K., acting assistant surgeon, is relieved from temporary duty at the Army general hospital, Presidio, and assigned to temporary duty with troops on the horse transport Paking, during the voyage to the Philippine islands.

SHIMER, First Lieutenant IRA A., leave granted is changed to leave on surgeon's certificate. Lieutenant Shimer is authorized to apply, if necessary, for an extension of 1 month.

BRUHL, CHARLES E., acting assistant surgeon, is granted leave for 1 month, with permission to go beyond the limits of the department of Cuba.

WILLIAMS, ADRIAN D., acting assistant surgeon, now awaiting orders at Governor's Island, will report to the commanding officer, first battalion, 11th infantry, at Fort Columbus, to accompany that battalion to the Philippines.

VAN TUY, Captain WILLIAM R., assistant surgeon, recently appointed, will proceed from Fort Thomas to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

TANNER, Captain WILLIAM T., assistant surgeon, is assigned to duty with the third battalion, 11th infantry, and will proceed to Washington barracks and report to accompany that battalion to the Philippine islands, where he will report for assignment to duty.

CARTY, GEORGE S., hospital steward, Fort Douglas, Utah, is transferred to Fort McDowell for duty with the hospital corps school of instruction.

BEASLEY, Major SHADWORTH O., surgeon, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, P. I., where he will report for assignment to duty.

ALLEN, Captain IRA A., is granted leave for 1 month from about April 20.

HICKS, Captain GEORGE L., JR., assistant surgeon, recently promoted from first lieutenant, assistant surgeon 38th infantry, U. S. volunteers, is assigned to the 38th infantry, U. S. volunteers.

REIFSNYDER, Captain JOSEPH C., assistant surgeon, recently appointed, will proceed from West Point, N. Y., to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

BARTLETT, COZAM J., acting assistant surgeon, is relieved from further duty in the department of Alaska, and will proceed to San Francisco, Cal., and report for assignment to duty.

GARLINGTON, JOSEPH C., acting assistant surgeon, is relieved from duty at Fort Mott, to take effect upon the arrival at that post of Acting Assistant Surgeon Josiah W. Richards, and will then proceed to Fort Terry for duty to relieve Acting Assistant Surgeon John J. Gilhuley, who will proceed to his home, Bridgeport, Conn., for annulment of contract.

CARR, Major LAWRENCE C., surgeon, chief surgeon, in addition to his other duties, is detailed as sanitary inspector of the city of Santiago, Cuba, relieving First Lieutenant Ira A. Shimer, assistant surgeon, who will remain on duty as assistant until the transfer is completed.

FIELD, P. C., acting assistant surgeon, now on duty at the headquarters of the artillery defenses of Havana, is upon his own application relieved from further duty in the department of Cuba, and will proceed to Washington, D. C., for annulment of contract.

CROSBY, Major WILLIAM D., surgeon, in addition to his present duties, will relieve Major Henry S. Kilbourne, surgeon, of his duties as medical superintendent, army transport service, New York city, and upon being thus relieved Major Kilbourne will proceed to the Presidio for duty.

LONGINO, Captain THOMAS C., assistant surgeon, recently appointed, will proceed from Fort Clark to San Antonio, Tex., and report to the commanding officer, department of Texas, for duty to accompany troops to be sent from that department to San Francisco, Cal., where he will report for transportation to the Philippine islands, and upon arrival at Manila will report for assignment to duty.

HACK, Captain CHARLES W., assistant surgeon, recently appointed, will be assigned by the commanding officer of Columbus barracks, to duty with the first detachment of recruits to be sent from that post to San Francisco, Cal., where he will report to the commanding general, department of California, for transportation to Manila, P. I., where he will report for assignment to duty.

FOGG, Captain JOHN S., assistant surgeon, recently appointed, will, upon the arrival at Fort McHenry of Major Alexander N. Stork, surgeon, proceed to San Francisco, Cal., and report for transportation to Manila, P. I. where, upon arrival, he will report for assignment to duty.

STEER, SAMUEL L., and PINKHAM, EDWARD W., first lieutenants, assistant surgeons, are relieved from duty in the division of the Philippines, and will proceed to San Francisco, Cal., and report by telegraph to the adjutant general of the army for instructions.

LEHARDY, JULIUS C., acting assistant surgeon, will proceed from Savannah, Ga., to Fort Wood, to relieve Captain Charles R. Gill, assistant surgeon.

GILL, Captain CHARLES R., assistant surgeon, recently appointed, will proceed from Fort Wood to Fort Totten, and report for duty to accompany the battalion of engineers to be sent from the latter post to San Francisco, Cal., where he will report for transportation to the Philippine islands, and upon arrival at Manila will report for assignment to duty.

JAMES, Captain WILLIAM F., assistant surgeon, recently appointed, now at San Francisco, Cal., will report for transportation to Manila, P. I., where he will report for assignment to duty.

HALE, ROBERT E., hospital steward, (appointed March 26, from acting hospital steward), Manila, P. I., will report to the commanding general, division of the Philippines, Manila, for assignment to a station.

RIESS, HERMAN W., hospital steward, now on furlough, will, on expiration of furlough, be relieved from further duty at Fort Apache, and will report to the surgeon general of the army for instructions.

Changes in the U. S. Marine-Hospital Service, for the 14 days ended March 28, 1901:

MURRAY, R. D., surgeon, granted leave of absence for 5 days from April 9-March 23.

AUSTIN, H. W., surgeon, detailed as chairman of a board, to be convened from time to time as necessary, for the purpose of re-examining rejected immigrants—March 28.

EAGER, J. M., passed assistant surgeon, upon expiration of leave of absence to proceed to Naples, Italy, for duty, relieving Assistant Surgeon V. G. Heiser—March 25.

MATHEWSON, II. S., assistant surgeon, granted leave of absence for 3 days from March 26. To rejoin station at San Juan, P. R., March 27.

CLARK TALIAFERRO, assistant surgeon, granted leave of absence for 30 days on account of sickness—March 22.

LAVINDER, C. H., assistant surgeon, granted leave of absence for 10 days from March 28—March 27.

McMULLEN JOHN, assistant surgeon, upon being relieved from duty at Wilmington, N. C., to proceed to Mullet Key Detention Camp, Florida, and assume command—March 22. To report at Washington, D. C., en route to Mullet Key, Fla.—March 22.

RUSSELL, II. C., assistant surgeon, granted leave of absence for 18 days on account of sickness, from February 21—March 22.

HEISER, V. G., assistant surgeon, upon being relieved from duty at Naples, Italy, to proceed to Washington, D. C., and report in person for duty—March 25.

GOODMAN, F. S., hospital steward, to report to the director of the hygienic laboratory, Washington, D. C., for duty—March 20.

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American Professional Patriotism is fully justified by our history and is a laudable sentiment. We doubt if a judicial summing up of the contributions of national physicians would show for any country a greater share of discoveries made and of beneficent professional work done than by Americans. It may not be forgotten that the first cholecystotomy, the first nephrectomy, the first gastrectomy and the first ovariectomy were performed by American physicians. Many similar things might be mentioned, especially, of course, the discovery of anesthesia by an American. Pathology is the scientific branch *par excellence* of medicine and in 1839 Dr. Samuel D. Gross brought out the first textbook on this subject. None knows better than we that in its last analysis science has no nationality nor geographical limits, and yet scientific temper and methods do, as a matter of fact, differ in different countries, and the progress of our science and art is colored if not conditioned by these distinctive differences. It was not without a recognition of the characteristic advantages and excellencies of American medical science that we chose the title of the present journal. We wish it to reflect, stimulate and unify our national medical progress, a progress well prepared and as certain of a great future as of a distinguished past.

"Love thou thy land, with love far-brought
From out the storied past, and used
Within the present, but transfused
Thro' future time by power of thought."

Partisan Politics and Charitable Institutions.—The action of Governor Odell of New York in consenting to the withdrawal of the bill for the abolition of the State Board of Charities, is most praiseworthy. The hope of salvation of democratic institutions may almost be said to consist in the willingness of good men and women to give their lives in part or entirely to work for the public good, without reward or salary of any kind. There are 70,000 unfortunates in the reformatory, charitable and correctional institutions of New York, and these have been on the whole well managed by the practical philanthropists in charge of the State Board of Charities. To turn them out and place these charges of the community in the hands of the politicians would have proved an expensive crime. When this has been done there has developed a condition too horrible to be endured. The State of Indiana, after struggling many years with the old system of political administration of State charities, during which every form of abuse and

corruption that was possible pervaded the institutions, adopted the system of a State Board of Charities composed of unsalaried persons appointed without regard to their political beliefs. The result has been a gradual and most decided uplifting of the morale of the institutions and also a great reduction of expenses. The Indianapolis *Sentinel* says:

"For a number of years the Board of State Charities has studied the problems of official poor relief. The results of its studies have been formulated as laws. The showing concerning township poor relief is remarkable. In six years there has been a reduction from \$630,168.79 to \$209,956.22, which is \$420,212.57, or over 66%. There has been an equally striking reduction in the number of persons aided, a general lessening in the tax levy for poor purposes. Notwithstanding all these reductions, there has been a decrease in the poor asylum population and no gain in the number of dependent children. With all this reduction, we are assured that no injustice has been done any needy person."

Increase and Care of the Insane.—There is little doubt that the increase of the total number of the insane is in large measure an increase in the registered cases rather than in new ones. It is equally certain that the number of institutional cases is increasing, because of the decrease of the public disinclination to commit. This is a tribute to the beneficence of their work. On the other hand there is a danger of overcrowding, or its actual existence in many parts of the country. Of the 7,417 patients in public hospitals and asylums of Massachusetts on October 1 last, something over 13% were sleeping on cot beds made up each night in the corridors and the day rooms. This, of course, was detrimental to the health of the patients. In addition to the annual increase, the State is to assume the care, after 1903, of all the insane in city and town almshouses. These now number about 900. In Connecticut, too, the number of insane is in excess of the public accommodations. There are 2,135 patients in the asylum at Middletown, which is 500 more than there is room for, and the number is being added to at the rate of 100 a year. The building is crowded with humanity like cattle in a pen, a legislative committee reports, and in a garret they found 100 men packed in where there was room for but 20. The presentation of these facts hastened the appropriation by the Legislature of \$165,000 to increase the accommodations.

The Leukocyte Count in the Diagnosis of Small-pox.—Leukocyte counting has become something of a

fad in many places. Although it is no doubt sometimes of little value and many times overdone, there can be no question that considerable important information may be obtained by this means in a considerable number of cases. Weil (*La Semaine Medicale*, 1900, Vol. 20, p. 222) reports a study of 36 cases of variola in all its forms, with and without complications, which show that this affection is accompanied by leukocytosis, as has been previously pointed out by Courmont and Montgard. Very often the leukocytosis is slight, but generally moderately high. It appears at the beginning of the illness, increases at the time of the vesiculation and diminishes gradually after this. In character this leukocytosis resembles myelogenous leukemia. He believes that this is a diagnostic point of considerable value and that by differential counting it is possible to diagnose variola from the other exanthems at the time of the appearance of the rash.

In case of an epidemic of smallpox the diagnosis of the disease is usually not difficult, but the recognition of sporadic cases in time to prevent an epidemic is of great importance and any diagnostic point of value should not be overlooked. This suggestion with regard to leukocytosis seems to deserve the attention of those specially concerned with the treatment of contagious diseases.

Improved Sanitary Conditions and Lowered Mortality Rates.—Since the recent United States census has determined more definitely the exact population of our large cities, and the reports on vital statistics may be considered to show more accurately the percentage of diseases than formerly, the examination of the reports of our large cities shows a very marked improvement upon the condition of affairs which existed 10 years ago. Although the physician may be considered the man who is most likely to benefit by the misfortunes of others in the way of disease, it is almost entirely through the efforts of medical men that this decrease in the mortality rates has been brought about. The Monthly Bulletin of the Department of Health of the City of Chicago, for December, 1900, must be remarkably satisfactory to the inhabitants of that city. A comparison with the death rate in the other large cities of the United States and the large cities of foreign countries is most favorable to Chicago. The number of deaths per thousand in Chicago has been only 14.68 as compared with 20.61 in New York, 20.11 in Paris, 19.10 in London and 18.77 in Berlin. Dr. Arthur R. Reynolds, the Commissioner of Health assigns the following causes for the lessened mortality rate; medical school inspection, better water supply, the supervision of food supplies, vaccination and the bacterial diagnosis of disease. He finds that medical inspection of schools, has done a great deal to restrict the contagious diseases of childhood and notification, isolation and disinfection have helped such restriction of these diseases at all ages. The better water-supply has reduced the mortality from typhoid fever and the acute intestinal diseases, and the supervision of food supplies, specially milk and ice, have also aided in this reduction. The aid of the city laboratory to physicians in the bacterial diagnosis of such diseases as diphtheria and typhoid fever has facilitated prompt and scientific medical treatment, thus tending to lessen the death rate. The vigilance of the

chief medical inspector with regard to the vaccination of the people has restricted the spread of smallpox. Above all, he places the growing interest and intelligence of the public in sanitary measures and preventive medicine which have made more effective each and every one of these agencies in the restriction of disease and the protection of the public health.

Furfurol and the Next Morning's Headache.—Sir Lander Brunton and Dr. Zunicjiffe conclude that the furfurol constituent of whiskey is that which causes the violent headache of intoxication. Experiments upon animals and man demonstrated that furfurol has a temporary paralyzing action upon the voluntary muscles, with tonic and clonic convulsions, followed in man by throbbing headaches for 24 hours. In aging, the amount of the furfurol in whiskey grows less, and hence old whiskey causes less headache than the fresh spirit. With a perfectly furfurol-free whiskey the secondary symptoms of drunkenness in man and animals were absent. If the truth of this should seem probable the prohibitionists should at once institute researches to disprove such "science," and gold-cure people may once more pluck up their courage. But we cannot help suspecting some flaw in the argument. To have the fun and not have to pay the fiddler is hardly according to the wisdom and precedents of physiology. There is a sort of tipsy leer about headache-free drunkenness that is decidedly suspicious. We should not be too trustful of these scientists! In the interests of morality we candidly advise the freshly distilled article, moreover, it is so much cheaper.

Urotropin as a Urinary Antiseptic.—Urotropin is one of the very few new remedies upon which reports as to efficacy have been well-nigh uniformly favorable. While it has proved of no value as a solvent of uric acid calculi, a purpose for which it was originally introduced by Nicolaier, it has shown itself more effective than any other drug in ridding the urine of pathogenic organisms. When taken internally in daily doses of from 20 to 30 grains it rarely excites any ill-effects, but it is rapidly absorbed and rapidly eliminated in the urine. Casper attributed its virtues as a urinary antiseptic to the liberation of formaldehyd, but the recent researches of Cammidge (*Lancet*, January 15, 1901) indicate that this view is erroneous. According to this last observer urotropin alone by prolonged heating may be made to yield formaldehyd, but that this decomposition does not take place at body-temperature; that acids, acid-salts and alkalies when heated with urotropin also liberate formaldehyde but not at 37° C.; and finally, that the acid urine of persons taking 30 grains of urotropin a day does not contain free formaldehyd. The readiness with which urotropin is decomposed by acid and acid-salts, together with the more marked inhibitory power over the growth of microorganisms shown by the acid urine over simple urotropin solution or an alkaline urine, would suggest that it is not urotropin itself but some derivative of urotropin formed in the presence of acid urine that is the important factor in rendering the urine antiseptic.

The Study of Diphtheria.—Among the infectious diseases, diphtheria may be considered the one concerning which we have the most complete information. While to the investigator it at present offers few, if any, problems of interest, as a guide to the study of other infectious diseases, a knowledge of the diphtheric process is indispensable, and it is largely to the study of diphtheria that we may attribute the recent advances in our knowledge of the bacteriology, pathology and serumtherapy of infectious diseases in general. On this subject Councilman, Mallory, and Pearce have lately contributed a most instructive and important monograph (*Journal of the Boston Society of Medical Sciences*, Vol. V, No. 5). It deals with the results of the study of 220 fatal cases of diphtheria—the largest number of cases that has as yet been subjected to detailed anatomic and bacteriologic study. To the pathologist, the exhaustive study of the histologic alterations occurring in diphtheria summarized in the monograph will prove of extreme interest; to the clinician, the alterations found in the heart and kidneys are of practical importance. In 67 hearts examined, fatty degeneration of various degrees was found in 46. There was no definite relation between the duration of the disease and the presence of this degeneration, but in the cases of great severity in which death ensued early, it was as a rule the only lesion of the myocardium. Segmentation and fragmentation of the myocardium were not observed. In 13 hearts extensive fatty degeneration accompanied by disappearance of the contractile substance, vacuolation and hyaline transformation occurred. These were found only in the later stages of the disease—about the fifteenth day. Acute interstitial myocarditis, due to accumulation of large numbers of plasma cells between the muscle fibers occurred in 6 cases—generally about the tenth day. Chronic interstitial myocarditis with proliferation of endothelial cells and formation of connective tissue occurred in 14 cases with an average duration of 17 days. In the kidneys degenerative alterations—fatty, granular, and hyalin—were found in 112 cases, with an average duration of seven and a half days. Of 40 of these cases in which the urine had been examined albumin was found in 33, and hyalin and granular casts in some. Acute interstitial nonsuppurative nephritis, marked by infiltration of plasma cells and lymphoid cells, was found in 43 cases, with an average duration of about sixteen days. The most extensive lesions occurred in children of about 11 years of age; the slight lesions in those of about 2 years of age. Of 15 of these cases in which the urine had been examined albumin was present in 14. In 13 cases glomerular alterations were detected; in 9 they were proliferative in character and involved both the tuft and the capsule; in 2 they were acute inflammatory. As compared with other changes in the kidneys, the glomerular alterations occurred in the older children and at a much later stage of the disease. One of the characteristic lesions of the diphtheric process is the infiltration of almost all the tissues with plasma-cells, but the condition is especially well exemplified in the heart and kidneys where it becomes most marked. This with the other alterations noted constitutes the anatomic basis of the serious symptoms of the disease aside from the local

manifestations. Altogether the monograph is a most creditable and valuable one—consisting of 180 pages, and containing 67 photomicrographs and a complete bibliography of over 200 references.

The "Sport" of Pigeon Shooting should be looked after, if possible, by physicians, so long as the S. P. C. A. people feel that they must fritter away their energies in sham agonies over scientific unceruelties. Last week in an eastern State, about 20,000 pigeons were shot or maimed by several hundred "sportsmen," in the interests chiefly of gun-manufacturers and powder-makers. The atrocity of this cruelty is a thousand times as great as that in all the laboratories of the world during years, and almost rivals that of the shipments of cattle and horses across continents or oceans. If the antivivisectionists only hated cruelty as much as they hate medical science they would have long ago secured the passage of laws prohibiting trap-shooting. The shame of live pigeon shooting is heightened by the fact that by mechanical devices, clay-pigeon shooting is as perfect a test of markmanship.

Orthopedic Corsets in Lateral Curvature of the Spine have been used quite extensively by very good surgeons, but at present they seem to be coming into disfavor. Hüsey (*Zeitschr. f. orthopädische Chirurgie*, viii Bd., 2 H.) discusses the action of corsets in scoliosis at considerable length. From the results of a study of the literature and of a series of cases of his own he concludes that orthopedic corsets as a routine means of treatment should not be considered. He believes that the corsets may still be used in certain cases in which the deformity is very great or in cases accompanied by severe pain. But even in such cases the treatment should be supplemented by gymnastic exercises and the treatment should at all times be carried out strictly under the supervision of a surgeon familiar with orthopedic work. In the dispensary treatment of these cases in which gymnastic exercises are not available and in the milder forms of scoliosis the use of a corset is a mistake and the corset should never be used under such circumstances.

Nearly all progressive American surgeons will agree with these conclusions in the main, but it is surprising to see how many plaster-of-paris casts are still applied in cases in which common-sense should teach that such measures are illogical. We agree with Hüsey that if curvature be due to muscular weakness or improper development, the rational treatment is to prescribe exercises to strengthen the muscles of the back, and those movements which tend to obliterate or lessen the existing deformity are the suitable ones without the necessity for consulting empirical and confusing rules.

Danger to Life and Hardships to Travelers by Lack of Port Quarantine Facilities.—Recent public health reports state that the report on international quarantine, adopted by the Pan-American Medical Congress in the City of Mexico, November, 1896, provided among other measures, that each government should maintain quarantine stations at its domestic ports. That this provision is essential not only for protecting the several

countries from the introduction of contagious disease, but as an act of justice to the crews and passengers of an infected ship, is instanced by the narration in the annual report of the Marine-Hospital Service for 1893, Volume II, pages 7 and 8, of the experience of the 4 vessels which left Naples while cholera was prevalent there for ports in South America. Developing cholera en route, they were not allowed to land at any Brazilian port, but were obliged to return to Naples, many deaths from cholera occurring on the return voyage. A similar instance is that of the injustice to passengers and crew by reason of the lack of quarantine stations with facilities for the care of an infected ship which was refused harbor at port after port on the west coast of South America, the passengers being subjected to the dangers of yellow-fever infection with no possibility of escape from the vessel for a period of more than one month.

The Results of the Antitoxin Treatment of Diphtheria.—While the treatment of diphtheria by antitoxic serum has long since passed the experimental stage, and new reports but increase one's conviction regarding its efficacy, it is still a pleasure to read the splendid report by Otto Jelinek, of the State Institute for the Preparation of Diphtheria Antoxin in Vienna, which has just come to hand as a reprint from *Das osterreichische Sanitatswesen*, No. 52, 1900. The report, designed to be as complete as possible, concerns itself with a collation of the published reports of all observers in all parts of the world to the close of 1898. Its completeness and extensiveness are apparent from the fact that it comprises 568 references to reports published in Austria, Hungary, Bosnia, Germany, France, Italy, England, Russia, Switzerland, Holland, Belgium, Denmark, Norway and Sweden, Spain, Portugal, Roumania, Turkey, Egypt, United States of America, Canada, Cuba, India, Japan, and Australia. In all there are reports of 52,785 cases with 8,525 deaths, a mortality rate of 16.15%. Of these there were treated in hospitals, 35,095, with 6,398 deaths, a mortality rate of 18.23%, and in private practice and partially also in hospitals, 19,647, with 2,429 deaths, a mortality rate of 12.16%. To these Jelinek has added a number of collective reports from Austria, Hungary, Bosnia, Germany, Belgium, Russia, and the United States of America—127,359 cases, with 18,088 deaths—a mortality rate of 14.2%. An extremely interesting table is that which shows the influence of the early treatment with antitoxin upon the mortality rate. Thus of a total of 52,521 cases with 8,026 deaths—a mortality rate of 15.28%, there were treated on the first day 5,970, with 304 deaths—a mortality rate of 5.07%; on the second day 17,088, with 1,451 deaths—a mortality rate of 8.49%; on the third day 13,203, with 2,055 deaths—a mortality rate of 15.56%; on the fourth day 6,744, with 1,576 deaths—a mortality rate of 23.36%; on the fifth day 4,238, with 1,286 deaths—a mortality rate of 30.02%; after the fifth day 3,313, with 924 deaths—a mortality rate of 27.89%, and on some day not specified 1,965, with 430 deaths—a mortality rate of 15.28%. With regard to the ages of the patients it is noteworthy that under 2 years of age there were 4,264 deaths, with 1,442 deaths—33.81% (under 1 year of age 773 cases, with 305 deaths—

39.45%); from 2 to 5 years of age, 11,353 cases, with 2,165 deaths—19.06%; from 5 to 10 years of age, 9,628 cases, with 1,120 deaths—11.63%; over 10 years of age, 5,929 cases, with 350 deaths—5.9%. This exhaustive study demonstrates anew what has been already conclusively shown—that there results from the use of the diphtheria antitoxin a considerable reduction in the relative mortality from the disease. This reduction has occurred in all parts of the world, in all climates, in large cities as well as in the country, among the well-to-do and among the poor, at the commencement as well as at the termination of epidemics of diphtheria. The single exception is found in the reports of some English observers, but their relatively poor results are attributed to inefficient serum. The study shows conclusively also the necessity of prompt treatment if the best results are to be attained. An increase in the mortality rate of 5.07% when treatment is instituted on the first day of the disease to a rate of 23.36% when the antitoxin is given on the fourth day, and 30.02% when given on the fifth day, should certainly be sufficient to convince the most skeptical.

The "Irreconcilability" of Medicine and Christianity.—The Fulton Apostolic Church of New York City, and its pastor, the Rev. John W. Daugherty, have joined the antis. Their official journal, *The Everlasting Gospel*, says:—

"To our way of thinking medicine and Christianity are opposed to each other, and are utterly beyond reconciliation. It is a continual stumbling block to faith, and is frequently the cause of painful failure on the part of those who pray sincerely.

"Our personal experience has led us to inquire into the cause of our own personal failure in certain cases, and we believe it was all because physicians were in charge and medicines in use. We ask no one to give up the physician or the physic; for they will not and cannot do so from the heart, unless it is a matter of genuine faith, but we have definitely decided never to pray with the sick for healing where the people retain the services of a physician or use medicines. We may pray, but not for healing."

Mr. Daugherty explains this by saying that, while he holds to the teaching that Christians should obey the Scriptures in regard to sickness and call for the elders of the church and let them do as prescribed, they should not have the services of the elders and the physician at the same time. They should hold on to the doctor until they can fully trust God and let the services of the elders alone.

"There are two well-known physicians in my church," said Mr. Daugherty, "but neither of them takes medicine themselves; but, when needed, call for the services of the elders to pray over them and anoint them with oil, as required by the Scriptures."

What a pity this man, and his people, and his editor, have such a meager knowledge either of English grammar, of science, of civilization, or of Christianity. A little acquaintance with any of these subjects would have enabled them to avoid an exhibition of themselves painful alike to sensible, educated, or religious minds.

The surgical treatment of ascites due to cirrhosis of the liver, originally suggested by Talma but first carried to a successful issue by Drummond and Morison, has attracted considerable attention during the past few years. Of the several articles on the subject, one deserving of special commendation has lately been published by Packard and Le Conte (*American Journal of the Medi-*

cal Sciences, March, 1901). These authors, reporting two personal observations, contribute also a thorough review of, and an analysis of 20 other cases from, the literature. The treatment finds its rationale in the fact that it has been thought feasible to relieve the ascites, generally considered to be due almost exclusively to portal obstruction rather than to toxemia, by providing means for a collateral circulation. The establishing spontaneously of a collateral circulation has been observed in many cases of cirrhosis of the liver, and it has been known to occur in other cases in consequence of the formation of peritoneal adhesions due to repeated tappings. In addition, the significance of peritoneal adhesions in forming a collateral circulation has been demonstrated experimentally in dogs. What more natural than to cause the formation of peritoneal adhesions and provide the means for a collateral circulation by operative procedures? In the article by Packard and Le Conte alluded to, the results of the operation in the cases so far reported are tabulated. The statistics are susceptible of varying interpretations depending upon whether or not complicated cases are excluded; but, contrasting the worst view with the best possible construction that can be placed on the tables, there appears to be an operation-mortality of between 23% and 7%, and a recovery-rate of between 41% and 64%. The authors, recalling that the patients subjected to operation had been for weeks or months under careful medical treatment and had been repeatedly tapped, and their condition had been unimproved or progressively deteriorating, believe the statistics to be very encouraging and the operation to have won a distinct place. They point out that patients with cirrhosis of the liver, if unrelieved, are doomed to a life of continued invalidism. In general such patients are poor subjects for operation, and as the exact amount of degeneration of the organs, including the liver, is difficult or impossible to estimate, it is to be expected that the operation-mortality should be relatively high. In future, however, it may be possible to form a clearer conception of the suitability of a particular case for operation. They believe further that when the diagnosis of pure portal cirrhosis of the liver can be made, and when persistent and well-directed medical treatment is productive of insignificant results, the operation should be strongly recommended. On the other hand, it would seem that the operation is scarcely indicated, if not contraindicated, in cases of ascites associated with other kinds of cirrhosis (Hanot's, syphilitic, mixed, etc.), or with chronic peritonitis. It is to be hoped that these extremely practical as well as conservative opinions will receive that serious consideration on the part both of physicians and surgeons that they merit. And that the scope as well as the utility of the operation may be definitely determined, it is also to be hoped that observers will report all their cases, even should they terminate fatally, as did the two cases of Packard and Le Conte. Their example is worthy of emulation.

The Causation of Cancerous and Other New-growths.—To the *British Medical Journal* for March 16, Prof. J. George Adami has contributed an extremely thoughtful and instructive address upon the causation of

cancerous and other newgrowths—an address that well repays the reading. While he devotes dispassionate attention to the various theories that have been propounded to explain the origin and growth of tumors, he has bethought himself especially to follow his own advice to study anew the entire field of oncology. This he has done particularly with the idea of ascertaining if there be “a common denominator as it were, associating the various groups of tumors.” He begins the elucidation of this problem with the facts that certain tumors arise from misplaced cells, whereas other tumors arise from cells originally in normal position, and he asks, What is the cause of either category of cells taking on excessive growth independently of the needs of the organism? Naturally the alluring parasitic theory immediately suggests itself. His statements with regard to this, while they tend to shatter the hopes of the supporters of the theory, scarcely allay the prejudices of those who oppose it. He does not entirely discountenance the parasitic theory; indeed he refers to certain tumors arising from normal and functional tissues through known microbic agency, such as, coccidiosis of the liver of the rabbit and bilharzia tumors of the bladder and rectum. This class of tumors, however, he places at one extremity of the list of newgrowths, and with them he contrasts others that he places at the other extremity—tumors that assuredly arise independently of parasitic intervention, such as teratomas and various so-called benign tumors. Between these extremes we have the broad debatable territory wherein we encounter the main mass of neoplasms. He asks, How are we to regard them? Do they belong to the one or to the other class? Discussing then the relation of growth and functional activity of cells, the influence of environment on cell activity, and inertia of cells, he finds that all forms of tumors have a starting point in common. This “is that condition in which the cells of the part, whether functional or lying latent, upon being stimulated and as a consequence undertaking active assimilation and anabolism, cannot from their relations carry on their peculiar functions to a corresponding extent, so that the accumulated energy is instead utilized in mitotic changes and cell division, rather than in normal katabolism.” As a consequence of the continued action of the primary stimulus there develops a colony of cells all tending actively to proliferate. Thus is acquired the “habit of growth,” the factor common to all tumors. The views of Prof. Adami are summed up as follows: Whatever the origin of the tumor proper, however, it is started, what makes the tumor is the assumption by the primary cells of that tumor of the habit of growth in place of the habit of work, and, according to this replacement, do we get the various grades of tumor formation from the most benign to the most malignant. Finally he admits that microbes and their products may be one of the causes originating localized cell proliferation provided they bring about stimulation rather than irritation, and provided they continue to act sufficiently long to bring about the habit of growth. We heartily commend the address to all desirous of learning more of the assumption of the “habit of growth” by the cells of tumors; of assimilation and mitosis, the 2 functions retained and impressed

upon these tumor cells; and of all that is to be said dispassionately in favor of the parasitic theory of tumor formation—a theory that the future has yet to justify.

The Solidarity of the Race.—After reading Dr. John Inglis' paper in the *Journal of the American Medical Association* for March 30, on "Sanitary Conditions of Peking," one is tempted to wish that the "open door" in China could be closed as tightly as before the days of Marco Polo. The train of evils which is likely to accompany and follow the return of the allied armies will certainly prove China to be a veritable Pandora's box. The "yellow peril" looms up in a new aspect and christendom may then realize how one touch of filth infection makes the whole world kin. It is fortunate for the peace pursuing citizens of America that her soldiers have a chance to sterilize themselves in the Philippines before proceeding farther. Think of 4,000 years of civilization which still dumps all its garbage, excrement, and dead and dying babies into the public street; which sprinkles its dusty thoroughfares with the water of cesspools and stagnant sewers; which draws all its drinking water from wells sunk in these same reeking, unpaved roadways; which keeps its adult corpses until only starving beggars can be hired to carry them to burial; a place in which cholera, smallpox and diphtheria have the eternal freedom of the city; from which typhoid, typhus, malignant malaria and dysentery are never absent. One wonders that the palace spider needed anything more fatal in dealing with the legation flies. While the American army was in Cuba it had a Colonel Ludlow with it, but it does not seem to have occurred to the snarling concert of the Powers that anything but a China-smasher of the von Waldersee type was required to make Peking a healthful place for foreigners. How many milleniums must roll around before the world will have an International Board of Health with power to cleanse all such threatening plague-spots.

Infection of the Embryo with Tuberculosis without Infection of the Mother.—Dr. Joseph B. Greene, of the Marine Hospital Service, reports to Surgeon-General Wyman that recent experimental studies conducted by Dr. Friedrich Franz Friedmann in the Biological Institute of the University of Berlin, prove the direct infection of the embryo with tubercle bacilli, without infecting the mother. Clinical evidence has tended to prove the possibility of direct transmission of tuberculosis from the male, but it has been difficult to exclude all possibility of infection through the mother. It would be easy to overlook a small focus of infection in the lungs, genital tract, or elsewhere.

Dr. Friedmann has used for this purpose healthy rabbits, and has injected into the vagina of the female, immediately after copulation, a few drops of a virulent culture of tubercle bacilli, which are suspended in a slightly alkaline salt solution. After the lapse of 6 days, before the appearance of the first signs of placental formation, the rabbit was killed, and the embryo with the adjoining part of the uterus was placed in absolute alcohol, and finally imbedded in paraffin. Very fine transverse sections were then made perpendicular to the

long axis of the uterus. The specimen was then stained according to Ehrlich's method, the tubercle bacilli assuming a beautiful rose-red color, while the tissues remained blue. The bacilli were for the most part found within the cells lining the embryo, though some were found in the coagulated fluid within the embryo, and others in the zona pellucida. Dr. Friedmann succeeded in finding the bacilli in 48 different places, which would tend to eliminate the chance of accidental occurrence or error of observation. The organs of the mother were next examined and found healthy. No bacilli were found in the mucous membrane of the uterus, and only in 2 cases were they observed in the cavity of the uterus, and then situated near the embryo. These experiments of Dr. Friedmann correspond to the well-known clinical fact in regard to syphilis—that a child can inherit the disease from the father without the mother becoming infected.

The Value of Quinin in Labor has frequently been discussed, and many contradictory reports have been elicited. Its power to initiate uterine contractions is a much debated question, but its value as a stimulant is undoubted; and it has frequently proved useful in maintaining general strength and good uterine contractions. Fussell (*Therapeutic Gazette*, January, 1901,) has used the drug in over 100 cases and finds that it produces strong intermitten, quickly recurring contractions, exactly resembling normal labor pains, and entirely different from the tonic contractions produced by ergot. He has found it much more useful in multipara than in primipara, and has never observed that it possessed a tendency to produce bleeding, although Hirst claims that in certain susceptible individuals it will occasionally cause violent postpartum hemorrhage. He administers the drug in doses of 15 grains, and considers that it prevents rather than produces hemorrhage.

Acute Interstitial (Nonsuppurative) Nephritis.—Our present concise knowledge of this form of nephritis we owe largely to the work of American investigators. Although first described by Bierner in 1860; it was not until 1898, as the result of Councilman's extensive study, that the true nature of the lesion was understood. Occurring as it does as a complication of the acute infectious diseases, especially scarlet fever and diphtheria, and therefore accompanied by parenchymatous degenerations of the kidney, the clinical picture is still obscure. The examination of the urine has not been of much assistance; albumin is generally present; leukocytes and occasionally hyaline casts are found in the sediment, but there is nothing to distinguish it from other acute lesions of the kidney. Oftentimes the urine is normal.

The pathology of the lesion is, however, now well known. The most extensive and complete description of the lesion is that contained in the recent study of the "Pathology of Diphtheria," by Councilman, Mallory, and Pearce (*Journal of Boston Society of Medical Sciences*, Vol. V, No. 5). In the study of 220 fatal cases, acute interstitial lesions were found in 43. Omitting 3 cases of 42, 53, and 136 days respectively, in which other complications prolonged the illness, the average duration

was 16 days. Age seems to have a singular relation to the degree of the lesion. The less marked lesions occurred at an average age of $2\frac{1}{2}$ years; the moderate at $7\frac{1}{2}$ years, and the severe lesions at $11\frac{1}{2}$ years. The interstitial lesion was much more common than the glomerular lesion, the latter being present only in 11 cases.

The essential lesion is an extensive infiltration of the interstitial tissue with plasma-cells; other organs also are frequently affected by a similar infiltration. The cells are derived from the lymphoid cells or possibly from the cells of the bone marrow, the proliferation being due, in all probability, to the action of some toxic substance produced during the course of the disease. Excluding the degenerations of the parenchyma, which occur in any acute infectious disease, this lesion must be considered the most frequent change in the kidney in diphtheria. This clear understanding of the pathology of the lesion, the systematic examination of the urine in diphtheria and the infectious diseases, controlled by postmortem examination may lead to the recognition of the condition clinically.

Blessed be the Postmaster-General!—An order is expected soon formally granting authority to post-masters to allow carriers, during the heat of summer, to clothe themselves in a humane manner. We have often wondered at "the inhumanity of man to man" displayed in no more striking manner than in the regulations as to clothing in the public services. The men are not allowed sufficient clothing in winter unless they put on several suits of underclothing beneath the uniform, which makes them look like bloated toads or overfat boys about to burst through their coverings. In summer the brutal stupidity of their roasting should, if real cruelty appealed to their sensibilities, long ago have aroused the antivivisectionists to an upsetting of political parties. As all physicians know, this abuse has a distinct medical aspect. Protecting the body and feeding it are the two oldest of all human functions, and yet of all our arts and trades there is nothing so blunderingly and badly done as our clothing and cooking. If the Postmaster-General shall issue the proposed order, the American people should make him President if he desires the office, or give him a dozen or two good sized islands in which to set up a new empire. We should be able to hope that our policemen, firemen, soldiers, sailors, etc., might in time, by imitating the good custom, be allowed to clothe themselves as if their rulers had some innate kindness of heart combined with some acquired common sense.

Criticism of and Advice to the Editor follows a law, the reverse of that of gravitation. The strength of the force of gravity is inversely as the square of the distance, but the volubility of the critic and of the adviser of the medical editor positively increases with the distance—the financial distance, we mean. Among thousands of enheartening letters we have received, there have been less than a dozen offering pages of well-meant but trivial advice about trivial things. At the end of all such letters appears the inevitable "I wish you success, but owing to etc., etc., I am unable to subscribe etc., etc."

The person who subscribes liberally has no advice to offer, except perhaps a jolly "I'm wid yez," or an encouraging "More if you need it!" The old story will apparently never lose its point: "I am sorry for the widow this sack of flour and this barrel of potatoes; how much are you sorry?"

EDITORIAL ECHOES

Liquid Air in Medicine.—*The Medical Press* concludes that on the whole it would not seem that liquid air promises to extend greatly the therapeutic field, and it would be unwise to have too sanguine an estimate on its uses in medicine, however interesting a product it may be to the physicist.

Circumcision as a Preventive of Venereal Disease.—"It is not likely that the practice of circumcision will ever become universal—any more than, for instance, preventive removal of the vermiform appendix—but the reasons that have been put forward should be sufficient not only to warrant its continuance when once the practice has been instituted, but to extend the field of its application. For those who see in it no religious justification, there is abundant reason of a less spiritual character for its performance; and the physician has placed at his command a potent means for restricting the ravages of a disease that he cannot hope ever entirely to eradicate, and which, while ordinarily amenable to treatment, is still capable of causing much suffering to innocent and guilty, to transgressor and victim alike."—*[The Medical Record, April 6, 1901.]*

A Suggestion to Generous Millionaires.—"What this great continent needs, and needs very badly, is something that very few men seem to realize our lack of. It sadly wants endowments devoted to the acquisition of scientific knowledge. In European countries governments maintain huge laboratories, defray the expenses of men sent upon scientific missions, see to it that the principal educational institutions do not lack funds wherewith to carry on important work. In this country, with its vast wealth, the man of science, the man who lives not for the prospect of riches, but in order that he may add to the storehouse of knowledge, has had little encouragement unless his researches had for their object the discovery of something that might prove of ultimate financial value.

"We may need a few more hospitals and a few more colleges, perhaps, and undoubtedly we will get them in good time. But our crying need is for money to be under the control of the heads of our scientific institutions, to be devoted to pure scientific research, which must, eventually, result in the greatest good to the greatest number."—*[Internat. Jour. Surgery, April, 1901.]*

"Kissing the Book."—We are glad to see that some progress is being made toward the abolition of the uncleanly and dangerous English practice of administering the oath by requiring a witness to "kiss the Book." * * * * "If you have got a fad about microbes you should say so, and I will swear you Scotch fashion," said a judge. This offer marks a distinct advance, although it would have been more satisfactory had the judge set an example and carried out the law in a more gracious fashion. * * * * The *City Press* is responsible for the statement that the two Testaments in the City of London Court are kissed by 30,000 persons annually, while a police court usher is said to have stated that the covers of his New Testament had been worn smooth and well polished from the pressure "of numberless lips,

bearded and beardless, blooming and faded, honest and lying, foul and sweet,' as some 49,760 witnesses were sworn in that court annually. There can be no question whatever about the right to be sworn in the Scotch fashion. * * * We are informed that the members of the Leyton Medical Society have agreed invariably to adopt this form, and the matter is one upon which the medical profession might very well continue to preach by example.—[*Brit. Med. Jour.*, March 23, 1901.]

The Prevention of Venereal Diseases.—"In the course of a discussion on the 'Ravages of the Venereal Diseases,' recently held before the Physicians' Club of Chicago, Judge Lorin C. Collins pointed out the difficulty in reaching an agreement as to proper legislation to be enacted for the purpose of controlling and diminishing venereal diseases, and the obstacles likely to be encountered both in its enactment and in its enforcement. In the course of the same discussion, Dr. Edmund Andrews struck the keynote of the situation in urging education of the public upon the subject of venereal diseases, in order that it may for itself realize the dangers, and intelligently apply the preventive and corrective measures, individually and collectively. * * * The question is a most important one, and its regulation is likely to continue, as it has in the past proved to be a most difficult undertaking. It is clear, however, that the desired results are to be secured, not through any single means, but from a combination of all. The most important of these, as striking at the root of the evil, includes a full knowledge of the nature of the diseases, the methods by which they are conveyed, as well as the means by which such conveyance is to be prevented, and the adoption of all possible measures of prophylaxis, moral and physical, together with the most rigorous and systematic treatment in private and public alike."—[*Jour. Am. Med. Assoc.*, April 6, 1901.]

The Punishment to Fit the Crime.—"We are getting to a state in which we cannot work our criminals to advantage because the trades unions forbid it, and we cannot keep them in idleness and confinement because that means mental breakdown and is, in the eyes of the philanthropist, the worst alternative of all. Every member of society, even in a prison, should have his utility, and the author in question sees this for the incorrigible in making him of benefit to the race in deciding scientific questions, in other words a subject for experimentation for scientific purposes. It has been said that the worst use to which a man could be put is to hang him, and this idea was doubtless in the mind of the sociologic student in question. While it is a little odd that the idea should be seriously propounded—at least to all appearances—it is much more likely to come from such a quarter than from anyone even remotely connected with the medical profession. It would not be surprising, indeed, if it should receive the endorsement of some antivivisectionist zealots, for zoophilism and genuine philanthropy, understanding by the word a real love for their own species, are sometimes mutually exclusive. Science can get along with the necessary occasional sacrifice of the *corpora vilia*, and certainly does not ask for human sacrifices, even of murderers. The days of Herophilus and Erosistratus have not yet come again, and it is to be hoped never will."—[*Jour. Am. Med. Assoc.*, April 6, 1901.]

The National Hospital (London) for the Paralyzed and Epileptic appears to be endeavoring to exclude the members of the medical profession from voice or power in the management of the institution. The "Secretary-director" seems to be gathering to himself all power, governmental and medical. The medical staff demands some representation on the Board. The demand is denied, as we gather, on the ground that if 2 members out of 12 should be physicians the hospital

would become "a mere scientific laboratory." This is a grossly untrue and calumnious statement, without a particle of warrant in professional animus or history.

The real point for which the staff is contending is the right of a specially deserving class of poor sufferers to all the benefits which medical science in its highest developments can confer on them. These they can obtain only if the eminent men whose knowledge and skill are recognized by the whole world are allowed to do their work in the way their experience has taught them to be the best in the interest of those under their charge. They do not ask to have the government of the hospital transferred to them. They only wish to have such a share in the management of its affairs as shall safeguard the interests of the patients and ensure that the treatment shall be carried out under the conditions which they consider necessary for its success. The governors will incur a very heavy responsibility if, by allowing themselves to be influenced by the antiscientific prejudices to which appeal has been skilfully made, they imperil the usefulness of an institution which has done so much for the relief of suffering and the furtherance of knowledge of the highest use to mankind.—[*Brit. Med. Jour.*, March 23, 1901.]

The Defeat of the Medical Bill in Minnesota.—"The medical bill has been defeated. This outcome of the bitter fight that has been waged is disappointing, yet there is a considerable degree of comfort in the reflection that the osteopathic bill also met with defeat. The causes of the failure of the efforts of the legislative committee of the State Medical Society to secure the passage of a blanket law covering all forms of healing can be summed up in a few words: First, the opposition of a certain number of medical men to a bill which apparently lowered the dignity of the profession by requiring that irregulars should come up to the same standard of qualifications as regulars, and, second, the virulent and bitter opposition of Senator Horton, a lawyer of St. Paul, an active partisan of osteopathy, and an enemy of regular medicine. It is apparent that the profession of Minnesota is not wholly agreed as to the kind of medical legislation that it wishes. There does not seem to be an unanimous opinion on the principles which should underlie all medical laws. So long as the profession is lacking in harmonious agreement upon the principles of legislation, and is guided by expediency and selfish policy, there can be no concerted effort made. The opposition of the osteopaths and other irregulars was not of serious consequence. The chief cause of the defeat of the medical bill was the active interference of those within the profession, who at the last moment threw obstacles in its way and undermined the support of senators whose votes had been practically pledged in its favor. Before further legislation is attempted it would be wise for the State Medical Society to specifically determine what legislation it wants, to definitely instruct its legislative committee and to pledge the united support of its members to the measure."—[*St. Paul Med. Jour.*, April, 1901.]

The "Refracting Optician."—"Every man can instance many examples where harm has been done by the pseudo-profession of opticians. A case, reported elsewhere, recently occurred in this city. A mother, at the instance of a teacher, took her son, a lad of 8 or 10, to one of these fakirs with the history of dullness in school and poor vision. Unable to improve the visual acuity of the boy by any glass, he jumped at the conclusion that there was some cerebral trouble, and, telling the mother that there was inflammation of the optic nerve, advised her, not as one would suppose, to see a physician, but, instead, to give the boy some strychnia. She obtained from a druggist some tablets containing $\frac{1}{30}$ of a grain of strychnia and proceeded to feed the boy upon them, thinking that the prescriber was a doctor and that he

would not advise her to do anything that was harmful to the boy. As a result convulsions occurred and a dangerous termination was only averted by a timely knowledge of the treatment he was undergoing. The vision was easily improved by proper lenses and no further trouble was experienced. A lad with a vision of $\frac{5}{10}$ was wearing concave spherical glasses of 12 diopters, with no improvement of vision, while his refraction was hypermetropic and required for correction a convex glass of 9 diopters, a difference of 21 diopters. A man recently came to the Rhode Island Hospital with a diagnosis of 'inflammation of the optic neuritis,' another with a detached retina for an operation for cataract; a lady recently had her glasses changed 4 times in as many months, with a steady impairment of vision, who was suffering from albuminuric retinitis and who died within a few weeks after the diagnosis was made and the condition ascertained; and so example after example might be quoted where injury to the patient resulted both by incorrect adaptation of lenses and failure to recognize existing morbid processes. This is not, however, a plea for special legislation, but an appeal to the profession of this State to discourage the practice of consulting incompetent men for ocular defects. There is no selfish or pecuniary consideration to this question; on the contrary every one of the dozens of incompetent men who are doing this work are manufacturing future patients for the physician; but the welfare of the community demands that the profession take a decided stand on this question. They have it in their power to control this evil within at least moderate bounds."—[*The Providence Medical Journal*, April, 1901.]

Quotation Without Comment.—

Appropos of "modern medicine," a newspaper the other day, while commenting on the tuberculosis congress, or congress for the suppression of tuberculosis, or whatever be its name, said that there was hope that modern medicine "would conquer tuberculosis as it had so many other diseases." This shows the childlike credulity of the average editor, for can he, or the sophisticated ones, name any disease that modern medicine has conquered?

Homoeopathy, not modern, but old Hahnemannian homoeopathy, is as sorely needed by the world today as ever.

Medical paternalism [Medical Practice laws] is a bad thing, a hundred times worse than the harmless "quack" who dare not kill by his "treatment."

From an article taken from a Victorian (Australia) journal we learn that through their greed and brutality the vaccinating doctors in that colony are getting in bad odor with the public. For instance, some of these brutes vaccinate an infant, just delivered, simply to secure the fee; the infant, of course, has little chance of living, but what is that when compared with the fee! The Victorian troops that went to South Africa suffered horribly from the enforcement of this idiotic old superstition.

A medical journal controlled by a vaccine maker says: If we could only establish a law that every person should be vaccinated every five years we could stamp out completely the scourge of smallpox.

Also make a colossal fortune for the vaccine makers. Probably if it were not for the money in it vaccination would have been a mere memory by this time. But there is money and power in it, hence the grip it has on that patient beast of burden, the public.

Cancer follows where vaccination is enforced.

Paul Paquin, M.D., one of them, at the recent meeting of physicians, riddled the "hypocritical" claim of "public welfare" and said that the brethren were out for the dollars like any one else.

Be not swift to take offense;
Let it pass!
Anger is a foe to sense!
Let it pass!
Brood not darkly o'er a wrong;
Which will disappear ere long!
Rather sing this cheery song—
Let it pass!
Let it pass!

—[*Homeopathic Envoy for Propagating the True Medical Faith*, April, 1901.]

AMERICAN NEWS AND NOTES

GENERAL.

An Ingenious Swindle.—The postoffice authorities of Washington are now investigating the case of a doctor who advertised to cure deafness, without fail, for \$18.50. Persons sending this amount were forwarded 2,000 pills, with instructions to take 1 each day, and on no account to miss a day, or the charm would be broken and it would be necessary to start all over again. As the truth of the doctor's claim cannot be proved until the end of 5½ years the authorities are puzzled what course to take.

Scarlet Fever, in a light form, has broken out in Maryland Agricultural College, and the students have been dismissed. The cases are being cared for in the building.—The Kingston, New York Board of Health has ordered all day and Sunday-schools closed on account of the rapid increase of scarlet fever and livermen have been ordered to fumigate their carriages after the funerals.—The superintendent of the New York Bureau of Contagious Diseases has been troubled over a case of scarlet fever of which he had had notification recently at the Grand Hotel on Broadway. The parents of the child left with him in a private car during the night.

Cattle Diseases.—Reports do not indicate that there is any diminution in the extent of foot-and-mouth disease which has prevailed in almost every country in Europe for the last 3 years, and the United States Government is refusing to admit cattle, sheep or swine except from the British Isles. As a result of negotiations between Secretary of Agriculture Wilson and the Canadian Minister of Agriculture an agreement has been reached between the administrations by which Canada is to have a first-class veterinarian stationed in England to test for tuberculosis all British cattle shipped to this country via Canada. The Canadian Government wanted all cattle admitted from Canada without tests at the border by American experts. To this the department at Washington would not agree. It is officially stated that about 10% of live stock in the United States and about 40% in Great Britain have tuberculosis.

The Improvement in the Sanitation of Rio Janeiro for the year 1900 is noteworthy. The general mortality has decreased. If we accept the figures of the sanitary authorities we find a total mortality of 17.97% per 1,000, against 23.3% per 1,000 for the year 1899. This indicates an extraordinarily favorable result. The mortality among children of 1 year or less, in relation to the general mortality, is also favorable; it is 17.4% against 18.6% of the preceding year. This death rate would show very favorable sanitary conditions. The birth rate, however, is just the reverse: it amounts to 17.7% per 1,000, against 35% per 1,000 in Europe. Very remarkable is the number of stillbirths; it is equivalent to 77% per 1,000 of the number of births. Compared with the average number in European statistics we find that the number of stillbirths is about 38% per 1,000 of all births and about 55% per 1,000 of the illegitimate births.

To Suppress Yellow Fever.—At a recent meeting of the International Medical Association at Havana, Dr. Edouard Wilde, Minister of Argentine Republic at Washington, presented a scheme for international cooperation in suppression of yellow fever. His idea is to negotiate a treaty to be signed by all American nations, establishing a uniform system of quarantine regulations and systematic cooperation for removing the sources and suppressing the causes of yellow fever. He suggests that a tariff or tonnage tax or quarantine restrictions be imposed by all other nations against those which shall refuse or neglect to do their share in the work. His suggestions were adopted and a committee, appointed to carry them into effect, has issued invitations for a convention to meet at Havana February 6, 1902. The invitation to the United States is now under consideration by Dr. Wyman, of the Marine Hospital Service. Each American colony is to send 3 delegates, including bacteriologists, sanitary engineers and specialists in economics. The subject will probably be taken up at the Pan-American conference to be held in Mexico in October.

Rudolf Virchow Fund.—The following circular letter is self-explanatory and we trust will meet full response from the medical profession:

On October 13, 1901, *Rudolf Virchow* will be 80 years old. When he completed his seventieth year a fund was started in his honor to enable the great master to facilitate scientific research by establishing scholarships, and by encouraging special medical and biological studies. Contributions to that "*Rudolf Virchow Fund*" were furnished by those in all countries interested in progressive medicine, as a homage to the man whose name is always certain to arouse admiration and enthusiasm. In Berlin a large committee containing amongst others the names of A. Bastian, v. Coler, A. Entenbun, B. Fraenkel, O. Israel, Fr. Koenig, C. Posner and W. Waldeyer has been formed to call for contributions which are to be added to the original "*Rudolf Virchow Fund*" so as to increase its efficiency. The committee expresses the opinion that in no better way, and in none more agreeable to the great leader of modern medicine, can his eightieth birthday be celebrated, and ask for the sympathy and cooperation of all those engaged in the study and practice of scientific medicine all over the globe. The undersigned have formed a subcommittee for the purpose of making the American profession acquainted with the intentions of the Berlin committee, and

urge their colleagues to participate in honoring the very man who has done more, these 50 years, than any other to make medicine a science, and international. Subscriptions should be sent to their secretary, who will receipt therefor. CHARLES A. L. REED, President of the American Medical Association; HENRY P. BOWDITCH, President of the Congress of American Physicians and Surgeons; WILLIAM K. WELCH, Johns Hopkins University; ROBERT F. WEIR, President of the New York Academy of Medicine; A. JACOBI, 110 West 34th street, New York, Secretary.

Smallpox.—In Indiana, April 2, the secretary of the State Board of Health reported 472 cases of smallpox in the State and in Wisconsin there is computed to be about 200 cases, many of them among the mining and lumbering camps. Some fears are entertained that there will be a spread of the disease as the lumbering camps are breaking up and these infected men will be scattered among the community. A case of smallpox has been discovered among the men of the Eleventh Infantry and 2 companies of the regiment are to be detained at Angel Island until danger of the spread of the disease is past and the regiment will not sail for Manila on the day planned. At St. Joseph, Missouri, the Health Department thought smallpox was stamped out, but 35 new cases have been recently quarantined there and in the opinion of the city physician Tygert the disease is spreading throughout the northern part of the State. In Parkersburg, Va., 12 cases of smallpox, fully developed, were recently discovered which had been diagnosed as chickenpox. At Lynchburg a delirious negro lately escaped from the pest house and ran amuck in the town, but was pursued and shot. Kentucky will quarantine against the State of Tennessee for smallpox. This quarantine will be absolute in that no person will be allowed to cross the Kentucky State line coming from Tennessee who cannot show a certificate of recent vaccination. Persons buying a railroad ticket in Tennessee will be compelled to show a vaccination certificate before being allowed to board the train. If necessary, the Kentucky State Board of Health has determined to place guards along the State line to prevent people without vaccination-certificates from slipping over. At Clarksburg, Tennessee, the outbreak has been more violent than has ever been known and has been chiefly confined to the negroes. The management of the situation has required almost superhuman efforts, but it has been efficient and now there is only 7 patients under treatment. At Colmesnell, Texas, smallpox was reported April 2 as prevailing to an alarming extent. The Ontario, Canada, Health Board reports 1,765 immigrants examined, and 797 vaccinated at the Sudbury smallpox camp. The hospital patients there number 117, of whom 65 are defined cases. In New York the *Bulletin of the State Department of Health* for February, lately issued, states: There were 33 deaths from smallpox during February, of which 32 occurred in New York City and in Watertown and its environs, and in Luzerne. During March about 80 cases of smallpox have been reported up to and near the end of the month in the metropolis.

Obituary.—GEORGE HAYWARD of Boston, March 30, aged 81.—R. A. FERIN of Nelson, Canada, April 1.—WILLIAM A. DUCKETT of Montreal, March 30.—F. B. W. HURDMAN of Brandon, Canada, March 28.—JAMES C. LARSH of Baltimore, April 3, aged 80.—WILLIAM TALIAFERRO HORD of Washington, April 1, aged 80.—JAMES O. CAMPBELL at Winslow, Arizona, March 20.—CALVIN M. BREWER at Clarkson, Texas, March 20.—GEORGE P. JONES at East Newmarket, Pa., April 2, aged 55.—JAMES A. S. CARPENTER of Washington, April 2, aged 74.—ALFRED S. SPEARMAN of Milwaukee, April 1, aged 71.—LEO RANDALL of New York, March 15, aged 37.—EDWARD CLARENCE FRAZER in Philadelphia, March 19, aged 61.—MARY S. WEST of New York, March 24, aged 61.—S. R. McCLANAHAN of Culpepper County, Va., March 19, aged 65.—GEORGE M. FISHER of Denton, Md., March 21, aged 67.—J. HENRY HOBART BURGE of Brooklyn, March 24, aged 77.—STEPHEN B. BENNETT of Canton, Ill., March 1, aged 62.—CHARLES N. FOWLER of Youngstown, Ohio, March 19, aged 73.—RALPH J. HESS, at North Brother Island, N. Y., March 24, aged 27.—JOHN B. BUSTEAD of Brooklyn, March 11, aged 31.—KETON H. LONG at Jasper, Mo., March 23.—A. T. BLACKBURN of Atkinson, Neb., March 18.—JAMES T. HALLOWAY of Empora, Miss., March 18, aged 41.—JOHN THUNDER, head medicine man of the Winnebago tribe, April 4, aged 60.—G. M. B. MAUGES of St. Louis, March 23, aged 80.—JEROME M. PAYNE of Bagley, Iowa, March 22.—HERBERT K. TEFFT of Topeka, Kan., March 11.—GEORGE W. C. WREN of New York, March 23, aged 27.—WILLIAM E. SCULL at Lavernia, Texas, March 14.—F. G. MASON in Newbern, Tenn., March 19, aged 67.—SETH B. SINGLETON of Welsh, La., March 17.—MYRON H. PARKHILL of Howard, N. Y., March 26, aged 35.—MATTHEW F. RYAN at Millinocket, Maine, March 18.—GEORGE W. WILLIAMS at Aurora, Ill., March 23.—PATRICK A. HOLOHAN of Great Barrington, Mass., March 19, aged 32.—WILLIAM J. ALMON of Halifax, Nova Scotia, aged 82.—A. G. HOLLENBECK of Willow Springs, Mo., March 22.—JOSEPH H. BINNEY of Fullerton, Neb., March 26, aged 54.—CHARLES RAY KING of Torresdale, April 5, aged 88.—JOHN FERGUSON of Manchester, N. H., April 6, aged 82.—THOMAS A. HILL at Danville, Ill., April 4, aged 84.—WILLIAM RICHARD WARNER, the inventor of the sugar-coated pill, of Philadelphia, April 3, aged 55.—JOHN H. GROVE of Philadelphia, April 6, aged 75.—J. R. KIRKLAND, of Meridian, Miss., April 5.—WILLIAM JAY YOUNG, for many years editor of the *Popular Science Monthly*, at Mt. Vernon, N. Y., April 10, aged 62.—Of carbolic acid poisoning, WM. N. GUERNSEY, of New York, April 9.

EASTERN STATES.

The Delaware State Board of Health met April 4, at Newark, and elected Dr. E. W. Cooper president and Dr. Alexander J. Lowber secretary and executive officer. Dr. Robin was re-elected State bacteriologist.

A Competitive Essay.—Dr. J. B. Learned, of Northampton, Mass., has offered to pay \$100 for the best essay containing some method for inducing sleep, without the use of drugs, in insomnia. Representative men of scientific medicine are to be the judges in the competition.

Maine Eye and Ear Infirmary.—By an almost unanimous vote the House of Representatives killed recently the resolution to appropriate \$5,000 yearly to the Maine Eye and Ear Infirmary, and adopted a report declaring that a reform was needed in the management of the infirmary.

Cigaret-smoking and its increasing tendency among growing boys is deplored in the annual report of the Superintendent of the Somerville (Mass.) schools. He urges the school authorities to make an effort to enforce the existing statute which forbids the sale of cigarettes to children under 16 years of age.

Mosquitos.—The petition before the Committee on Metropolitan Affairs for a bill to place \$50,000 at the disposal of the Metropolitan Park Commission with which to improve Alewife brook and certain other small streams in Cambridge, Somerville, Arlington, Belmont or Watertown, Mass., which have been shown by the Board of Health to be in a filthy condition and injurious to the public health inasmuch as they breed mosquitos—met with opposition.

A Typhoid Epidemic, has broken out in New Haven, Conn., and was first thought due to a barnyard situated near one of the small lakes which form a part of the water supply of the city. The heavy spring rains had deluged the barnyard, washing the refuse into the reservoir. Later investigation has shown as a cause that in a poor German's home near a small brook feeding the Woodbridge reservoir there were 3 cases of typhoid fever in last January, and that the excreta from the patients was buried in a ploughed field about 150 feet from the brook. There is a total of 300 cases.

Cigaret Legislation.—On April 5 in the Boston Legislature leave to withdraw was reported on the bill which forbids the manufacture and sale of cigarettes. A bill raising the age limit as those to whom cigarettes could be sold from 16 to 18 years was also reported.—In the New Hampshire Legislature the lower house passed a bill providing that no person, firm or corporation shall make, sell, or keep for sale any form of cigaret in New Hampshire, nor shall any one under any circumstances make a gift of a cigaret to a minor. The penalties are to be \$10 for the first and \$50 for each subsequent offense. The upper house has not yet considered this most drastic measure.—The Pennsylvania House has just passed a bill requiring all dealers in cigarettes and cigaret-paper to pay an annual license tax of \$250 to the treasurer of the place where the articles are sold. To pay this tax 250,000 cigarettes would have to be sold annually, since the retail profit is \$1 a thousand. It is thought this will effectually wipe out cigaret traffic in small stores and prevent many children from contracting the dangerous habit.

Connecticut Sanitary Science.—The annual report of the State Board of Health, after noting the improvement in sanitary administration during the last few years, calls attention to the rapid increase in pneumonia, which has now outstripped consumption in mortality. Out of 16,263 deaths from all causes in Connecticut during 1900, there were 1,631 victims of pneumonia, as compared with 1,476 from consumption and 1,341 from heart-disease. During the decade from 1890 to 1899, inclusive, the average annual mortality from pneumonia has been 1,296, as compared with an annual average mortality of 776 during the 13 years previous. The disease is in close accord with the development of late years of influenza and grip. The tables indicate that consumption is slowly lessening.

The **death-rate for Connecticut** during the year 1900 was 17.9 per 1,000. In 10 years, notwithstanding the fuller returns of deaths, the rate has fallen from 19.2 per 1,000 to 17.9 per 1,000. Births, in spite of fuller returns and increase of population, have been almost stationary for 8 years, there being 20,395 in 1900, as compared with 20,296 in 1893. In the birthrate of the State the town of Bradford leads with a rate of 35.6 per 1,000, and Greenwich is lowest, with a rate of 14.7.

Some remarkable figures are given to show the **large mortality from typhoid fever in private practice** as compared with hospital treatment in 1900. Returns from 6 hospitals with 693 typhoid-fever patients show a mortality of but 6.8%, while 1,163 cases in the whole State showed a mortality of 20%. An official report of the Forestville epidemic of typhoid fever resulting in 50 cases and 7 deaths is given, showing clearly that the disease originated from river water contaminated by human excreta from a factory, the water being pumped into the regular Forestville supply owing to a break of a pipe where it crossed the stream.

The report strongly urges the **employment of sanitary inspectors**, other than the health officers, for economic and

other reasons, and emphatically objects to requiring complaints of nuisances to be made in writing over the signature of the complainant. No citizen should be compelled to complain of his neighbor in order to have a nuisance abated that is dangerous to the health of his family. It also urges the importance of local hospitals in every considerable town and city, for the isolation of primary cases of contagious diseases, as a means of preventing their spread and saving life, and gratuitous examinations of morbid specimens for the early and positive detection of suspected infectious diseases. It recommends strongly the more general practice of systematic inspection of school children.

The report strongly opposes sewerage into running streams and favors intermittent filtration as the method best adapted to Connecticut conditions under supervision of the State Board of Health. It says that an anti-spitting law is sure to reduce tuberculosis. A State hospital for consumptives is strongly favored.

Some modification of the Registration Act of the State should be made so as not to exclude old and skilled physicians not technically up in the minute points required in the examinations. On this matter the report says: "If present conditions continue the profession in this State will be almost a close corporation, limited to those who join it while they are fresh from their college work, and their memory is still retentive of chemical formulas and of minute points in anatomy and physiology."

NEW YORK.

New York Eclectic Medical Society.—The annual meeting was held in Fiskill Landing on April 4. Over 100 members attended.

Bronx Hospital.—Senator Hennesley's bill providing for the construction of a hospital by New York City, in the borough of the Bronx, the cost not to exceed \$200,000, was passed by the Assembly on March 29.

Cigaret Smoking.—On April 3 a young Cornell student, who 3 years ago had won a free medical scholarship, was removed to Bellevue Hospital, suffering from paralytic dementia, caused by cigarette indulgence.

The Anti-Vice Committee of New York, at a meeting held April 3, decided to issue a report April 13, which will explain all their work to that date. They will show how vice is protected throughout the city, who is responsible for the protection and how it is accorded.

Dr. Abraham Jacobi celebrated on April 5, at the New York Academy of Medicine, the semicentennial anniversary of his graduation in medicine, invitations having been issued by the Fellows of the Academy. Dr. Jacobi was graduated from the University of Bonn, Germany, in 1851.

Prostitution in the Tenement-Houses will be investigated exclusively along lines which concern the physician as a practitioner by a committee of 7 members of the County Medical Society. This committee consists of P. A. Morrow, S. A. Knopf, H. D. Chapin, C. W. Allen, L. D. Buckley, L. Weiss and G. B. Fowler.

Drug Habits.—A special department of neurology, for the study of neuroses and psychoses due to alcoholism and drug habits, has been established by the New York School of Clinical Medicine and Dr. T. D. Crothers elected professor, and a course of clinical lectures on inebriety from alcohol, opium, chloral, cocaine and other narcotics by him is announced.

Baths for Immigrants.—The Immigration Bureau has about completed on Ellis Island a great cleansing establishment for the benefit of prospective citizens who have just landed. There are 2 bathrooms capable of accommodating 1,000 bathers each day, and a laundry capable of cleansing 20,000 garments in a day. It is the intention of the Government to send the immigrants into society clean and sweet.

Ingenious Advertising.—It is reported that a New York physician evades the unwritten law of the better physicians that they shall not advertise, without technically breaking it. He does not advertise; he writes letters to his clients thanking them for their appreciation of his services and outlining what he has done for them. Accidentally the letters are misdirected and sent to those whom the doctor desires as patients.

The Charitable Annex in connection with the Loomis Sanatorium, at Liberty, New York, was opened March 22 with 12 patients. The present capacity of this annex is 24 patients. The patients receive their board, lodging, medical attendance, laundry, and medicines, the deficit between the sum charged to them and the actual cost of maintenance being made up by a maintenance fund raised annually by subscription. The nurses are furnished from the training school at the main sanatorium, and the patients receive practically the same treatment as is given at the main sanatorium. The various medical examinations from the main sanatorium will also examine applicants for admission to the annex, but the rules for receiving only

incipient cases are even more rigidly enforced than at the main institution. The plant of the Liberty, New York, Electric Light and Power Company has been purchased by J. Pierpont Morgan for about \$40,000 and presented to the Loomis Sanatorium. It furnishes light and power for the Sanatorium and for the entire town of Liberty.

Bell Practice Bills Not Accepted.—The bill entitled "Medical Practice Bill" brought into the Assembly at Albany, N. Y., became so changed in its passage through the Chamber, that only a new name would probably designate it. It was intended to prohibit Christian Scientists and Osteopaths from giving treatment, but it was amended so as to permit Christian Scientists to practise except in infectious diseases and when surgery is required. The fact that the Christian Scientist disregards these distinctions, rather denies sickness of any kind, makes the bill ludicrous to the sane and easy to the Scientists. It was remarked by Dr. Henry, chairman of the Health Committee, that while the Scientists professed great faith in prayer and absent treatment, they had used other means in Albany to defeat the bill, and had not trusted to absent treatment. The bill not meeting the wish of the promoters, was killed.

The Spitting Nuisance.—The crusade against the "spitters" continues to hold the interest of the New York public. On April 4, President Sexton, of the Board of Health, appointed 180 policemen of the sanitary squad to arrest all persons caught violating the spitting ordinance. A number of arrests were made, and with the exception of 1, who was discharged, the offenders were all fined, or held in anywhere from \$50 to \$500 bail for examination. The officers will report from time to time the results of their work and observations to Dr. Roberts, the sanitary superintendent. Dr. Cosby, commissioner of the Board of Health, in a public statement on the above date, fully explained how diseases of the respiratory organs are carried by means of indiscriminate spitting. He declares the authorities should use every means in their power to enforce the law and thus decrease the spread of disease. A resolution has been passed by the Board of Health directing the sanitary superintendent to have the stairways leading to stations inspected for the purpose of preventing spitting on the same.

A Home for the Scientific Societies of New York.—These various societies have needed a home where their collections and libraries could be kept and their research work carried on, and it is now proposed to collect enough money by subscription to erect a building of sufficient capacity to accommodate the New York Academy of Sciences, the Torrey Botanical Club, the New York Microscopical Society, the Linnean Society of New York, Mineralogical Club, the New York Section of the American Chemical Society and the New York Entomological Society. Two weeks ago a number of scientific men, members of the societies interested, secured a committee of wealthy men to take charge of the subscriptions and to identify themselves with the undertaking. This committee has as members: Andrew H. Green, Andrew Carnegie, Abram Hewitt, Samuel Sloan, William E. Dodge, Edward D. Adams, John S. Kennedy, Frederick W. Devoe, J. Hampden Robb, D. Willis James and Colonel John J. McCook. J. Pierpont Morgan has promised \$25,000, provided the whole amount needed—\$500,000—is raised.

PHILADELPHIA, PENNSYLVANIA, ETC.

Physical Culture in Schools.—Steps are being taken towards the introduction of a system of physical education into the schools of Philadelphia in accordance with the recent act of Legislature making such training compulsory.

Dr. Frederick A. Packard, of Philadelphia, has been elected to the Board of Trustees of the University of Pennsylvania. He succeeds to the place made vacant by the death of Dr. J. M. DaCosta. Dr. Packard was graduated from the department of arts in 1882 and from the medical department in 1885.

The Public Bath and Wash-House of Philadelphia has closed its third year under favorable circumstances, and the report of the superintendent for 1900 shows that in 3 years 105,248 bathers and 3,668 washers have patronized the bathhouse, and that a business which grows 40% in 12 months may justly be called successful. During 1900 the patrons paid 65% of the running expenses—the deficit decreases each year. On January 1, 1901, the total indebtedness was \$2,633.98.

Excitement Reproduces Past Experience.—A curious recurrence of memory caused Chas. Washburne, of Allegheny, Pa., to disown wife, children and home. Seventeen years ago he was injured in a railway accident and was taken to a hospital where he recovered completely. He married in Pittsburg and has children. A few evenings ago a lighted lamp fell in his home. Fearing a conflagration Mr. Washburne became excited and was unconscious till the next day. When he awoke he fancied himself back in the hospital and denied his wife's claim to be his; nor did he know his children.

A New Operation.—Gastronomy is an operation that every surgeon is familiar with, but gastrectomy was first attempted as late as 1883 by Dr. Connor of Cincinnati.—*Philadelphia Press*, April 7.

The Women's Sanitary League of Philadelphia, at a meeting on April 1, adopted a resolution urging the Legislature to make an appropriation for the Free Hospital for Poor Consumptives. Another resolution petitions for the enactment of a law providing for the imposition of a penalty on all persons who expectorate in public conveyances or places. And another requests the Faculty of the Medical School of the University of Pennsylvania to make it compulsory for all students to visit the Municipal Hospital prior to graduation. Dr. J. Madison Taylor made an address on the work of the Board of Health.

Generous Gift to Hahnemann Hospital.—Mr. and Mrs. George C. Thomas, of Philadelphia, recently presented the property adjoining Hahnemann Hospital on the north, to the trustees of the hospital. The property is 76½ feet front by 196 feet in depth, and is valued at \$60,000. The buildings now occupying the ground will be razed and a house for nurses built. This building will front on Fifteenth street and will contain a tablet in memory of Bessie Moorehead Thomas and the late Dr. A. R. Thomas. The trustees also propose to build a maternity hospital and probably an operating amphitheater, north of the present hospital and college. A special committee has been appointed to provide plans for the proposed buildings. The State Legislature has been petitioned to appropriate \$100,000 to help defray the expenses of erecting these buildings, this having been approved by the State Board of Public Charities. Until building operations are commenced the grounds will be converted into a temporary park for convalescents.

Vital Statistics of Philadelphia for the week ended April 6, 1901:

	Cases.	Deaths.
Total mortality		490
Brain—abscess 2, congestion 3, inflammation 13, softening 2		20
Apoplexy 23, paralysis 3, epilepsy 1		27
Convulsions 19, puerperal 3		22
Diphtheria	72	12
Heart—diseases of, 31, fatty degeneration 1, neuralgia of, 5, pericarditis 1		38
Kidneys—Bright's disease 9, dropsy 3, uremia 7, diabetes 2, nephritis 14		35
Casualties		12
Lungs—inflammation of, 73, edema 3, tuberculosis 66, congestion 2, inflammation of pleura 3		147
Inanition 18, debility 6, teething 1		25
Scarlet fever	96	7
Typhoid fever	43	8
Stomach and bowels—inflammation 20, obstruction of bowels 2, diarrhea 1, dysentery 1, carcinoma of, 3, peritonitis 6		33
Measles		13
Old age		10
Aneurysm of aorta 1, alcoholism 1, asthma 1, anemia 1, atheroma 1, burns and scalds 1, carcinoma of face 1, of breast 2, of liver 1, of pelvis 1, of tongue 1, of uterus 2, eyanosis 2, drowned 1, eczema 1, erysipelas 3, uterine hemorrhage 1, homicide 1, influenza 1, appendicitis 7, cystitis 2, bronchitis 7, laryngitis 2, whooping cough 6, coroner's case 2, tumor 1, sarcoma 2, suicide 5, syphilis 2, suffocation 4, stricture of esophagus 1, smallpox 1, septiemia 1, pyemia 1, arterial sclerosis 1, rheumatism 1, pyemia 1, poisoning 2, jaundice 1.		

SOUTHERN STATES.

New Orleans Polyclinic.—Dr. Isadore Dyer announces that on account of various requests the session of the Polyclinic will be continued to May 31, instead of May 11, as announced in catalogue.

Mad Itch is the name given to a disease of cattle reported to have made its appearance in Kentucky. It first attacks the hoofs and causes an intense itching superseded by a pain so severe that the animals become wild. It is claimed to be contagious and to result in death in many instances.

Pigpens Within City Limits.—A very bitterly contested municipal election was held lately at Elkton, Md. The issue at stake was the upholding or abolishing of a town ordinance prohibiting pigpens within the city limits. The candidates who were in favor of sustaining the ordinance were elected.

Tuberculosis Sanatorium.—The State Board of Health of Louisiana recommends the building and equipment of a sanatorium, supplied with tents, and all necessary paraphernalia for

the treatment of those suffering from tuberculosis in New Orleans, where the mortality from this disease has been high.

Refund Under Protest.—Dr. B. W. Bizzell, of the Board of Health of Atlanta, refunded on March 29, \$195, paid him by the city for professional services. He made this return under protest, stating that the money was justly due to him. The city attorney advanced the opinion that the city could not make such payments, but the physician may bring suit and make a test case of the matter. Three other Board members were also asked to refund money paid them.

Reformatories for Children.—On April 3, Judge Riley, of Lexington, Ky., declared that reform schools throughout the State were being made a refuge for children whose parents wanted to shirk the responsibility of their support. Prior to the establishment of these schools there was seldom a child in his court with the plea of refractory conduct. He therefore ordered a colored boy whose mother said she could not control him, to be given a whipping. The lad was taken to a cell, and the mother gave him a sound thrashing.

Program of American Gastroenterological Association. The fourth annual meeting will be held in the banquet hall of the "Shoreham," Washington, D. C., May 1, 1901. The following papers will be read and discussed:

The German Clinics of Today, J. C. Hemmeter; The Etiology of Hepatic Sclerosis, A. L. Benedict; Treatment of Gastric Ulcer, D. D. Stewart; The State of the Gastric Secretions in Chronic Rheumatism and Rheumatoid Arthritis, Frank H. Murdoch; Some Cases of Tetany, William Gerry Morgan; Report of 2 Cases of Acute Dilation of the Stomach, Julius Friedenwald; Experiments in Peristalsis, Fenton B. Törck; Some Clinical Studies in Gastric Secretions, G. W. McCaskey; Treatment of Atonic Gastric Splanchnoptosis by Means of Abdominal Strapping, A. Rose; Hyperchlorhydria, John A. Lichty; Report of a Case of Cancer of the Cardiac End of the Esophagus at a Distance of 20 Inches from the Incisor Teeth in a Man 5 Feet and 3 Inches Tall, C. D. Spivak; Digestive Disturbances in Formes Foustes, John P. Sawyer.

Marine Medical Inspectors.—The Louisiana board of health has adopted a new regulation to take effect with the commencement of the annual quarantine restrictions on April 1, between the port of New Orleans and Central and South America. Nine registered physicians have been appointed to act as marine medical inspectors on fruit vessels engaged in carrying passengers from tropical points. Their duty will be to reside aboard the vessels plying between New Orleans and Central and South America and to accompany the ships through the round trips. They have been specially instructed to see that the quarantine restrictions are enforced, and that no passengers are taken on the ships other than from regular embarking points. The marine inspectors are to work in harmony with the board's resident physicians who have been detailed to various ports in Central and South America. The latter are to see that the baggage of passengers has been properly fumigated, and the former have been entrusted with the duty of daily recording the temperature of the passengers and crews while they are on the ships en route to the city.

WESTERN STATES.

Typhoid Fever.—The prevalence of typhoid fever in Sheboygan, Wis., is ascribed to the water which is not in good condition, and an effort is being made to have an improved water supply.

A Woman Coroner.—On April 3, the County Court of Franklin County, Nebraska, appointed Dr. Ella E. Summers, of Omaha, coroner. She is probably the only woman coroner in the United States.

Children's Hospital.—The new hospital for children to be operated in connection with the City Hospital of Cleveland, Ohio, will be formally opened March 27. The new hospital has a capacity for 120 beds, but only 40 will be used at present.

Women in Medicine.—Victor C. Vaughan, of the University of Michigan, has but little commendation for women as medical students. He claims that in textbook work a woman student is superior to a man, but in original work requiring personal judgment she fails in efficiency.

Strict Marriage Laws.—The Tri-State Medical Society, composed of members from Iowa, Illinois and Missouri, in a recent convention held at Keokuk, appointed a committee to present petitions to the Legislatures of the respective States for the enactment of laws prohibiting the marriage of well-recognized mental and physical degenerates.

The Gift of a Hospital.—Mr. Z. G. Simmons of Kenosha, Wis., has announced his intention of presenting to that city one of the best hospital buildings in the State, thoroughly equipped for the care of the sick. Two sites are under consideration, but

the selection has not been made. Plans are being drawn, and it is purposed to have the hospital completed by the end of the summer.

Disease Germs in Books.—Dr. Kuplewski, chairman of the special committee appointed by the Chicago Public Library Board to investigate the books and to consider the necessity of adopting some plan of sterilization to prevent the spread of contagious disease through them, has reported that all the 50 books examined by him were more or less infected by bacilli and he advises the immediate adoption of a system of dry sterilization.

Compulsory Vaccination.—Judge Adams of the Circuit Court, Kalamazoo, Mich., has issued a peremptory injunction against the action of local school authorities who excluded the children of George Matthews from school because their parents refused to have them vaccinated. This was a test case entered into in a friendly spirit between the school authorities and Matthews, with the understanding that the losing side would appeal to the Supreme Court.

Farm Home for Juvenile Delinquents.—A bill is before the Illinois Legislature to appropriate \$100,000 for a home for juvenile delinquents under the age of 16, who might be amenable to such a life as could be maintained on a sort of farm colony where freedom would be subjected to limits, but rather wide ones, and where the life would be out of doors and occupied but with a reasonable proportion of class work. The bill provides that the site shall be donated by some individual or organization.

A Physician's Lawsuit.—The Supreme Court of Indiana has rendered a decision recently that a licensed practising physician is not legally obliged to attend any patient for whom he is called, although he may in the past have served as family physician for the family to which the patient belonged, nor does his refusal to answer the call lay him liable for damages. The case in point was that of Dr. Weddingfield, who refused to attend a patient, although called 3 times. It was charged that the woman's death lay at the doctor's door, and he was sued for \$10,000 damages.

The American Academy of Medicine will hold its twenty-sixth annual meeting at Hotel Aberdeen, St. Paul, Minn., June 1, 1901, and will continue through Monday, June 3. The principal features of the meeting will be a symposium on Institutionalism and Reciprocity in Medical Licensure. Interesting papers on some other subjects will also be read. The president (Dr. S. D. Risley, of Philadelphia) will deliver an address on the evening of June 1, and the Annual Social Session will be held on the evening of June 3. Members of the profession will be welcomed to the open sessions of the academy.

Plague at Ann Arbor.—The reported single case of plague at the University of Michigan, in a medical student who has been taking a special course in bacteriology and became inoculated from handling culture tubes, will no doubt cause more consternation there and elsewhere than the occasion warrants. The final outcome of a case of diphtheria, scarlet fever or measles might be worse, but not have such an effect on the imagination. With Dr. Frederick Novy on the ground, fresh from his investigation of the disease in San Francisco, it is unlikely the disease will pass beyond this single case. Even in San Francisco, with its filthy Chinese quarter and more or less grave dereliction on the part of the local authorities, although existing among the Chinese for over a year the disease has made no headway.

Reason in Animals.—In a recent decision of the Supreme Court of Iowa practical importance has been given to the mooted question whether animals can be said to reason. Suit was brought against the Chicago, Milwaukee and St. Paul railway for killing stock at a crossing. It was shown that the engineer had failed to warn the animals by whistling. The railway company contended that the whistle signal required by law was intended only for the protection of human beings. The court, however, instructed the jury that animals were also entitled to such warning, and a verdict was returned for the plaintiff. The railway company took exception to the ruling and appealed to the Supreme Court which sustained the decision of the lower court, and held that animals have sufficient reasoning power to enable them to recognize the approach of danger and take measures to avoid it.

The plague situation in San Francisco is summarized in the Public Health Reports of the Marine-Hospital Service, which has been issued recently. This report is that of a commission of experts appointed by the Secretary of the Treasury, which made a special investigation, and which shows that there have been 10 cases of the plague in San Francisco since the beginning of the year, all being fatal. It has been confined almost exclusively to the Chinese quarter and the prevailing type has been a mild bubonic form. Recognizing the danger

that this might give rise to graver cases a committee representing the business interests of California consulted with the commission at Washington and determined on measures of suppression. This committee, on its return to San Francisco, raised funds for immediate work, such as disinfecting houses, providing hospitals for suspects, houses for detention, and morgues, and a general disinfection of Chinatown. It is reported that this work has been pushed and is doing much good.

Licensing Opticians.—A bill to insure the better education of opticians, to regulate the practice of opticians in the State of Illinois, and to create a State Board of Opticians, has been introduced into the House of Representatives at Springfield. The bill provides that after 6 months from the passage of the act it shall be unlawful for any person not a registered (or licensed) optician to practise as an optician, and any violator shall be liable to a penalty of not less than \$25 nor more than \$100 for the first offense, and for each subsequent offense to a double penalty. The proposed State Board of Opticians is to consist of 5 practising opticians of recognized standing and ability of at least 5 years' practice in the State, appointed by the Governor, to hold office for 5 years. Its duty will be to report annually to the Governor and to the Illinois Optical Society upon the conditions of the optical profession and trade in Illinois and furnish the names and places of business of all opticians registered under this act. The bill provides that every certificate of registration, or license, shall be conspicuously exposed in the place of business of the optician possessing it; and every person holding a license shall have it recorded in the office of the clerk of the county in which he resides or does business, within 3 months of its date, and until the license is recorded the holder is forbidden to practise or to sell his goods.

CANADA.

Druggists Charged with Practising Medicine.—The appeal of the Toronto druggists, charged with having practised and professing to practise medicine, was sustained in the higher court. The men were convicted in the Police Court. Judge McDougal, who gave the decision, declared that having prescribed in a single instance, did not sustain the charge of practising medicine.

Physicians' and Surgeons' Supply-House.—An Association of Practitioners in Medicine and Surgery in the Province of Ontario has just been formed under charter issued by the Ontario Government, with its headquarters in the city of Toronto. The organization is unique inasmuch as the stock or share capital of the association can only be subscribed to by medical practitioners, with a maximum fixed upon the number of shares that will be allotted to any one subscriber. As the name indicates, the association will deal in and supply all kinds of drugs, instruments, etc., required by the profession. The financial advantages of this cooperative movement will doubtless lead to the upbuilding of an establishment of Dominion-wide connection.

Vaccination.—A militia general order has been issued at Ottawa for the inspection of all recruits and of all men, women and children occupying militia buildings and for the vaccination of all those who require it. At Hamilton 5 physicians have been appointed by the Board of Health to proceed at once with the vaccination of the public school pupils whose parents have expressed their willingness to have the work done by these appointed physicians. There are over 1,100 children to be vaccinated.—**Revaccination** is under consideration by the Ontario legislature. The bill provides that persons having religious scruples with regard to vaccination shall not be required to have their children vaccinated before they can attend the public schools. There is very little likelihood of the bill becoming law since it is being energetically opposed.

Quebec leads the Provinces of the Dominion in respect to birth-rate and progressive legislation in regard to tuberculosis. According to the law passed June 7, 1900, every householder in that Province in whose household a death occurs from consumption must notify the local board of health within 48 hours from the occurrence of such death. Then it is imperative upon the municipality to order and cause to be made a disinfection of the premises and apartments which may have become contaminated through the patient. In this way does Quebec hope to check the ravages of consumption. The city of Quebec has the smallest death-rate from tuberculosis of any of the Canadian cities, and Ottawa has the largest. Quebec's rates is 1.99 to each 1,000 of the population; Ottawa's is 3.12, Montreal's 2.87, Toronto's 2.41, Kingston's 2.17, and London's 2.67. Paris is said to have a death-rate from this cause of 4.90, and New York one of 3.60. The recorder of statistics can take a justifiable pride in the birth-rate of the Province. In 1898 it was 35.70, as against that of Ontario, 20.4. In 1899 it was 33.46, a decrease of 3,585. Even with this decrease, Quebec's birth-rate is larger than that of any country in the world, except Germany's, which was 36.2 in 1898.—*New York Medical Journal*.

FOREIGN NEWS AND NOTES

GENERAL.

Obituary.—G. RITTER v. HOCHBERGER, the oldest medical practitioner in Austria, aged 98. WENZESLAUS MANASSEIN, editor of the *Vrateh*, February 13, aged 60. GEORGE FRANCIS FITZGERALD, of Dublin, distinguished physicist and mathematician.

Trains to Fly Yellow Flag.—As a further precaution against the introduction of the plague in Pretoria, a military doctor has been specially appointed to meet all trains arriving from Cape Town. All these trains have been ordered to fly a yellow flag.

Famine in Shensi.—Messengers who have arrived in Peking from Si-Ngan confirm the reports of the ravages of the famine in that province. It is estimated that 3,000 persons are dying daily from starvation. Sixteen public soup kitchens have been established, but they are utterly insufficient to relieve the hunger.

Plague at Cape Town.—The total number of deaths reported April 3 was 107 including 22 Europeans and there had been 315 cases. The outlook seems very grave where more than 20,000 refugees from the Transvaal have flocked to the overcrowded city and where the habits of some of the colored races make a complicated problem in sanitation and isolation.

A Peculiar Disease of the Scalp.—Stuart Eldridge, Acting Assistant General of U. S. M. H. S., in his report from Yokohama, February 26, 1901, tells of a peculiar disease of the scalp. It was first noticed in Osaka, but has since spread rapidly throughout a large portion of central Japan. Its dissemination is attributed to the native barbers. It is found to be intensely contagious and when stricken the victim becomes totally bald in a few days, whether permanently or not remains to be seen. The nature and progress of the disease is being investigated. Numbers of new cases are constantly being reported from all the larger towns in communication with Osaka. Though not of the gravity of ordinary quarantinable diseases it is both interesting and important.

Vaccination Statistics.—There occurred annually in the city of London from 1771 to 1780, prior to the introduction of vaccination, 5,020 deaths from smallpox among every million of the population; from 1801 to 1810, after the introduction of vaccination, 2,040; from 1831 to 1835, 830; from 1854 to 1871, 388; from 1883 to 1892, 73. For the whole of Great Britain the annual death rate from smallpox has diminished from 1,064 per 1,000,000 in 1838 to 27 per 1,000,000 in 1894; in 1889 it was 1, in 1890 nil and in 1891, 2. Vaccination came into use in England at the beginning of the last century; provision for its gratuitous performance among the needy was made in 1840; it became obligatory in 1853, and legislation for its systematic enforcement was enacted in 1871. —In Prussia, where vaccination had been generally employed, and revaccination became obligatory in the army in 1834 and in the community also in 1874, the mortality from smallpox ranged from 43.8 in 1865 to 262.4 in 1872, while in 1873 it was 35.6, in 1874 9.5, and in 1880 1.4 per 100,000 of inhabitants. In Austria, on the other hand, where vaccination was optional, the mortality was in 1865, 22.8; in 1872, 189.9; in 1873, 314.7; in 1874, 174.3; in 1884, 50.8. Since 1886 vaccination has been obligatory among recruits in Austria.—There occurred in Sweden between 1774 and 1801, before vaccination was practised, an average annually of 2,050 deaths from smallpox per 1,000,000; between 1801 and 1810, when vaccination was optional, 686 deaths, and from 1810 to 1855, when vaccination was obligatory, 169. From 1884 to 1894 the mortality averaged 2.—These statistics could be multiplied indefinitely, but it will suffice to add the announcement that the Imperial Government of Japan has decided to make vaccination compulsory.—[*Ledger*.]

GREAT BRITAIN.

Antivaccinationists.—In the County of Leicester 60,000 people refused to heed the vaccination acts and the assizes have begun the prosecution of the defaulters.

Woman Surgeon.—Miss Marion Ross, aged 27, has been appointed junior surgeon of the Macclesfield, Eng., Infirmary. She took high honors at Glasgow University.

London's Water System.—It was announced in the House of Commons recently that the government would introduce a bill granting authority for the establishment of a state water supply for the whole of London. The scheme will include the purchase of all the existing water supply companies.

Housing the London Poor.—The London County Council is now considering 4 systems of relief for congested city neighborhoods, which together involve the immediate erection of homes for 54,250 persons. Two of these plans provide for the building of separate cottages of various grades and each one furnished with its own garden in suburban neighborhoods

accessible by tramways to the centers of the city. The other plans provide for the erection of tenement blocks 5 stories high, having suites of apartments of 2, 3 or 4 rooms each, wherein light and ventilation have been carefully considered.

Insuring Children in England.—In some of the congested districts of the larger English cities, it has been proven that among children whose lives are insured the mortality is higher than those not insured. And this has been particularly noted with the increase of insurance facilities. For this reason the forces of humanity have made persistent warfare against child insurance. Mr. Waugh, Secretary of the National Society for the Prevention of Cruelty to Children, has in recent years led this movement. He admits that the abolition of child insurance may work hardships occasionally to respectable parents who need such help as insurance offers, but thinks the evil is small compared with that which is made possible to unscrupulous parents who secure insurance on their children.

CONTINENTAL EUROPE.

Professor Grassi had the distinction of the Golden Crown conferred upon him by the Society of Italian Agriculturists in consideration of the services rendered by him in the investigation of malaria.

Typhus Fever is reported as raging in Russia in those provinces which have been famine-stricken in consequence of failure of the crops last year. In some places 20% of the population being stricken.

The Famine and Typhus Fever situation in Russia is growing more serious. The reports of April 4, from Cherson, Bessarabia and parts of Kieff and Taurida state the mortality is 30% of the population.

Women Medical Students in Russia.—In consequence of the student riots the Medical Institute of the University of St. Petersburg has closed indefinitely and by official orders all the higher courses for women.

A New Preservative it is claimed has been discovered by a Danish dairyman, which is not injurious to the health and which it is believed will revolutionize the shipping of butter and other perishable merchandise.

Christian Science imported from America and spread by Americans residing in Germany, especially in Berlin, is reported and deplored as making rapid progress among the higher and even the highest classes, although exclusively confined to women thus far.

Smallpox in Naples.—The official report for the week ended March 30, 1901, notes the steady increase of smallpox in Naples so that it had become quite general. In Caivana, 10 miles from the center of the city, a small epidemic of typhus fever prevailed, one of the attendant physicians had died and one was dangerously ill.

German Surgeon's Birthday Celebration.—Surgeon-General Van Coler celebrated his seventieth birthday on March 15. His has been a career of unusual activity and usefulness in connection with the medical department of the German army, into which he introduced many systems by means of which military surgeons are enabled to keep in touch with the most recent medical thought and practice.

Carlsbad Salts.—A copious new hot spring is said to have burst forth at Carlsbad—where already the hot water rises to the surface in 17 places. Sodium sulfate is the dominant mineral in the Carlsbad Springs but some of them contain a good deal of carbonate of lime. Whether the water of the new spring agrees in composition with those already in use we have yet to learn, for it does not always follow that neighboring springs are of identical composition.

A Surgeon's Sewing Machine was exhibited by Dr. Paul Michel at the late Congress of Medicine. The instrument is quite small, easily held in the hands, and has received the Barbier prize of the Faculte de Medicin. In future a surgeon need not slowly stitch the edges of a wound. With the left hand he keeps the 2 lips together, and with the right he fastens it by means of little clasps or "agrafes" of nickel having points which only penetrate the epidermis, and are not painful. These catches are applied to the machine, a species of pincer armed with them, which can be disinfected by heating it red-hot.

First Women Physicians.—Russia claims the distinction of first introducing women physicians. Marya Bokoff and Nadezhda Susloff are cited as pioneers who did much to open up medical instruction for their countrywomen. In 1870, Mme. Shanyawsky gave 50,000 rubles to be used for the instruction of women in the higher medical studies. These special courses were started in 1872, in connection with the Military Medical Academy. Twenty-four successful students were sent in 1877 to the seat of war during the Russo-Turkish campaign. They did so well that they received the imperial permission to call themselves "women physicians."

ORIGINAL ARTICLES

THE MEDICAL ASPECTS OF CARCINOMA OF THE BREAST, WITH A NOTE ON THE SPONTANEOUS DISAPPEARANCE OF SECONDARY GROWTHS.

BY

WILLIAM OSLER, M.D.,

of Baltimore, Md.

Professor of Medicine, Johns Hopkins University.

[Concluded from page 19.]

CASE VI.—*Tumor of breast in 1896; operation by Dr. Tiffany February, 1898, scirrhus; good health until August, 1899, when she had nerve-root pains, and an attack of shingles; severe pains all winter; in March, 1900, complete paraplegia, with semiconscious condition, and the patient lay at death's door for days. Gradual improvement; disappearance of the paraplegia; slight recurrence in the scar; complete recovery of power in the legs; no disturbance of sensation; in fairly good health at the end of 1900.*

In 1896 Miss Y., aged about 30, whose sister I had seen a year before with cancer of the breast, consulted me for a lump in the left breast. I urged her to have it operated upon at once. I saw nothing more of the case for more than two years, when she called upon me with her nephew, who had anorexia nervosa. She had been operated upon by Dr. Tiffany on February 19, 1898.

I did not see her again until October 10, 1900, when she came to town to consult me about the possibility of getting rid of the morphia habit. She gave the following remarkable history.

She did well after the operation until August, 1899, when she began to have pains in the chest and back, more particularly in the right shoulder blade, where the pain was very acute and intense. She had excruciating pains around both sides, most intense at night, and agonizing attacks of pain down both arms, particularly the right. In November she had a severe attack of shingles over the left chest and shoulder. She had a winter of great suffering and the pains increased up and down the back. In March she became completely paraplegic, with retention of urine. Her physician, Dr. Lockwood, has kindly given me the following statement about this paralysis. "March 23, 1900, she complained of difficulty in walking and using the lower limbs, and she became completely paralyzed as to motion and sensation from about the middorsal region down a few days thereafter (I think March 25th). The abdomen became greatly distended, with apparent complete paralysis of the bowel. On April 6 respiration dropped suddenly to 8 or 10, the pulse was barely perceptible, and the patient was semi-conscious. She remained in what seemed a most critical condition for some days. Nausea and vomiting were persistent from the onset of the paraplegic attack, and up to the time of my last visit (May 6) she was able to take or retain very little food."

She was desperately ill, and neither Dr. Lockwood nor Dr. Tiffany expected her ever to recover. She had a great deal of pain up and down the spine, and for several days she was unconscious. She was moved to the country in June. In July she began to get better, and since then she has steadily improved. The paraplegia has gradually disappeared, and though she is very stiff, she is able to get about with a cane, and has been walking very much better.

When I saw her she looked very thin, color fairly good. She walked stiffly, and with a slight stoop. She has a good deal of stiffness at first when she begins to walk, but she gets more limber as she goes on. She has had to continue the morphia, and she takes now about 3 grains a day. There is a slight local recurrence, which Dr. Tiffany did not think advisable to remove. The spine is bowed, but it can be twisted perfectly well in all directions. The right shoulder blade is natural.

There are no glands enlarged above the clavicles. There are two small recurrences at the margin of the scar. She has recovered power in the legs perfectly; no disturbance of motion or sensation. The kneejerks are greatly increased. Babinski's reflex is not present.

CASE VII.—*Neuralgic pains in the arms, legs and sides; gradual loss in weight; paraplegia dolorosa; scirrhus of the right breast.*

On November 16, 1894, Father S., aged 46, of Watertown, Mass., was admitted to Ward C, of the Johns Hopkins Hospital. He had been in Florida, and there had become so ill that his physician had been sent for. On their way back he had become much worse, and when they reached Baltimore they decided to stop over for a few days to consult me.

About the middle of July he began to have severe pain in the right shoulder blade and subsequently this affected the right arm and hand. About 8 weeks ago he noticed that there was some loss of power and atrophy in the right hand. At times he has had pain in the left arm and about the elbow. A week ago for the first time he noticed numbness in the legs and abdomen. Three days ago he began to have difficulty in walking, but until today he could walk with a little assistance.

He was a large framed, well built man. After he had removed his night shirt I stood at the foot of the bed to get a general survey, and my attention was at once attracted to his right breast, which stood out prominently. He had not noticed it himself, nor had any of his physicians. He had had no pain, and nothing to call attention especially to it. On examination he had a firm, hard tumor, evidently a scirrhus. There was no secondary enlargement of the glands, and there was nothing to be detected in his spine. The kneejerks were increased. The pains were very characteristic of pressure on the cord—those of a paraplegia dolorosa. Finding the breast tumor, there was no question then as to the nature of the spinal cord trouble. I did not hear of the subsequent history of the patient.

The special interest in the case lies in the fact that no complaint had been made of the tumor in the right breast, and I am quite sure it would not have been discovered had he not been stripped for a thorough preliminary inspection.

CASE VIII.—*Carcinoma of left breast; complete removal; 6½ weeks later stiffness of the back and girdle pains; for the next 3 months progressive increase in the pains; onset of paraplegia dolorosa; secondary masses in the ribs and in the spine; death; autopsy.*

W. L. C. B., aged 47 (Surg. No. J. II, H., 8117), I saw repeatedly in Ward E, when he was under the care of my colleague, Dr. Halsted. He had a tumor of the right breast, the size of a walnut in 1897, which grew rapidly, and became sore, and the glands in the axilla became involved. When seen September 15, 1898, he was a healthy looking man, with a disc-like, hard growth in the left breast and enlarged axilla.

On September 21st, Halsted's complete operation was done. The skin graft took well, and the patient was discharged October 2. On October 18 he returned complaining of pain in the epigastrium and along the costal margin on each side. The pain came on in paroxysms, and was often severe enough to keep him awake. There was no nausea or vomiting. He remained in hospital until October 23, when he went out, feeling better, although still suffering with the pain. On November 3 he returned complaining of great stiffness of the back, and pain in the epigastrium, and very severe girdle pains in the course of the ninth and tenth ribs. The rigidity of the back had been present for 2 weeks, and was steadily increasing. On examination there was no curvature, and the spine was held very rigid.

He was seen again on February 6, 1899, complaining a great deal of paroxysms of intense pain, in which he would have to double up, and of trouble with the bladder. He had recently begun to have stiffness of the left leg, and sensations in the soles of the feet as if walking on cotton-wool. The sixth and seventh

dorsal spines were prominent, and there was swelling about them, and there was a small, painful mass the size of a lemon at the level of the eighth spine. Both legs gradually became weak, and ultimately completely paralyzed. He died February 22. The autopsy showed secondary nodules in the sternum and ribs. On the floor of the spinal canal, opposite the seventh dorsal body, was a saddle shaped mass, 2 cm. by 1½ cm. projecting into the canal, and causing a well marked compression of the cord at this level. From the fifth and eleventh vertebrae there were also small nodules projecting into the canal, but not far enough to exert any pressure on the cord. It is interesting to note the small size of the mass which caused the pressure.

Shields makes the significant remark that some of these cases are only too apt to be mistaken for hysteria. In the following instance the symptoms were supposed, for a time at least, to be due to functional disturbance.

October 1, 1900. I saw to-day with Dr. Atkinson, Mrs. Y., aged 37. Dr. Halsted had removed the left breast for carcinoma about 2 years ago. She had done very well until about April, when she began having attacks of pain in the back and side. With these she had a great many nervous symptoms, so much so that she was sent to Dr. Sinkler, in Philadelphia, for a rest treatment. There she gained 10 pounds in weight, but the pains did not subside. Since her return from Philadelphia she has been getting gradually worse, and has had to have morphia, and is scarcely able to stir without great pain. The patient was thin, looked badly, not specially cachectic. She was highly nervous. It was very difficult for her to turn in bed. The pain was chiefly on the left side and down the left leg in the region of the sciatic. There was no local recurrence, but just above the outer margin of the scar there was a slight induration, which possibly was a gland, and just above the left clavicle there was a distinct induration. She moved her head with difficulty, and it was very painful above the left clavicle, but it was very hard to say how much of this was genuine pain. She certainly, however, could not move the head freely from side to side.

I saw her again November 26, 1900, with Dr. Atkinson. She has grown weaker, still has the severe pains, and speaks of committing suicide and wishing to die. She moves the head a little more freely than she did, but she has not been able to get up on her feet, and it was impossible in her condition to make an examination of her back. She complains of difficulty in swallowing, of a lump in her throat.

March 9. This patient has now well marked paraplegia dolorosa and the organic nature of the whole trouble is manifest.

II.—THORACIC MANIFESTATIONS.

Naturally, from the proximity to the original disease and the intimate connections between the lymphatics of the chest wall and those of the pleura and mediastinum, secondary disease is very common within the thorax. There are 3 groups of cases; the pleural, the glandular and the pulmonary.

(a) *Pleural.* With pains in the chest and sometimes with signs of an acute pleurisy there is a gradual effusion, and the case may be seen first with all the signs of a large exudate. The effusion may be the result of a cancerous pleurisy, or it may come from pressure of enlarged mediastinal glands on the azygos and other veins.

CASE IX.—*A small nodular scirrhus in left breast; enlargement of the cervical and axillary lymph glands on the same side; effusion in left pleura; condition mistaken for tuberculosis.*

In the spring of 1891, just as we were interested in the use of Koch's tuberculin, the late Dr. Christopher Johnston sent into the hospital a woman, aged about 29. The supraclavicular and

the axillary lymph glands on the left side were enlarged, forming quite prominent bunches. They had been noticed about 3 months before, and had gradually increased. She was very well nourished, and had a very good color. She received the tuberculin injections, and the reaction on each occasion was active. About 10 days after admission signs of pleurisy were noted on the left side, and she gradually had quite an extensive effusion. She grew worse, and was taken to her home, where she died some few months later. Dr. Councilman performed the autopsy, and found a small nodular cancer the size of a walnut in the left breast, with cancerous involvement of the left pleura, and of the axillary and subclavicular lymph glands.

CASE X.—Mrs. B., aged 56, seen January 8, 1893, with Dr. James Carey Thomas. She had had a cancer of the breast removed 2 years before. She had had pain in the chest, gradual increase in shortness of breath, slight local recurrence in neighborhood of the scar, and at the time of examination the left side of the chest was full of fluid. She was tapped repeatedly with great relief, but she died ultimately from gradual exhaustion.

In Case V, under the cerebrospinal manifestations, the effusion was very possibly due to pressure, and not to direct involvement of the pleura, as the fluid was gradually absorbed, and she has got so very much better.

There are many instances of hydrothorax referred to in the literature.

(b) *Glandular.* By far the most distressing secondary features of breast cancer are seen in the cases in which the bronchial and mediastinal glands are involved, and in which the patient dies from gradual suffocation. Some years ago I was impressed with the terrible character of this possibility by the death of 2 friends, a mother and daughter, within a few years of each other, with secondary disease of the bronchial glands. Case V, mentioned under the cerebrospinal manifestations, illustrates how even a mediastinal growth which has begun to penetrate the bone can undergo involution. There may be no external signs of tumor, but the features are most characteristic of intrathoracic tumor; pain, paroxysmal cough, gradually increasing dyspnea, signs of pressure, usually upon the veins, causing great lividity, and sometimes hydrothorax. The features are very much indeed like those produced by pressure of an aneurysm. The literature as given in the Index Catalogue (both series) contains reference to many cases of this variety. The following distressing instance I saw a few months ago.

CASE XI.—Mrs. A., seen June 1, 1900. The patient had had the breast removed about a year and a half or 2 years previously. She was in a most pitiable condition. She had had cough for many weeks, and progressively increasing dyspnea and orthopnea. She was sitting up in bed, livid, respirations very labored. There had been slight local recurrence. The superficial glands were not enlarged. It was impossible to make a very satisfactory examination, as she was in such distress, and evidently was desperately ill. The pulse was extremely feeble, and she suffered at times a great deal of paroxysmal pain. She sank very rapidly through the night, and died at 8 a. m. on the day after I saw her.

(c) *Pulmonary.* Secondary scirrhus of the lungs is not very common, except the presence of scattered nodules, which I have seen not infrequently postmortem. Encephaloid is, I think, more frequent. I remember seeing a postmortem in which the lungs were stuffed with secondary masses following an encephaloid of the breast, and I see in the Index Catalogue a reference to a case reported by Delbarre of encephaloid of the breast with generalization in the lungs¹.

III.—ABDOMINAL MANIFESTATIONS.

The cases may be divided into 2 groups, the peritoneal and the hepatic. Throughout the literature there are many references to cases of secondary growths in the omentum and peritoneum, with nodular masses in the mesenteric glands, with or without ascites. In the following case the masses appeared to be in the omentum and peritoneum.

CASE XII.—*Cancer of the left breast; tumor in the abdomen probably omental and peritoneal.*

Mrs. R. L., aged 59, was transferred from the surgical side on October 26, 1900. She was admitted with cancer of the left breast, but as tumor masses were found in the abdomen, it was decided not to operate. She had been a very healthy woman, of active habits. Her weight was 137 pounds. She noticed the growth in the breast in August, and very shortly afterwards she began to have pain in the upper left half of the abdomen. With this there was belching of gas and some nausea, and twice she had vomited. She had lost much strength, and slightly in weight. Since admission the pain in the abdomen had been the special symptom.

The patient was fairly well nourished; complexion sallow. The conjunctivas had a slightly yellow tint. There was a firm, hard, sclerous mass in the left breast. The abdomen on admission looked a little full, symmetrical. On palpation there were nodular masses—one in the upper umbilical region, and a second just to the right of the navel. On inflation the lower stomach level was about an inch below the navel. The question was whether these masses were in the stomach or on the omentum and peritoneum. The test meal, given twice, showed once no free hydrochloric acid, and once a slight trace. There was no lactic acid. The Oppler-Boas bacillus was not present. The patient constantly complained of the gastric pain. The abdomen increased in girth. There was flatness in the flanks, evidently some effusion of fluid. The tumor masses in the abdomen were very evident. In all probability they were connected with the omentum and peritoneum rather than with the stomach.

Cancer of the liver secondary to disease of the breast is very common. I have seen a great many cases in the postmortem room. The following are illustrative cases:

CASE XIII.—*Tumor of the right breast for some years; rapid growth within the past year; gradual distension of the abdomen; tapping, blood-stained ascitic fluid; enlarged, nodular liver.*

Mrs. D., aged 64, was admitted to Ward G, February 14, 1900, with swelling of the abdomen and an enlargement of the right breast. She had been a very healthy and strong woman until 4 months ago, when she had vomiting, and the abdomen began to swell, since which time she has been confined to bed. The abrupt onset is an interesting feature of the case. There has been a tumor of the right breast for some years, she does not remember how long. At first it was as large as the end of her finger. It has grown within the past year with a great deal of rapidity.

She was an elderly woman; some emaciation; slight respiratory distress. There was nothing of special moment in the examination of the chest except that there was a little flatness on the right side, probably due to exudate. In the right breast there was a tumor the size of a large pear. The mass was freely movable, not tender. There was no retraction of the nipple. The tumor was lobulated, measured 17 cm. vertically and 11 cm. transversely. The glands in the axilla were not enlarged. There was a little irregularity in the heart's action, nothing noticeable.

The abdomen was distended, prominent in the umbilical region, and bulged in the flanks. The walls were infiltrated and pitted on pressure. The fluctuation wave was distinct. Circumference of abdomen, 125 cm. There was edema of the legs. She had no leucocytosis; hemoglobin was 83%; red blood corpuscles just under 5,000,000.

On the 19th the abdomen was tapped, and 5½ litres of a dark yellow turbid fluid removed. After tapping, the edge of the liver was just palpable 1 cm. above the umbilicus, 7 cm. below costal margin in the parasternal line. Two distinct notches could be made out, and there was a distinct nodule above the edge of the right lobe. The surface, too, was slightly irregular. The spleen was not palpable.

The sediment in the ascitic fluid was blood stained; microscopically, red blood corpuscles and fine fat globules. There were no mitotic figures seen in any of the cells.

The patient went home March 16. There was no special change in the condition. On the surgical side it was thought that the breast tumor was probably an intracanalicular myxoma.

CASE XIV.—*Removal of right breast for carcinoma in May, 1896; local recurrence in May, 1897; through the summer and autumn pains in the joints and sciatica; swelling of abdomen in March, 1898; loss in weight; April, 1898, ascites; drainage; large nodular liver; at autopsy secondary carcinoma of the liver.*

Miss O., aged 40, admitted April 12, 1898. In May, 1898, the right breast was removed by Dr. Hartley for carcinoma. In May, 1897, a small lump appeared at the edge of the axilla, which was removed by the doctor. Shortly before this she had an attack of influenza, and in May an attack of sciatica in the right leg, which was very severe. Later in the summer she had sciatica in the left leg. She had pains in several of the joints, but no redness or swelling. She failed gradually, and in September and October she was a complete invalid. At the New York Hospital, under the care of Dr. Peabody, she improved, and gained in weight. On November 30 she went to Atlantic City, and she again had pains in the joints, and sciatica and high fever. She gradually recovered, and was able to get up and about. About the middle of March, 1898, she noticed that her clothing was very tight, and she found that her abdomen was swollen, and this of late has been increasing. She has had nausea and vomiting, particularly in the morning. She has also had some swelling of the feet. She has lost in weight in 3 months from 125 to 103 pounds.

On admission she was very weak and exhausted, and had an anxious, careworn expression. She was most comfortable when propped up in bed, though there was no great dyspnea, and she had no cyanosis. On the right side of the chest there was the scar of an operation wound, extending to the axilla. There was a hard nodule at its center the size of a chestnut. The abdomen was distended, symmetrical; fluctuation was easily felt. The edge of the liver could be felt on "dipping." There was marked tenderness over the region of the spleen.

On April 18 Dr. Cushing opened the peritoneum, and drained off 1000 cc. of a chylous fluid, which, after centrifugalizing, showed a number of cells 2 or 3 times the size of leucocytes, some of them very granular, others with a row of granules about the nucleus. A most careful search was made for mitotic figures, but none were found.

She was much relieved by the operation for 24 hours. Then she gradually sank and died on the evening of the third day.

The autopsy showed an enlarged liver, with numerous masses of cancer. There were no peritoneal growths.

NOTE ON THE SPONTANEOUS DISAPPEARANCE OF SECONDARY GROWTHS.

The phenomena presented by Cases V and VI are among the most remarkable which we witness in the practice of medicine, and illustrate the uncertainty of prognosis, and the truth of the statement that no condition, however desperate, is quite hopeless. The references in the Index Catalogue show that there are a good many similar instances in the literature. Two of the most remarkable I may quote. One of the most extraordinary is that reported by Mr. Pearce Gould². A woman had

noticed a tumor in 1888. Dr. Collins removed a scirrhous in 1890. The tumor was examined microscopically. In 1892 the glands in the axilla were removed. In 1894 there was recurrence in the scar, and a third operation. In the same year recurrent nodules about the scar, and she had dyspnea. In 1895, when aged 43, she was admitted to the cancer ward of the Middlesex Hospital. She then had enlarged glands above the clavicle, dyspnea, paroxysmal cough and hemoptysis. There was a large tumor in the left femur, supposed to be secondary cancer. She gradually improved, her dyspnea subsided, and the tumor in the femur reduced in size, and she slowly recovered, and Dr. Nunn, who also mentions the case, states that she was shown at the Clinical Society in the spring of 1899.

Vulpian³ gives the case of a woman, aged 32, admitted November 3, 1883. Eighteen months before she had noticed a tumor of the breast, which had increased in size, and had ulcerated. The other breast had become involved. She was admitted in a state of advanced cachexia. The axillary and clavicular glands were involved; there were nodules of secondary cancer in the abdominal walls, and she had an exudate in one pleura. She gradually improved, the secondary masses disappeared, the tumors in the breasts became atrophic, and she left the hospital apparently well on February 23. He quotes a somewhat similar case of Gluck's, in Berlin.

The spontaneous involution which we see occasionally in the primary growth in the breast, affords an explanation of the disappearance of the symptoms in some of the cases with secondary metastases. Without any obvious reason a tumor of the breast, which may have been growing rapidly, ceases to increase in size, slowly and gradually a diminution takes place, the nipple becomes retracted, and in the course of a year or two there is a small, hard, puckered mass, about which, as in Case I, the patient may forget, and even the attending physician may overlook. The metastases in the bones of the spine may undergo precisely similar shrinkage, with complete disappearance of the pressure symptoms, as in Case VI.

The diagnosis of these cases is, as a rule, easy enough when once it is recognized that paraplegia dolorosa and nerve root pains are exceedingly common sequences of cancer of the breast. I have already referred to the statement made by Shields and others that in the early stages the cases may be mistaken for hysteria or neurasthenia, more particularly as there may be no evidence whatever of secondary growths. The autopsy referred to on Case VIII illustrates how severe may be the symptoms, and how extensive the paralysis, with comparatively small growths.

The treatment is most unsatisfactory. Morphia alone gives relief, and it often has to be used in increasing doses. Many patients, however, are fairly comfortable with 3 or 4 quarter or half grain doses in the 24 hours. It is one of the conditions in which the physician has to bow to the inevitable, and in which to relieve the pain is his plain duty.

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GASTROJEJUNOSTOMY IN GASTRECTASIS.*

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Abdominal surgery as practised today by American surgeons is a typical demonstration of surgical ingenuity and application of methods approaching perfection. The peritoneum is as "sacred" today as of old, but modern asepsis has robbed invasion of this sac of most of its dangers. Dirty operations and imperfect technic bring disasters the same as in former years. The peritoneum is filled with hollow viscera, most of which are essential to life. These naturally contain myriads of pathogenic germs, hence the opening of one of these organs is fraught with many dangers unless the surgery is most skilfully performed. The improper application of a single stitch may lead to the loss of a life.

Until recent years most of the operations on that part of the alimentary system situated in the abdomen have been performed as emergency procedures and directly for the purpose of saving life. The successes in that class of cases led naturally to an extension of surgery to operations having as the indication not primarily the saving of life, but the relief of suffering, the restoration of function and prolongation of life.

While gastrectasis in the majority of instances is due to some form of pyloric obstruction there are other cases in which the stomach is dilated from purely a muscular atony-myasthenia. One of the frequent causes of pyloric obstruction is carcinoma, yet it must be remembered that dilation of the stomach is a slow and gradual process, and that cancerous extension of the muscular coats of the stomach may take place early and that these patients frequently die before any obstruction with dilation takes place. I call attention to this phase of cancerous obstruction because so many cases of noncancerous stenosis with dilation are refused relief by surgeons. An erroneous diagnosis of malignant pyloric obstruction has cost many a patient his life by robbing him of the opportunity offered by a gastrojejunostomy. In the majority of cases the dilation is not due to a cancerous obstruction. A pathologic closure of the pylorus that leads to the retention of the stomach's contents (isochymia) will sooner or later produce changes incompatible with comfortable and healthful existence.

The muscular coats of the stomach are first thinned by the dilation, but retain for some time considerable contractile power. The organ under some circumstances is capable of making an approach to its natural size in its efforts to expel its contents through the pylorus or esophagus. Later the organ becomes permanently dilated with thinned or thickened walls in an atonic state, and with very little power of self-emptying.

The pyloric and duodenal fixation is at a much higher point than the bottom of the sacculated stomach. Any operation having as its object the relief of the distention and retention must be made with a recognition of the

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above facts and a site selected for the opening near the dependent portion of the dilated organ.

In reports of many cases of pylorotomy and pyloroplasty the symptoms have not disappeared after operation; the same is true when gastroenterostomy is improperly performed. The weight of the retained food produces a downward displacement of the stomach; decomposition, gas-formation, chemical and bacterial changes are constantly going on, resulting in chronic ptomain poisoning and starvation. These are briefly the unnatural conditions to be overcome in the treatment of a pyloric obstruction regardless of the character of the pathology.

Stomach atony may be determined by the salol test. The salol passes into the intestines where it is mingled with the alkaline intestinal secretions, salicylic acid being the result; this in turn manifests its presence in the urine at the end of 2 or 3 hours, as detected by the addition of a drop of tincture of ferric chlorid to the urine, showing a violet color. This test may be misleading in cases of pyloric stricture, as the salol might remain for days in a nonabsorbing stomach. Atony of the walls of the stomach as a source of dilation when acting as a cause of chlorosis, should receive the same surgical aid as the other forms of gastrectasis, especially if other treatment has been tried and failed.

After the operation I have noticed in most of my cases that the normal secretory function of the stomach has been restored and that disagreeable intestinal indigestion has disappeared, decomposed and improperly prepared food leaving the stomach, as such will not be digested or assimilated by the intestines. In most of my cases, at the end of 2 or 3 months the patients have gained much in weight, uncomfortable symptoms have disappeared and the size of the stomach has materially diminished and lost motility has been restored. I have noticed that a stomach which before operation extended several inches below the umbilicus has in the course of several months postoperative, receded to nearly its normal position. After the operation these patients eat anything they desire and are not aware of the fact that they have a stomach. Intestinal indigestion, a frequent companion to a dilated stomach, usually disappears. The capacity of the stomach may vary from the usual 4 pints to a much larger quantity and yet remain functionally normal (megastria). This condition does not call for surgical intervention unless, by pressure on other organs, symptoms are induced demanding relief.

The application of gastrojejunostomy is not limited to cases of dilated stomachs, but has a much wider scope, as in some cases of gastric ulcers, etc. The use of the stomach tube, proper dietetics, and tonics, should not be depreciated in the management of the atonic variety of dilation yet their use should be discarded after a faithful trial has demonstrated their futility. Even though the obstruction is malignant and is accompanied by a dilation of the stomach, the relief of suffering and prolongation of life warrants the operation. Stomach-washings should be practised for a few days before operation.

The incision is made in the median line above the umbilicus. In none of my cases has it been necessary to make the cut in abdominal walls longer than 3 inches. A small incision shortens the time of operation, prevents

handling of the bowels, and extrusion minimizes the dangers from leakage of fluids into the peritoneum.

Loreta's operation, introduced in 1883, has not demonstrated by time and a fair trial all claimed for it by its originator. Any operation having for its aim the permanent dilation of a cicatricial narrowing of a canal must of necessity extend over a long period of time, and that, too, with frequent divulsions or stretchings. The history of all cicatricial tissue, especially when the process of healing extended over a large mucomuscular area, is to return to its contracted state after divulsion. This is notably the case with a cicatrix of the pylorus following a healed gastric ulcer. The operation of Loreta is certainly not applicable to the closure of the pylorus due to malignancy.

Pyloroplasty, or the operation devised by Heineke-Mikulicz, is one that promises very good results. It consists in making a longitudinal incision on the anterior wall of the duodenum and stomach, in all about 3 or 3½ inches in length. This incision is closed in a vertical direction, or transverse to the way in which the cut was made. By thus closing the wound a new pylorus is created, with the cicatricial tissue on its posterior wall. This is a very good procedure, but is attended by unnecessary difficulties to be encountered by the surgeon, and dangers to which he is not warranted in subjecting the patient. Time is an important factor in the success of any abdominal operation, and especially is this true in the case of patients much debilitated from any cause. Many of these patients are much run down as a result of the prolonged suffering, lengthened starvation, and chronic poisoning from decomposed food, etc. Much surgical time is occupied in doing a pylorotomy or a pyloroplasty.

Malignant disease of the pylorus, giving rise to an occlusion or partial closure, with a resulting dilation, is best relieved by the operative procedure recommended in this paper. It must be remembered that when malignant disease of the pylorus has advanced to a period when it produces a closure of the pylorus, it has also advanced beyond the limit of probable total extirpation; hence temporizing and comfort-giving surgery (by methods entailing the least danger to life) should be applied in the case.

Pyloric resection for cancer, while a brilliant procedure, has not been crowned with success, as far as cure is concerned, such as would entitle it to be placed on the list of advisable and warranted surgical operations. This statement, I fully recognize, is at variance with the writing and practice of some of the world's greatest teachers and surgeons.

Dreydorff reports a series of collected cases of pyloroplasty with a mortality of 20%. The same author (1894) tabulates 188 pylorotomies with a mortality of 70%, the average duration of life in those recovering from the operation being only 11 months. Czerny's mortality from this operation is 41%. Any operation having an immediate mortality of from 50 to 60%, with an average duration of life of only 11 months following the procedure, should be banished from the list of legitimate surgical operations. Especially is this true when a less dangerous and more satisfactory method is offered as a substitute.

In leaving a large cicatricial mass at the pylorus there is, as is claimed by some surgeons, a disposition to malignant degeneration at the site of this fibrous tissue, but this rare change is best averted by diverting the source of irritation (the passage of the stomach's contents) in a direction furthest removed from the scar.

Nomadic surgical procedures, or wandering surgical operations, usually result in half-doing any or all methods tried.

With a few surgeons the new and untried technic presents a seductive persuasion hard to resist, but the adoption of this technic is only too often disastrous to the patient. Surgical calisthenics ("keeping the hand in") in inoperable cases of any nature, should be, and, as a rule, are condemned by the majority of operators. It is useless and unsurgical to perform a pylorotomy for far advanced malignancy when it is known that nothing but a specimen and a little "surgical exercise" can be expected.

Surgical procedures of long duration on anemic patients are fraught with much danger. Malignant disease of the pylorus soon induces profound anemia and cachexia, both militating against successful surgical work. A pylorotomy or a pyloroplasty requires too long, as a rule, for a low mortality in anemic patients.

The importance of gastrojejunostomy as a drainage operation has not been dwelt on sufficiently. The direction of the motion of the stomach makes no difference in this operation; the intestine above the site of anastomosis atrophies to quite an extent after the operation as its only function is conducting the bile and pancreatic fluids downward. Intestinal peristalsis will divert any tendency of the fluid to go upward.

While in most cases it is desirable to make the anastomosis at the lowest point of the stomach on its posterior wall, equally as satisfactory results have been obtained by an anastomosis at the most dependent point on the anterior wall. Some of these patients are in such desperate physical condition that the shortest possible time of operating should be obtained. It takes a few minutes longer to perform the operation when the anastomosis is made in the posterior wall.

A coil of the jejunum should be selected as the portion of the intestine to be used in the anastomosis. If the anterior wall of stomach is selected, the intestine will, of course, have to cross in front of the transverse colon; and enough "slack" should be allowed to prevent any undue compression on the colon or dangerous tension at the site of the gastrointestinal union. In one of my cases the anterior wall of the dilated stomach had descended below and in front of the transverse colon, making not only the anterior anastomosis easier, but most desirable. The colon in this case was anchored by adhesions that prevented its descent with the stomach. The one important practical truth to keep in view in the selection of the site of anastomosis, is that the operation is a drainage or "emptying" one and that the opening must be at the bottom. A barrel will not empty itself through the bung hole while sitting on its end.

I have used the Murphy button in all my cases. Its selection does not demand an apology, as all surgeons are familiar with its uses, as well as intestinal suturing, and

can and do use either as thought best. Neither does the technic of the application of the button need any explanation. It is not my intention to enter into any discussion of the selection of the mechanical means of relieving the symptoms in these cases, as Dr. B.⁶ will get good results with the button, Dr. A. by suturing, etc., etc. The point I do desire to lay some stress upon is the uselessness of the complicated operations of twisting the intestine with multiple anastomosis and the resection of healthy bowel to obtain a theoretic physiologic intestinal circulation of the bowel-contents. Some operations, Baum's, for instance, remind one of a complicated piece of plumbing or automobile machinery.

The following cases present points of much interest:

CASE I.—Mr. L., aged 66. This man, some 8 years ago, had an attack of hepatic colic lasting several hours. This was followed by a jaundice that persisted for 3 weeks. He soon regained his former good health and remained well up to 2 years ago, at which time he had another colic attack, not so severe and not followed by jaundice. One year ago he began having more or less pain in the region of the stomach, or rather, as he expressed it, uneasiness after eating. Two or 3 months later he began losing his weight and had occasional attacks of vomiting, but did not vomit blood at any time. At my first visit he could not digest nor retain much solid food (muscular action was good). He was greatly emaciated, weighing only 120 pounds, although he formerly weighed 240. His appetite was fairly good and liquid nourishment was taken with a relish and fairly well taken care of. Solid food caused much pain and nausea, until relieved by vomiting. On examining him I found that his skin was flaccid and "swarthy," not of a cachectic appearance. Pulse and temperature were normal. An examination of the abdomen revealed a greatly dilated stomach; its peristaltic action could be plainly seen through the thin parietes. There was no pain on pressure at any point, only in the vicinity of the pylorus there existed a sense of unnatural resistance, covering an area the size of the palm of the hand. A test meal when examined revealed an absence of hydrochloric acid. Malignant stenosis of the pylorus was the most probable diagnosis, yet I did not believe there existed a malignant condition. He was given a tonic of strychnia and iron and nutrient enemata were ordered each 4 hours. Under this course he gained 8 pounds in a month.

At operation a median parietal incision 3 inches long was made above the umbilicus. A loop of jejunum was pulled into the incision after pushing the omentum to the left. The anterior wall of the stomach was delivered and a site selected at the lowest point of the dilation, an opening made, puckering stitch applied and $\frac{1}{2}$ of a Murphy button put in. The jejunum was treated in like manner and the halves of the button put together; a continuous Lembert suture was applied around the button for additional safety. Time of operation, 15 minutes. The patient left the table in good condition, and vomited for the first time 10 hours after operation, large quantities of bile. Two days later he had a similar attack. The bowels moved on the second day, and there was no distention at any time.

At the end of 12 days I could feel the button near the cecum, it had evidently completed its work; the button passed on the fifteenth day. His symptoms all disappeared and he gained 60 pounds. No evidence of malignancy could be found at the time of operating. This case was one of nonmalignant stenosis of the pylorus. The patient lived 4 years and died of pneumonia.

CASE II.—Mr. R., aged 67, of Salina, Kan., came to me January 17, 1900. Four months ago he began losing weight and complained of some uneasiness in region of stomach, but had no severe pain at any time. His bowels were very much constipated; in fact there had not been a natural bowel-movement in 3 months. Enemas had been used and even then only a little mucus and fecal stained fluid was passed. The obstruction at the pylorus has been complete for the last 2 months, during which time the stomach-tube has been used twice a day and the

contents of the organ removed by these washings. He had not vomited much. At no time had there been hematemesis. Pain had not been a prominent symptom at any time. He had formerly weighed 180 pounds but I found him much emaciated and very weak, with calcareous arteries. He had no fever or increased pulse-beats. The abdomen was flaccid and free from tenderness; no cachexy.

In the recumbent position nothing abnormal could be detected on palpation. When he was placed in the sitting posture, by deep firm pressure I could detect a hard mass in the right side near the umbilicus. This mass was the size of a 2-ounce, round, prescription bottle, and was quite freely movable, the range of mobility representing an arc of a circle, the axis of which appeared to be near the normal fixed point of pylorus. When the stomach was filled with water (6 pints) it descended an inch below the umbilicus. He was starving, as the stomach could not prepare and absorb the food necessary to hold his health's standard.

An operation was advised and preparations were begun at once. Nutrient enemata were given every 4 hours. Small quantities of concentrated nourishment were given day and night, and the stomach was washed by tube twice per day. Large saline injections were given by the rectum 2 or 3 times in 24 hours. Chloroform was administered and a median incision 2½ inches long was made above the umbilicus. The intestines were empty, hence, it was an easy task to find the jejunum and pull it into the incision; the stomach was easily and quickly found and also delivered, in part, through the incision. In this case time was a most valuable consideration, as the patient was in such a condition that any prolongation of the duration of operation meant death to the patient. After the intestine and stomach had been well surrounded with gauze in the incision, an opening was made in the jejunum some 15 inches below its fixed upper part.

The opening of the bowel of course was made on the convex surface, the purse-string suture having been introduced before opening the gut. The portion of the button holding the spring was introduced into the bowel and the puckering string tied snugly about the stem of the button. A point near the lower side, or better, bottom of the stomach was selected and treated the same as the bowel and the halves of the button were pushed together; a continuous Lembert suture was used about the button to give additional strength in case of severe vomiting.

The anastomosed stomach and jejunum were replaced and the abdominal incision was closed with silkwormgut sutures. Duration of operation, 18 minutes. During this short period of operating the patient's pulse and respiration ceased 4 times, requiring artificial respiration, and during the entire operation his chest and head were kept lowered. Following operation he did not have an ugly symptom. He was nourished by the rectum for 48 hours, after which he took beefsteak and other concentrated foods daily. No vomiting occurred, and only 2 stomach-washings were necessary, on fourth and fifth days. The bowels moved on the third day. At the end of 2 weeks he sat up in bed, at end of 3 in a chair, and in the fourth week he returned to his home.

This man died 11 months later from an extension of the malignant disease. He had no return of his obstructive symptoms after the operation.

I am surprised that the operation has not become more popular, as the indications for its performance are so plain, the relief brought so prompt and permanent, the mortality so low, and the patients requiring it so numerous. Some of our most widely known surgeons have never, they write me, performed the operation.

I recognize how few of the important features of this subject can be embodied in a paper to be presented before a medical society. I trust the discussion may elucidate the omitted phases.

CONCLUSIONS.

1. Cancer of the pylorus, even though removed, returns quickly, and always kills. Pylorotomy is

attended by a high mortality and is not a justifiable surgical procedure in advanced carcinoma of the pylorus. Gastrectasis due to a malignant closure of the pylorus is best treated by a gastrojejunostomy. The operation as advised by Wolfler or Von Hacker best meets the indications.

2. It is not necessary to twist the bowel, in making the anastomosis, to prevent bile from entering the stomach.

3. The anastomotic opening in the stomach should be at the most dependent point of the dilated organ. The operation is attended by a low mortality. In all cases in which marked dilation of the stomach exists, accompanied by emaciation, pain, and invalidity, the operation of gastrojejunostomy should be performed. The relief of pain, due to the effort of the stomach to relieve itself, follows this procedure at once. The patient gains rapidly in weight, and if the disease is nonmalignant his former good health is restored.

RESULTS OF VARIOUS AMERICAN OPERATORS IN GASTROJEJUNOSTOMY FOR GASTRECTASIS.

Operators.	No. Cases.	No. Malignant.	No Benign.	No. Recovered.	No. Died.	Suture Button.	Bile Regurgitation.	Died of Bile Regurgitation.	Anterior.	Posterior.
Bernays	92	92	0	83	9	S	2	2	0	92
Lanphear	3	3	0	2	1	S	1	1	—	—
Ricketts	1	1	0	1	0	S	0	0	1	—
Mayo	44	13	31	39	5	B	3	2	44	—
Taylor	1	1	0	0	1	B	0	0	1	—
Roberts	1	1	0	1	0	—	0	0	1	—
Cordier	10	2	8	10	0	B	0	0	8	2
Price, Jos.	4	4	0	2	2	C	0	0	—	—
Morris	10	10	0	8	2	S	1	1	—	—
Weir	11	4	7	7	4	O	2	2	6	5
Ochsner	8	7	1	7	1	—	0	0	—	—
Walker	3	3	0	2	1	S	0	0	—	—
Roberts	3	3	0	0	3	S	0	0	—	—
Carstens	15	14	1	10	5	O	2	2	—	—

RESULTS OF VARIOUS EUROPEAN OPERATORS WITH GASTROJEJUNOSTOMY. (IEBERKANT) 1898.

Date of Publication.	Operators.	No. Cases.	Carcinoma.		Ulcer and Cicatricial Stenosis.		Dilation of Stomach.		Sarcoma.		No Indication.		Remarks.
			R	D	R	D	R	D	R	D	R	D	
1887.....	Luke	8	5	1	2	—	—	—	—	—	—	—	—
1890.....	Billroth	28	14	14	—	—	—	—	—	—	—	—	—
1890.....	Navaro	10	5	3	2	—	—	—	—	—	—	—	—
1891.....	Lauenstein	17	10	3	2	—	—	—	—	—	—	—	—
1891.....	Hahn	11	—	—	—	—	—	—	—	—	5	6	—
1891.....	Boareman	5	—	—	—	—	—	—	—	—	—	—	—
1891.....	Senn	13	—	—	—	—	—	—	—	—	4	9	—
1891.....	Bernedl	6	—	3	3	—	—	—	—	—	—	—	—
1893.....	Ronx	14	7	7	—	—	—	—	—	—	—	—	—
1893.....	Doyen	10	—	—	—	—	—	—	—	—	6	4	—
1893.....	v. Kleef	19	—	—	—	—	1	—	—	—	13	5	—
1893.....	Cordivilla	6	2	—	4	—	—	—	—	—	—	—	—
1893.....	Helnecke	6	4	2	—	—	—	—	—	—	—	—	—
1893.....	Löbker	7	4	3	—	—	—	—	—	—	—	—	—
1894.....	Czerny	23	12	7	2	1	—	—	1	—	—	—	—
1894.....	Kraske	10	7	3	—	—	—	—	—	—	—	—	—
Other cases exclusive of above (total)		195	66	59	20	9	2	1	1	—	21	16	—
Total.....		388	136	105	35	12	3	1	1	1	52	42	40%

THE MORTALITY OF OPERATION FOR OBSTRUCTIVE JAUNDICE.

BY

JOHN B. DEEVER, M.D.,
of Philadelphia.

[Concluded from page 20.]

It would seem then that operation, and *early* operation, offers the best safeguard to the destructive possibilities of obstructive jaundice due to cholelithiasis. Strictures or obliteration of the duct, tumors closing the orifice of the duct or growing into its interior, pressure from without by tumors of contiguous organs, or by enlarged glands in fissure of the liver, present indications so unmistakably surgical that it is hardly necessary to argue the point.

Marked jaundice, and especially if of long duration, offers a serious obstacle to operative interference, and yet in some cases we must assume the increased risks. The class of cases in mind are the fulminating type of the disease; they run a course similar in onset, duration and termination of the attack to the fulminating form of acute appendicitis. A differential diagnosis is oftentimes difficult to establish, yet the one most important fact can be established as a rule; *i. e.*, general peritonitis, which is the usual accompaniment of fulminating appendicitis and unusual in the disease of the biliary apparatus. In either case operation should be synchronous with the establishment of a diagnosis, or even with a strong suspicion of the trouble; under these circumstances it is better to open an abdomen and find little or nothing wrong, than to do so later on in the attack and find an irremediable condition of affairs.

The time which elapses between the onset of an attack of fulminating obstructive jaundice and its fatal termination is, at the most, a very few hours, and even in this short time it is usual to find gangrenous destruction of not only the gallbladder and ducts, but of the contiguous organs and tissues and especially the duodenum and liver. Here the only hope is prompt relief of the obstruction and adequate drainage.

The important fact to be learned by this study and which to me seems to be the only logical deduction, is that early operation not only in the acute exacerbation of the disease, but in the early days of the disease itself, not only offers the best and surest prognosis as to recovery, but as to the mortality as well.

The 5 cases reported in this paper are used as a text; they represent the mortality of this affection in the German Hospital during 1898, 1899, 1900 and for January and February, 1901:

A. W. was operated upon in 1898 for obstructive jaundice caused by a stone in the common duct. He had consecutive hemorrhage which was controlled by packing; 4 days after operation a secondary hemorrhage occurred, and in spite of packing he died of shock due to hemorrhage.

C. L. was operated upon in 1899 for obstructive jaundice. The urine was loaded with bile and the gallbladder was enlarged and filled with sanguineous pus; 5 stones were removed from the gallbladder and 1 from the cystic duct. The patient died of exhaustion 2 days after operation.

C. P., aged 38 years, married, was admitted May 22, 1899, with a diagnosis of cholelithiasis. His father, mother, 1 brother and 3 sisters are living and well; he uses alcohol very moder-

ately. He has been married 13 years and has 2 living children, 2 died in infancy.

He has had usual milder diseases of childhood, had enjoyed excellent health until 3 years ago, when he had an attack of enteric fever. The present trouble began 1 year ago, although he had not been feeling well since his attack of enteric fever 2 years before. He has lost 50 pounds within the past 2 years. The present trouble began with severe cramp-like pains in the right hypochondriac region. These remained localized in this position and did not radiate. At the same time he became nauseated and for several days continued to vomit small quantities of biliary material. At this time he was confined to bed for a period of 10 days, although his pains had greatly moderated after the fourth day of onset of the symptoms. During this period and for an indefinite time hereafter, his stools, which were infrequent, were of various colors, varying from a light grayish clay color to dark brown. During this attack his skin became yellow, but gradually faded out until he became perfectly white again. Urine was at times of a deep brown color, staining his underwear. After a time he became better and finally resumed his work and continued at it until November, 1898, when he again had a similar attack with pain, biliary vomiting, constipation and jaundice, differing only from the former one in severity. This attack did not confine him to bed, but since then he has never been free from jaundice, or pain and tenderness over the region of the gallbladder. During the next 4 months he continued moderately jaundiced, but does not know whether his jaundice moderated or became more intense at times. His stools were of a variable color, at times clay colored, at others of a deep brown color.

His present condition began 4 weeks ago with severe pains in the left hypochondrium, followed by nausea and biliary vomiting. Fecal passages and urine had the above mentioned characteristics. This attack like the preceding one did not confine him to bed, but prevented him from continuing his occupation. His pain (although moderate) and soreness in the region of the gallbladder, have continued until his admission to the hospital. His jaundice was gradually becoming more intense.

Upon admission, temperature and pulse were normal. He has the above symptoms with slight tenderness upon deep pressure just below the costal arch 3 inches to the right of the median line. It seems that faint gallstone erepitus can be felt in this position. The gallbladder and area of liver dulness are not enlarged.

OPERATION was had May 24, 1899. The patient was prepared and etherized, using 480 cc. of ether. An incision was made through the rectus muscle. The gallbladder was partly visible and projected slightly below the anterior hepatic border; it was only slightly distended. The peritoneal cavity was packed off with wet, hot sterile gauze and the region of the gallbladder was explored by the finger. The finger inserted in the foramen of Winslow disclosed a large stone about the size of a pigeon's egg, occupying a position in the common duct, behind which the cystic duct and gallbladder were slightly distended by bile. An incision about 1½ inches in length in the common duct released the stone and many smaller triangular ones which had collected in the duct. The duct was then mopped out with iodoform gauze and the incision closed with a row of continuous sutures. The area just behind the common duct was drained by rubber tubing and 2 pieces of gauze. The gallbladder was opened by an incision barely large enough to admit a small rubber drainage tube; the latter was packed around with 2 strips of gauze, the tube emerging at the lower end of the abdominal incision. The tube draining the area behind the common duct came out just below the tube draining gallbladder. The gauze packing was removed and abdominal wound closed by interrupted, through-and-through silkworm-gut sutures, silver foil and iodoform gauze dressing.

On May 25 the abdomen was greatly distended, not tender. Distention diminished after a turpentine enema. Pulse was very feeble. Faeces drawn and pinched. On the 26th the pulse had become more feeble and was at times barely perceptible; the skin was cold and clammy. The patient had begun to vomit small quantities of greenish material. This was kept up without interruption during the day. Delirium in a mild form

had set in and altogether patient was in a very poor shape. The abdomen was greatly distended and tympanitic; hepatic area of dulness not marked. Partial necropsy showed localized fibrinous peritonitis; no pus in general peritoneal cavity. Death probably due to cholemia.

W. J. P., 54 years. Operation. Was admitted January 26, 1901, with a diagnosis of gallstones. Mother living and well. One brother died of enteric fever, one brother living and well. One son and one daughter living. Wife living. No history of carcinoma or phthisis. The patient was very weak when admitted. He was emaciated, exceedingly nervous, extremely jaundiced, no fever and fair pulse. His illness began in February, 1900, with a diagnosis of catarrhal jaundice. Gallstones were considered, but he never had pain in any way resembling biliary colic. In the following May he was improving from the attack and had a slight attack of colicky pain lasting 12 hours, which suggested biliary colic. After this he began to fail; he lost flesh, had marked anemia, leukocytosis, constant nausea and appearance of cachexia. Malignant trouble was positively diagnosed.

In July he had a second attack of colicky pain of short duration followed by rapid improvement. He gained weight, was free from jaundice and he thought he was cured, when on his return to Philadelphia in November, the jaundice, weakness, loss of flesh and nausea returned. Gallstones were diagnosed. Operation was considered, but was deferred hoping for improvement. He steadily lost ground until he was admitted on January 26 with above symptoms and leukocytosis of 15,400. Pruritus was marked and distressing. Three days after admission he was operated upon under ether anesthesia. Incision was made through the right rectus muscle into the peritoneal cavity. The gallbladder was felt to be smooth, not markedly enlarged, and the seat of a large stone. The intestines were walled off with gauze. The gallbladder was opened on the anterior surface and a large stone (of size of first joint of thumb) was removed. The stone was free. Another stone was felt in the common duct. This was also movable. It was removed by making an incision into the common duct. A rubber drainage tube was placed into the gallbladder and one in the opening in the common duct and held in place by a chromicised catgut ligature. A piece of iodoform gauze was placed under the gallbladder in both tubes. The large pieces of gauze were removed and the wound was closed by through-and-through silkworm-gut sutures except at the upper part where the 2 tubes and gauze were placed.

He did well for 2 days after the operation; his mind was clear and alert, pulse and temperature normal. He slept fairly well, expelled flatus and took nourishment. There was slight but continual oozing of blood from the wound and a free discharge of bile. He could not urinate voluntarily. The next 2 days he became nauseated, restless, passed scanty amounts of urine, pulse more rapid, mind not so clear. The slight oozing from the wound was not checked by packing; the gauze was removed on the third day, but the oozing continued. It was checked at once with a 1 per cent. solution of suprarenal extract. On the fourth day he became delirious, semicomatose; pulse was weak; was nauseated, with occasional vomiting; abdomen was flat and he passed flatus. He was transfused, with temporary improvement for 12 hours, at the end of which time he was again transfused. After repeated enemias he had a slight bowel movement on the fifth day. After this he gradually sank and was unable to take food by mouth or rectum, pulse weak, was semicomatose, extremely jaundiced, pruritus marked even in delirium. He died while in this condition. Permission for an autopsy was refused. This was, I think, a death from cholemia.

Mayo Robson cites the following cases of deaths from the causes indicated:

No. 283.—Obstructive jaundice; several loose stones in common duct; cause of death was violent and persistent hematemeses. Death on second day after operation.

No. 264.—Obstructive jaundice for months; pressure from cancer of pancreas. Died on fourth day of cardiac failure. No peritonitis.

No. 178.—Obstructive jaundice. Common duct thickened and contained gallstones. Death from exhaustion and shock on third day.

No. 149.—Obstructive jaundice of 4 months' duration. Cancer of pancreas and common duct. Death from extraperitoneal and intraperitoneal hemorrhage without peritonitis. Lived 1 week.

No. 141.—Obstructive jaundice. Cholelithiasis; 18 stones, dense adhesions. Gallbladder removed. Ligature slipped on second day. Extravasative peritonitis.

No. 243.—Obstructive jaundice. Stone in ampulla of Vater; removed through duodenum. Pus collection between liver and diaphragm, not discovered until autopsy.

No. 255.—Obstructive jaundice. Stone in common duct and 1 in ampulla. Well until fifteenth day; died on seventeenth day of heart failure. No peritonitis.

No. 277.—Obstructive jaundice; stone in common duct, which was immensely distended. Numerous adhesions; violent hematemeses 12 hours after operation.

No. 272.—Obstructive jaundice. Stone in gall bladder; 2 stones in common duct; many adhesions; persistent vomiting and death from exhaustion on fourth day.

No. 236.—Obstructive jaundice. Stones in common duct, hepatic duct and cystic duct removed. Patient died on sixth day of heart failure and exhaustion.

No. 177.—Obstructive jaundice. Stone in common duct removed by incision and duct sutured. Died at end of 5 weeks from exhaustion.

No. 59.—Obstructive jaundice. Stone in common duct; adhesions removed, incision and then sutured. Death from peritonitis due to fecal extravasation from a small hole in colon caused by adhesions.

No. 250.—Obstructive jaundice; no stones or tumor felt; cirrhosis of liver and some swelling of head of pancreas. Disease probably cancer of papilla and subsequent cholangitis. Died of shock and exhaustion on third day. No autopsy.

No. 274.—Obstructive jaundice. Cholelithiasis. Patient weak and no attempt to remove stones. Bladder drained. Died on second day. Hemorrhage, which was in the form of persistent oozing.

No. 143.—Obstructive jaundice with hemorrhage from various localities. Stricture of common duct. Death from hemorrhage and shock in 24 hours.

No. 51.—Obstructive jaundice. Distended gallbladder; no stones; head of pancreas hard. Died of shock on second day.

No. 33.—Obstructive jaundice. Cancer of pancreas with gallstones. Hemorrhage from nose, bowel, etc. Died of shock promptly.

No. 11.—Obstructive jaundice. Cancer of pancreas, distended gallbladder. Death on ninth day of hemorrhage.

No. 235.—Obstructive jaundice. No stones in gallbladder or common duct. Death in 7 days of syncope. Kidneys granular and capsules adherent. No peritonitis.

No. 159.—Obstructive jaundice. Adhesions, gallstones and infective cholangitis. Death from general oozing at site of torn adhesions.

No. 92.—Obstructive jaundice, with 18 stones from ducts; infective cholangitis; adhesions. Death on twelfth day from exhaustive persistent vomiting; no peritonitis.

Richardson* reports 13 deaths in cases of biliary calculi and about 100 recoveries. He claims that early operation is not attended by any mortality, but the fatal cases were those operated on late or after cholemia had become a factor.

* Paper read before Surg. Sect., meeting of American Medical Association, June 5 to 8, 1900.

PHELPS' OPERATION FOR CLUBFOOT WITH A REPORT OF 1,650 OPERATIONS.*

BY

A. M. PHELPS, A.M., M.D.,

of New York City.

[Concluded from page 24.]

In the management of clubfoot, it often becomes necessary for the operator to apply more force than can be done by the hands, not only during the time of the

with his canting lever 3, in his hand, flexes and rotates the foot, breaking it across the adjustable fulcrum 6, while his assistant holds the heel firmly with the other lever. As flexing force is applied by the larger lever, the leg is prevented from slipping by the adjustable slide 14.

The machine will not only be found useful in all cases of clubfoot, but more particularly so in those severe forms of clubfoot requiring operation. The operator from time to time can adjust the machine and apply any amount of force, breaking ligaments which he would find it difficult or impossible to cut. In the after treatment of clubfoot it will be found useful.

The operator should not cease operating until the foot



Fig. 13.



Fig. 14.



Fig. 15.

operation, but in the subsequent treatment of the foot as well.

In nearly all cases of varoequinus there is a shortened condition of the ligamentous contraction posterior to the ankle joint, and also an inward rotation of the os calcis. In such cases there is not sufficient power in the hand of the operator to overcome the ligamentous contraction.

To fulfil all of these requirements, I have devised a machine which will be found useful. It can be used in the class of cases above indicated, or several hands can be substituted.

It consists of a combination of levers and screws, so adjusted as to apply the force in the proper direction, varying from a single pound to one ton in force. The bed-piece (Fig. 11) is fastened to a table by means of a clamp 15; 14 is an adjustable slide working upon the cross part of the bed-piece. After having etherized the patient, he is placed in the machine with his leg flexed, as seen in Fig. 11.

The slide 14, is adjusted to prevent the leg from slipping. The straps 10, 11 and 12, hold the leg in a firm position on the bed-piece; 16 is a fulcrum, into which the end of the lever 1, is inserted for the purpose of making the pressure upon the os calcis by means of the pad; 4, 5 is the adjustable fulcrum into which the end of the other lever is inserted. The foot is attached to this lever by means of straps 7, 8 and 9 (Fig. 7), and 5, 6 and 7 (Fig. 12). The straps 5 and 6, are attached to the nuts 4, 4, by turning the screws 2, 2, which are held in the proper position by the framework 3.

Any amount of force can be applied to the heel and instep. The jack can be adjusted to the lever as seen in Fig. 11, the strap 7, passing around the foot as seen in Fig. 12, secures the toes firmly. The operator and his assistant turn up the screws, applying any amount of force required. The operator now,

is supercorrected, otherwise a relapse may be looked for, beginning with manipulation, either with the hand or the clubfoot machine or both, and concluding if necessary, with extensive osteotomy, pursuing the order of procedure as recommended above. Failures occur because the operator concludes his work before the foot is straight and overcorrected, and guesses that he can correct the deformity left by proper after treatment, which, as a rule, he cannot do.

Another source of failure is bad dressing. The desire



Fig. 16.

to use some pet splint, or devise some new scheme, accounts for the disappointment with results.

Failing to supercorrect by operation, and using some worthless wood or metal splint, so adjusted as to make undue pressure upon the resisting foot, produces sloughing, or even gangrene. When the foot has been once

*Paper read before the British Medical Association, August, 1900.

supercorrected, it will then rest in proper dressings without resistance or pressure, and sloughing is never seen.

THE OPERATION.

Prepare the foot by scrubbing, scraping, and antisepticizing with bichloride of mercury solution, 1 to 1,000, the night before. Carefully see that every detail of antiseptic surgery is followed at the time of operating. Then cleanse the foot with iodoform, 1 part; sulfuric ether, 8 parts. Apply the Esmarch bandage.

Keep up a constant irrigation with bichloride solution, 1 to 2,000, during the operation. After strong manipulation, either manual or instrumental, and subcutaneous tenotomy, make the open incision already described in Fig. 6, cut in the order already suggested. Use strong force after each tissue cut. Nothing will be gained by dividing soft parts more extensively than suggested above. If the foot still resists and cannot be placed in a supercorrected position, linear osteotomy, and

finally cuneiform resection should be done (see Fig. 8). In 2 cases, in adults, I found it necessary to remove both cuboid and scaphoid bones. Open incision in children under 1 year of age I have seldom found necessary. Flaps of skin can be turned into a wide gap.

The Dressings. Sponge out the wound, then apply, (1) Lister's protective, not rubber tissue; (2) antiseptic gauze, large quantity; (3) antiseptic bandage; (4) absorbent cotton to knee; (5) over all a plaster-of-paris bandage, holding the foot in the supercorrected position, until the plaster sets; avoid making pressure either by dressings or twisting the foot too far outward; (6) remove the Esmarch bandage; (7) sling the foot to a nearly perpendicular position for 6 hours or longer. Organiza-



Fig. 17.

tion of blood-clot usually occurs, but it is not essential to a good result.

My last cases were dressed as indicated, but the wound was filled with chopped-up fine catgut. Organization was perfect in each case. Fig. 13 shows scarring in a foot 4 weeks after the operation. Fig. 14 shows position of scar and appearance of the foot at the fourth week; Figs. 15 and 16 the condition before and 3 weeks after the operation, and Fig. 17, 8 years after the operation, Figs. 18 and 19 the deformity and method of after-treatment by means of hooks and plasters 1 year after.

After Treatment. The plaster-of-paris shoe and the hooks and plasters or adhesive plaster answer well. The hooks and plasters are well adapted to children under 2 years of age. Fig. 19 represents the plaster and hooks as applied to the feet, the bandages removed. The upper hook connects with a belt above the hips by means of a tape, which tape is secured to the side of the leg at the knee with a strap. The lacings between the hooks hold the foot in the normal position. The results of my series of cases and of those which I have compiled will be found in the table pages.

Equinovarus, after any operation, or mechanical

treatment, is quite likely to relapse. For months and even years, the surgeon will need to carefully look after many of his patients. I have seen relapses following mechanical treatment which have been carried out for years, in every form of osteotomy, and more particularly excision of the astragalus. In my travels through



Fig. 18.

Germany I made casts of feet which had relapsed after these osteotomies in the hands of some of the most eminent and distinguished German surgeons, and the same observations are to be made in every country. An operation only straightens the feet; when this has been accomplished, the treatment (and not until then can treatment be said to begin) is only commenced. The slight twist in the neck of the astragalus will not be found a serious obstacle in the way of cure, unless excessive, in which class of cases it should have been divided with a chisel at the time of operating.

What are the limits of the application of this operation? (1) Eliminate all cases which by the hands can easily be placed in a normal position; (2) eliminate all of those cases which can by subcutaneous tenotomy be perfectly relieved with accompanying proper after management. Then open incision will find its legitimate place in surgery. The age of the patient has nothing to do with the indications for the operation.

What are the advantages of the operation? (1) cutting parts as they offer resistance in their respective order prevents the operator from needlessly cutting tissue not deformed by contraction; (2) after the subcutaneous ten-

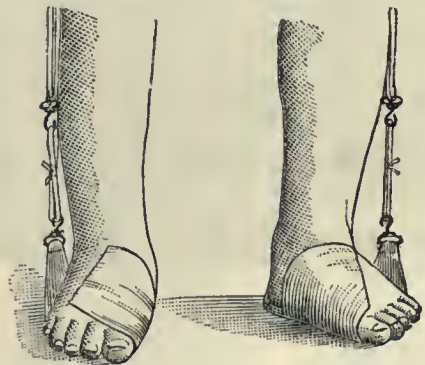


Fig. 19.

otomy of the tendo-achillis the tibialis posticus tendon is easily cut, through an open wound, near its attachment to the scaphoid, ligamentous contraction at this point can also be divided; (3) through this open wound contracted parts can be extensively cut without wounding the external plantar artery or nerve; (4) after all contracted

soft parts have been divided, including the skin (which, by the way, in this class of cases is always short, and from its intimate connection with the plantar fascia would defeat the object of the operation if not divided), the operator can ascertain the amount of the deformity of the bones, and if any considerable amount exists it can be easily remedied with a chisel; (5) it restores the foot to its natural length by lengthening the shortened side; (6) it makes the surgeon master of the situation; he advances step by step in a proper order, and need not stop or retreat until the deformity is overcome, beginning with manipulation and subcutaneous tenotomy, and ending with osteotomy, if necessary.

I desire again to state that osteotomy should not be resorted to as a primary operation, and not until after the contracted soft parts have been lengthened for the reason that in primary osteotomy the bones of the foot must be shortened in proportion to the amount of shortening of the soft parts.

Fig. 20 is of my first open incision operation, before, after, and 12 years after.

Fig. 21, my second case, 3 years old, 3 weeks after operation, 6 years old, 14 years old, and 21 years old.

Fig. 22, my third case, 3 years old, before, 3 weeks after, 4 years after, 10 years after.

Figs. 23 and 24, a case treated 6 years by interrupted traction, 9 times a day, showing results, and the final result after an open incision operation.

Result in a case 34 years of age (Figs. 25 and 26).

I will say that relapses, when they occur, take place during the first years after the operation.

There were performed 10 linear osteotomies, 5 linear osteotomies with cuneiform resection from os calcis or



Fig. 20.

cuboid, and 2 linear or cuneiform osteotomies, together with removal of both cuboid and scaphoid bones, making in all 17 osteotomies.

These results vary but little from Dr. Kaptyn's, of Abcande, Amsterdam, who has kindly furnished me with statistics of 42 operations in 36 cases in Holland. In this series 34 were very good, 1 materially improved, fair results in 6, and 1 still under treatment. In other words, good results were obtained in 36 feet, with useful feet in all the others, except 1, which is unknown.

I find in looking over the literature on the subject, the following reported cases: Hoffe, 6; Schede, 20; Nunchen, 13; Oliva, 6; Postemp-ski, 1; Schreiber, 11; Lowenstein, 2; Jones, 19; Roman, 3; Giordane, 1; Motta, 7; Volkman, 21; Kirmison and Rochard, 7; Ambrose, 1; Phillipson, 3; Levy, 9; Kaptyn, 42; Post, 2; Hamburg Medical, 1884, 12; Hingston, 4; the writer, 161, making in all 342. Bradford and Lovett, of Boston, have made interesting reports endorsing the operation, as has also nearly every member of the American Orthopedic Association and nearly every surgeon of prominence not only in America but in every civilized country on earth.

In my series all the cases at the time of reporting upon them were good results. In no case did I find a sensitive scar, a flat foot, or paralysis following the operation. No considerable atrophy of the muscles of the limb followed the operation in any case; the motion of the toes was preserved in nearly all cases. In those with loss of flexion of the toes, locomotion seemed to be as perfect.

In this series of 1650 cases, the majority had already



Fig. 21.

To summarize my results (I have operated on 1650 cases), I find that the average age was 7 years; the average time of healing of the primary wound was 4 weeks; there were 60% of blood-clot organization, 60 cases of catgut in the series.

The average duration of after treatment was 5 months; on the fourth month after operating, the feet were all straight. Out of the 140 cases traced after one year, 10 cases were found relapsed, or partially so, from neglect.

run the gauntlet of tenotomy and instrumental treatment, with a relapse in each case.

The proportion of relapses in the whole series I have been unable to determine after 1 year, on account of

charitable institutions, and we again make a record of the case. We seldom see a relapsed case. Possibly such cases fall into the hands of some of my colleagues in other institutions.



Fig. 22.

the difficulties encountered among the lower classes in the slums of New York. In my first series of 161 operations, there were 6% of relapses, and I dare say that even so large a percentage would be found in my last series. The first series was made up of cases largely in private practice, and from the better classes of the poor one could trace them easily, but the wandering



Fig. 23.

hordes, with which we now come in contact in our clinics, are from every part of the city and country, and move so often that it would take an army of assistants to trace them. We usually see them with perfectly straight feet for a few months, then with the plaster-of-paris shoe they disappear. Frequently they turn up at the clinic again after a year, with another member of the family, who comes to again impose upon the generosity of the



Fig. 21.

WILSON'S STATISTICS OF BONE OPERATION, 435 CASES.

Mortality	16
Amputation, 1 immediate; 2 subsequent	3
Subsequent operation	5
Tendency to relapse	17
Not entirely corrected	9
Walk with apparatus	16
Unsatisfactory	9
Not stated	81
Unsatisfactory	9
Not corrected	9
Tendency to relapse	17
Subsequent operation	5
Amputation	3
Died	3
	46
Walking with braces	16
	60
	13.81% failures.

My series shows 6% of failures only, and these by relapses through lack of care.

First Case.—Ida M. Thornton, 14 years old last April, single talipes equinovarus, congenital. Consulted an orthopedist in New York when 6 weeks old. He put a brace on when the child was 3 months old, and did nothing till that time. She wore the brace till 2½ years old, then put on a shoe and a side brace and he taught the mother to apply the stretching machine 3 times a day for 15 months. Took her then to his dispensary 3 times a week for 9 years. Assistants there applied the stretching machine for 15 minutes with the application of electricity. Two years ago was discharged; was told nothing more could be done for her except braeing. The mother informs me that she has worn braces made at that institution since then, and her feet are essentially now as they were when she left the dispensary and hospital.

I photographed this case. Figs. 27, 28 and 29 show the amount of deformity without brace; Fig. 30 the brace on, and Fig. 31 a photograph taken 3 weeks after the operation. The foot now is nearly perfect. When she was 4 years old a tenotomy was done; when she was 5 years old the plantar fascia was cut. The traction machine did not seem to work "its miracle", and owing to the fact that an insufficient operation was performed, the child of 14 years led a crippled life.



Fig. 25.



Fig. 26.

Second Case.—December 31, 1892, M. H., 17 years old, came to my clinic at the Post-Graduate School and Hospital. Consulted Dr. — when 2 years old, as a private patient at his house. Applied extension braces of several kinds until she was 6 years old. Twice a week was attended by Dr. — personally. When 6 years old the father, having suffered from financial reverses, sent his daughter to the dispensary and hospital, where she remained 5 years, till 11 years old. Went

walking before the anterior segment of the foot does. Such feet will take the weight of the body in such a direction as to turn them still further outward and prevent relapse.

5. Clubfoot shoes of every name and nature I have entirely discarded. The human hand is the best club-



Fig. 27.



Fig. 28.



Fig. 29.



Fig. 30.

home when she was 11 years old, unimproved. She had suffered from synovitis of knee joint, possibly due to wearing braces, the mother says, and the toes had become seriously deformed from the pressure applied. She was discharged, wearing heavy braces, and returned to the dispensary for care as often as she was directed to. She came into my clinic at the Post-Graduate Hospital when she was 14 years old.



Fig. 31.

I made casts of the feet before operating, and Fig. 32 is a correct photograph, showing the amount of deformity. She was a lamentable cripple, and when her shoes were removed could stand with difficulty. Fig. 33 is the same case, taken a few weeks after the operation. The mother states that her feet had remained the same as when she left the dispensary before I operated.

My observations have led me to the following conclusions:

1. All feet at any age after the fourth month, with shortened skin and ligaments, should be operated upon by open incision.
2. Prolonged medical treatment covering over months and years in any case is wrong.
3. While I am prepared to admit that many of such cases can be benefited or cured, the surest and easiest plan for the patient is to operate.
4. The operation is not completed until the foot is placed in the supercorrected position flexed upon the leg and the heel prominent so that it strikes the ground in

foot shoe ever devised, and by manipulation the foot is carried to the supercorrected position and fixed there with a plaster-of-paris shoe or adhesive plaster.

6. The treatment just begins after the operation is completed.

7. Osteoclasis should be performed in all cases of inward twist of the tibia or a relapse may be looked for.

8. Bone operations should never be performed primarily.

9. Open incision should supplement all cases of subcutaneous tenotomy when it fails to supercorrect.

10. Short tendons and ligaments should be cut and not stretched, because prolonged stretching results in deformity of the entire tarsus.



Fig. 32.

11. A case cannot be said to be cured and free from the dangers of relapse until the heel strikes the ground first in walking.

12. A cure is effected when new facets are formed on the tarsal bones.

13. Pirogoff's amputation was required in $\frac{1}{4}$ of 1% in my series of cases.

14. Open incision should never be performed unless the skin resist and will not stretch sufficiently to allow of supercorrection and the proper unfolding of the foot.

15. The weight of the body falling upon any clubfoot shoe or brace nullifies the action of the apparatus. This was the reason why the late Mr. Adams treated one foot at a time with his shoe, putting the patient on crutches until the foot was cured.



Fig. 33.

would nullify the action of any clubfoot apparatus; which is a fact. With this idea I fully agree and not following out this plan is the reason why so many failures occur in treatment and years are required to prevent relapse by means of cumbersome braces. Any clubfoot appliance which does not take its base of support at the pelvis is worthless, because it will turn round upon the leg and can exercise no considerable force upon the varus. Mr. Clark also states that thousands of cases would be ruined by publishing these ideas. This is also an error, because any man endowed with average surgical knowledge can straighten these feet permanently and can easily keep them straight; whereas by not publishing the idea, hundreds of thousands of cases would be condemned to a cripple's life by the application of braces and mechanical contrivances, the principles of which originated during the ages of surgical ignorance. I have already in my paper indicated the class of cases suitable for operative procedure and those which should be treated by manual force and fixation, and those conclusions are arrived at after treating thousands of cases, both in private and hospital practice during the past 30 years.

In answer to Mr. Tubby; he states that the operation is a bad surgical procedure. His position is identical with that of the doctor who states that the operation for appendicitis is useless and bad practice. He opposes his personal opinion, not based upon an actual personal experience against that of our most distinguished orthopedic surgeons and surgeons in America, notably that of the Sayers, Gibley, Bradford and Lovett, of Boston; Sherman, of San Francisco; Wilson and De Forrest Willard, of Philadelphia; Senn, of Chicago; Bryant, Weir and Myer, of New York; Sir William Hinxton, of Montreal; nearly every surgeon of Europe; Mr. Edmund Owen, of London; and hundreds of others, had I time to mention them. He says that the large gap produces a scar which will contract. The late Mr. Adams said; the operation left a large scar which would stretch. This is my understanding of the action of scar tissue under pressure, verified by observation. He would not operate at the fourth month. If skin and ligament is short and will not stretch sufficiently an operation is imperatively demanded and no bad result will follow. If mechanical treatment is continued for years in such cases, a hopeless deformity of the tarsus or a relapse clubfoot will be the result. I differ with him, and know that my results are better from the operation than I ever attained from any mechanical means whatever.

DISCUSSION BY DR. PHELPS.

Mr. President, Mr. Clark states that the feet after the cutting operation are not elastic. This is positively an error, because I have not observed this result in 1,650 operations. He quotes Mr. Adams' work. We are all familiar with it and also with the work in many of the orthopedic institutions in London, where the teaching of Mr. Adams, I am informed, is not carried out to the letter. Mr. Adams taught that the patient should be put upon crutches and one foot strunged at a time by his orthopedic apparatus, because as he stated: "The weight of the body

He states that these cases are not followed and seen years afterwards to determine what the final result is. In answer to that, I present here a series of photographs out of the scores of cases which I have observed until they have grown to womanhood and manhood, which contradicts this statement absolutely. Mr. Smith states that by my rule there would be no cases to operate upon. I stated in my paper the rule for operation. I again state here that 90% of cases occurring in babies do not require operation. The other 10%, which would require bracing for years, resulting in a failure in 9 out of 10, require the operation. Of the 1,650 cases upon which I operated, nearly all of them have been handled in the orthopedic institutions of New York, or in private practice, where they follow precisely the same kind of treatment followed in many of the orthopedic institutions of London. Mr. Smith has a fear of nonunion of tendons. Unless infection takes place the fear is entirely unfounded. The specimen which he presents is an excellent result after years of careful mechanical work and suffering and inconvenience upon the part of the patient. An equally good result could be attained within 2 months by resorting to open incision. Mr. Williams cannot find cases to operate upon. Every case that he has treated by mechanical means for more than 6 months, which still has a shortened inner side of the foot, should be operated upon by an open incision, or else, sooner or later, a large per cent. of such cases drift into the hands of the surgeon, who will operate with varying results, because, as a rule, he is not so well equipped to carry out the after treatment as the orthopedic surgeon. He states that they get these relapse cases at the large hospitals. I have already stated one of the reasons why. In America, these cases which come from the large hospitals to my clinic, after an open incision operation, had already served their years of apprenticeship in some orthopedic hospital. He says the operation is fascinating, which is true, and if he will permit me to add that when the operation is performed, as I have already described, and the after treatment judiciously followed by an orthopedic surgeon, the results are more fascinating. The orthopedic profession of every country on earth has accepted the operation as one of the surgical procedures in our specialty, excepting England. By so doing, they have prevented these cases from drifting to the large hospitals and falling into the hands of the general surgeon. The operation belongs to orthopedic surgery, and not to general surgery.

DECEMBER 18, 1900.

My Dear Sir:—I was much interested in the account of your latest operation for equinovarus at the annual meeting of the British Medical Association. I have spoken with favor upon that operation in my book on Operative and Practical Surgery, and, having read your original description in one of the American Transactions, I believe I was the first to carry out your latest operation in Great Britain, and I recently showed 3 feet operated upon in that way to a surgical society.

One child, aged 8, was brought to me in irons with considerable rigid deformity; he had worn the irons for 3 years. The following particulars are interesting: "Operation" at 4 months. Operation at 10 months, followed by splints, etc. Then seen privately. At 1 year and 9 months in one of the London Orthopedic Hospitals; remained for 6 months, and subsequently went home a year until he was 4. He had 3 or 4 operations and wore "scarpa's by night and irons by day," and had his feet "pulled." Has worn irons since he was 2. Mother counted 21 marks of operation. I performed your complete latest operation first on one and then on the other foot, with excellent results. I wished to test case properly and left off all apparatus, trusting to plantigrade progression. This year, 2 years after operation, I exhibited patient. He had perfect plantigrade progression, with a good arch, and could run and jump well. In fact he could hop and jump well 2 months after the operation.

When an operation on the bones is required I have no hesitation in saying that I regard your latest (complete) method as far and away the best. So you have one advocate in England, at any rate.

Yours faithfully,

[Signed]

THOS. CARWARDINE.

AN OBSCURE CASE OF HYSTERIA WITH ASSOCIATED RIGHT MYDRIASIS AND AMBLYOPIA AND LEFT MYOSIS.

BY
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[Concluded from page 25.]

On January 24, three weeks after Dr. de Schweinitz saw her first, she told me that she had seen out of her mydriatic eye for the first time in 11 years. Dr. de Schweinitz's report is as follows, and because of the unusual ocular findings is the most interesting part of this paper:

First examination January 8, 1901, patient being in bed and convalescing from a surgical operation. V. of R. E. equaled light perception in all portions of the field; pupil widely dilated 8 mm. in diameter, reacting slightly to direct and indirect light stimulus. The media were perfectly clear, the disc was small, slightly grayish in color; the central veins full and streaked with slightly distended lymph-sheaths; the arteries normal in size. There were no retinal lesions.

V. of L. E., roughly tested, 20/C, and ordinary print and written characters could be read. There was myosis, the pupil being contracted to about 2 mm.; no view of the fundus. There was intense ciliary pain.

The following day the examination was repeated, scopolamin solution, having been instilled into the left eye. This dilated the pupil, but not *ad maximum*. The ophthalmoscope revealed a practically healthy fundus, the nerves and vessels presenting appearances similar to those described upon the opposite side. The field of vision as taken with the hand was normal; the color field was not tried. The rotations of both eyes were ample in all directions. The right conjunctiva was distinctly anesthetic, the left, if anything, hyperesthetic. There was some loss of sensation of the skin surrounding the amblyopic eye. With the ordinary prism test and Harlan's test, it was easily demonstrated that the patient, although she claimed only light perception for the right eye, could see quite as well with that eye as with the other. The diagnosis of hysteric amblyopia seemed warranted by the ocular examinations.

Second examination February 8, 1901, patient greatly improved in general health and sitting in a chair. V. of R. E. equaled shadows; other ocular conditions unchanged. V. of L. E. about 20/C; field of vision had very slight concentric contraction for white; moderate contraction for blue and red, the color lines coinciding on the horizontal meridian on the temporal side, but no reversal; extreme contraction for green.

Third examination February 13, 1901, patient showing continued general improvement, in the refraction room of the hospital some distance from her own quarters. V. of R. E. at first counting figures, but when +3 D. lens was placed before the eye 20/CC was acknowledged. The ophthalmoscopic appearances were unchanged and the mydriasis previously noted unaltered. V. of L. E. with +3 D., 20/L; no changes in the fundus. The pupil, under the influence of atropine, dilated to 5 mm. The visual field of the right eye, mapped by Dr. H. Haden, showed decided contraction for white, marked contraction for colors, with a tendency to reversal of lines. The visual field of the left eye was similar to that of the right, but somewhat more contracted and also exhibited a tendency to reversal of the color lines.

Fourth examination February 14, 1901, the patient being again removed from her own room to the refraction room of the hospital with the eyes under the influence of a mydriatic. This did not increase the mydriasis already existing in the right eye. The total refraction of each eye was determined by means of retinoscopy and proved to be

$$\begin{array}{l} \text{R. E.} + 3 \text{ } \overset{\text{S}}{\text{C}} + 0.25 \text{ axis } 105 \\ \text{L. E.} + 3 \text{ } \overset{\text{S}}{\text{C}} + 0.25 \text{ axis } 60. \end{array}$$

With these lenses the patient promptly obtained a vision of 20/XX with either eye. Through these glasses at 20 feet there was an exophoria of 2° and a right hyperphoria of 5°. The following combination was ordered for constant use.

$$\begin{array}{l} \text{R. E.} + 2.25 \text{ } \overset{\text{S}}{\text{C}} + 0.25 \text{ axis } 105 \\ \text{L. E.} + 2.25 \text{ } \overset{\text{C}}{\text{C}} + 0.25 \text{ axis } 60. \end{array}$$

Fifth examination February 24, 1901. Like the two preceding ones, this examination was made in the refraction room. V. of R. E., 20 XX, the letters of the line being read slowly but correctly; amplitude of accommodation 5.5 D. The pupil was still dilated, but not so greatly as on former occasions. V. of L. E., 20 XX, the letters of the line being read promptly; amplitude of accommodation 6 D. The visual fields were: For the right eye decided contraction for white; contraction for red and blue, with coincidence of the lines on the temporal side, but no reversal; great contraction for green. For the left eye moderate contraction for white; only slight restriction for blue and red; great contraction for green. The mydriasis of the right eye is gradually disappearing, the pupil being about 4 mm. and freely acting to all impulses; the myosis of the left pupil remains as before.

Remarks by Dr. de Schweinitz.—Hysteric amblyopia, which, as Parinaud said, "may be styled an anesthesia of the organ of vision," is doubtless the most frequent of all the hysteric anesthetics, and is, as it was in this case, usually accompanied by other disorders of sensation. As is well known, Briquet regarded anesthesia of the conjunctiva as characteristic of the hysteric state. Generally the left conjunctiva is affected; in the present case it was the right one. Loss of sensation around the amblyopic eye is common. The pupils in hysteria may be contracted or dilated; if dilated the reflexes are usually preserved. Such phenomena are often of temporary duration. Long-standing mydriasis of one eye has been reported a number of times, and myosis is also described, especially according to Galezowski, when there is an associated spasmodic myopia. But complete mydriasis on one side, with slight preservation of the reflexes, and equally complete myosis, without spasm of accommodation and usually without marked photophobia, as exhibited by this patient, is unusual if not unique. Concentric contraction of the visual field, i. e., an insensibility which develops from circumference to center, is the rule in hysteric cases, and nearly always is accompanied by a corresponding contraction for colors. Sometimes, however, the field for white is more restricted than that for colors. The last color affected in hysteria is red, in other words, the normal sequence of the color lines may be more or less reversed, the red field being the largest. In the present case this concentric restriction of the visual field was well-marked, but inversion of the color fields was not positively demonstrated; it was only indicated in one examination. The green field was always greatly contracted, in this respect confirming an observation of John K. Mitchell and G. E. de Schweinitz that the green field is, relatively at least, more and more often contracted than the others. The map of the visual field made in the patient's room was wider than the one obtained in the refraction room of the hospital. This is probably to be explained by the fact that physical tire resulting from the journey from one room to the other found some expression in retinal tire. To explain the disappearance of monocular amaurosis in binocular vision, somewhat complicated hypotheses have been advanced by Bernheim, Frankl-Hochwart, Pari-

naud and others, which need not now be discussed. The gradual restoration of the vision of the right eye was due to the improved general condition and to the glasses; as Mr. Swanzy well puts it, "the psychological inhibition to the function of sight in the eye has been withdrawn by the suggestion provided by the spectacles." In this case not only did the glass provide the suggestion, but it permitted accurate retinal stimulation. Furthermore the lenses fully neutralized the refractive error, relieved a long-standing eye-strain and thus aided in the recuperation. High hypermetropes often have small pupils, and it may be that the myosis of this patient's left eye is normal to its refractive condition. The dilation of the right pupil has been reduced more than half and it is likely that this pupil will finally equal in size the other. The sphincter of the iris is regaining its power in connection with the restoration of power elsewhere in the general nervous mechanism, and it responds to all stimuli in a normal manner.

Under Swedish movements and massage with proper medical treatment the patient speedily improved. Her restoration of vision has been permanent and she is able to stand on the left leg and to walk with crutches, although she is using these less and less as she acquires confidence in her ability to walk. The pain has practically disappeared and she has returned to her home.

INDICATIONS AND LIMITATIONS OF THE VAGINAL OPERATION IN PELVIC DISEASES IN WOMEN.*

BY

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By a strange shifting of ideas vaginal section for the treatment of diseased appendages, which was devised in this country by Battey, of Georgia, was extended and enthusiastically adopted in France, but has lately been employed so extensively by the German operators that they have obtained quite a monopoly in this line of work. On the other hand, laparotomy for the treatment of pelvic disease, which was formerly advocated by the Germans, and employed extensively in England, especially by Lawson Tait, has been adopted more completely by the French operators, by whom it is now known as the American operation. In the latter sense it is applied more particularly to the treatment of fibroid tumors. The vaginal method, in its wide application to pelvic disease, is, however, gradually obtaining a foothold in this country, and the indications for its employment are rapidly extending, in accordance with the acquired efficiency and skill of the operator, to cover the treatment of all pelvic diseases, when confined to the true pelvis.

Speaking broadly, it may be affirmed that any operation that can be done as safely and satisfactorily, for the patient, by the vaginal route as by the abdominal, should be done by the vaginal method. The dangers are less, incomparably less; the convalescence is smooth and the after-treatment simple, the patient being relieved of

annoyance of stitches, adhesive plaster, bandage and dressings; there is no visible scar to remind her continually of her experiences; and above all, there is no danger of hernia. The removal of stitches, the repeated application and removal of adhesive plaster, and finally, the wearing for 6 months or a year of the inevitable abdominal supporter, all this is a great wear and tear upon the nerves of a woman already depleted by the disease, for the relief of which the operation was performed. Practically, no such thing as hernia or enterocele has been known to follow as the result of vaginal section; while following abdominal section, even for the relief of the simplest forms of pelvic disease, cases of ventral hernia are constantly presenting.

Accepting the dictum, then, that from the standpoint of the patient the vaginal operation is preferable, it but remains to be considered what are the indications for the operation and what may be its limitations.

CANCER OF THE UTERUS.—Personal experience and the careful study of the experience of operators in the wide fields of gynecology and general surgery have led me to the conclusion that the only justifiable radical operation for uterine carcinoma is vaginal hysterectomy. From the operative standpoint carcinoma of the uterus has two stages; first, the stage in which it is confined absolutely to the uterine tissue; and second the stage in which the cancer-cells have wandered out into the surrounding tissue. During the first stage of development an absolute cure may be hoped for through the operation of hysterectomy. In this condition vaginal hysterectomy is a comparatively simple procedure; simple for the patient and simple for the operator. Moreover, there is far less danger of infection of the surrounding parts by the cancer-cells than is necessitated by the abdominal operation, and this danger is one that has been distinctly recognized and pointed out by the most careful investigators in this line of work. In this connection one point in the technic may be quite worthy of mention. I refer to the importance of removing the uterus intact, instead of bisecting or quadrisecting it, as has been recommended recently by Dr. Howard A. Kelly, and for the very reason that I have just mentioned, namely, the danger of infecting the surrounding tissue with the cancer-cells.

In the second stage it must be recognized that the disease is beyond even the hope of cure. Although Cullen tells us in his recent incomparable work on "Cancer of the Uterus," that the cancer-cells wander first into the connective tissue and in some cases tarry there for a definite period before being taken up by the lymphatics, the impossibility of determining when the expiration of that period has been reached robs us of all reasonable prospect of a cure when once the cancer-cells have passed beyond the limit of uterine tissue. Some operators are still performing what is called the radical operation for cancer, which consists in ligating through an abdominal incision the large bloodvessels of the pelvis, rimming out all of the cellular tissue and lymphatics in connection with a panhysterectomy, with the hope of heading off the invasion before it shall have involved the general system.

Examination of their statistics reveals the fact, as Richelot says, that the patients thus operated upon, pro-

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vided they have survived the operation, are either all dead, are about to die, or enough time has not elapsed since the operation to indicate just when their demise may be expected. To my mind, these men are following an *ignis fatuus*. The analogy so frequently drawn between the lymphatics of the breast and axilla and those of the pelvis is misleading. In the former the lymphatics follow definite lines and lead to a central depot, while in the pelvis they lead to no common center but are widely diffused in all directions.

The only hope in the operation for cancer of the uterus is in forestalling absolutely the first invasion of the cellular tissue, and it is for that reason, as well as the danger of cancerous infection when the operation is done from above, that I am ready to stand upon the dictum that the only justifiable radical operation for cancer of the uterus, is vaginal hysterectomy.

FIBROID TUMORS.—The value and importance of myomectomy as contrasted with hysterectomy in case of fibroid tumors of the uterus has been gaining ground rapidly in connection with the general trend of conservatism, and in every case the question presents: Shall the operation be myomectomy or hysterectomy? Quoting from a recent paper of mine upon this subject, "There are staunch advocates of myomectomy as the operation of choice, as the dominant operation in the treatment of fibroid tumors of the uterus; on the other hand, there are strong advocates of the sweeping and uncompromising dictum that in all cases of fibroid tumors of the uterus nothing short of hysterectomy should be entertained. For myself, I believe in conservatism in all departments of gynecologic surgery. If, in addition to saving the menstrual function by retaining ovarian tissue, there is prospect of conception, gestation, and motherhood, my rule is to save at least a portion of one tube also and preserve for it a patulous canal. If part of an ovary can be saved and the menstrual function preserved to a woman throughout her natural menstrual period, it is my custom to leave one healthy ovary or part of an ovary in case of panhysterectomy for fibroid tumor. Extending this principle to the uterus (a uterus affected with a fibroma or a number of fibromas) the following rule holds: Remove the diseased portions, as many fibroid foci as can be discovered, but save the uterus."

In dealing with this class of cases vaginal section has its indications and also its limitations. Experience and facility of operation on the part of the operator can alone determine this question, although the location of the tumor or tumors plays a large part in its solution. To illustrate the question at issue a few typical cases selected from my list of the past year may be of interest:

CASE I.—In this case there was a large retroverted uterus, with a hard, round fibroid an inch and a half in diameter in the posterior wall just above the junction of the cervix with the body, complicated by firm adhesions of the uterus to the rectum. An incision was made into Douglas' pouch for the purpose of breaking up the adhesions, then an incision through the anterior fornix, through which the fundus was delivered into the vagina. By drawing down firmly upon the uterus the tumor was brought into easy reach, was enucleated, and the excavation stitied with tier sutures of catgut. The round ligaments were then shortened through the same incision and the uterus restored to the peritoneal cavity, where it has

remained to the present time in normal position and the patient has been relieved of all her symptoms.

CASE II.—A woman of 43, the mother of 4 children, and whose general health had been wretched for a number of years, was found to be suffering from a bilateral laceration of the cervix, extensive laceration of the perineum, a retroverted and immovable uterus wedged in place by a number of fibroid developments on the posterior wall and at either side. The uterus was ennetted and packed with gauze, a trachelorrhaphy was performed, the anterior lip being amputated, and an incision made through the anterior fornix. Through this, by careful, patient and persistent manipulation, the uterus, with its fibroids, was delivered into the vagina. Two of these were found to be pedunculated and were readily pinched off. After this smaller neoplasms, to the number of 5, making 7 tumors in all, were shelled out; the incisions being so made as to facilitate the shelling out of 2 tumors through the same incision in each of 2 instances. The round ligaments were then shortened through the anterior incision and perineorrhaphy performed. The temperature remained normal throughout her convalescence, and on the nineteenth day she left for her home at Elmira. Being the wife of a physician, I have had accurate reports of her steady improvement to complete restoration of health.

CASE III presented a large retroverted, adherent uterus with a small fibroid in the anterior wall, between the bladder and the uterus. The operation was performed as in the 2 previous cases, but the tumor was removed previous to delivering the fundus into the vagina. By lifting up the bladder on a strong retractor and dragging down the uterus with vulsellum forceps, the tumor was brought into full view and 2 smaller tumors were revealed, one at the side and the other a little higher on the anterior wall. The three were removed in the usual way; the fundus was then delivered in the vagina and the round ligaments shortened to cure the retroversion.

These are simply typical cases demonstrating the fact that when the tumors are small, no matter in what part of the uterus they may be located, the vaginal incision affords opportunity for their complete and satisfactory removal.

Two other cases which have passed through my hands recently, in each of which the tumor weighed something over 2 pounds, were coextensive with the fundus—that is, a generally diffused myoma. In this condition there was no hope of preserving a functioning uterus, and in both instances morcellation per vaginam was adopted. The procedure went forward without untoward incident, both patients making such prompt and smooth recovery that they presented no indication of the radical procedure that had been done. In both these cases, however, the tumor was in the true pelvis.

When the tumor is sufficiently large and so located that the patient presents the appearance of a woman at the fourth or fifth month of pregnancy, I believe the limit is reached at which it is desirable to operate through the vagina, and in those cases I invariably perform supra-vaginal hysterectomy through the abdominal incision.

The indications, then, for vaginal section are small multiple fibroids of the uterus, or larger tumors filling the pelvis but not rising into the abdominal cavity. The limitations are reached when the tumor has attained the size of a 5 months' gestation.

SALPINGITIS AND OVARIAN ABSCESS.—These cases are best treated through the vagina, the posterior or the anterior incision being first used as an exploratory procedure to determine what the character of the operation shall be. If the disease involves the appendages of one

side only, the other appendages being amenable to conservative work, then the pus is evacuated, the diseased appendages removed, and such conservative work as may be indicated done upon the remaining organs. If, on the other hand, the appendages of both sides are hopelessly diseased, panhysterectomy is immediately decided upon and the entire pelvis is relieved of all diseased tissue.

As a point of technic, I might say that I am using the angiotribe almost exclusively in these cases and find that it greatly facilitates the work in cases in which adhesions render it difficult or impossible to drag down the broad ligaments within reach of ligature. In these cases it is quite possible to shell out the diseased organs, leaving intact the roof of plastic exudate which shuts off the general cavity from the pelvis. There is then no soiling of the peritoneum; convalescence is smooth and satisfactory. In my experience the plastic exudate promptly absorbs and the intestines become freely movable.

DISPLACEMENTS OF THE UTERUS.—But while the vaginal method in the various conditions already discussed gives most satisfactory results and is to me far and away the method of choice, the procedure has its ideal application in the cure of displacements of the uterus, whether they be simple or complicated by moderate disease of the appendages, with adhesions.

The operation consists in opening through the anterior vaginal fornix, breaking up adhesions, delivering first the uterus and then the appendages into the vagina, performing upon the appendages such conservative work as may be indicated to preserve the function of one or both ovaries, and finally curing the displacement by shortening the round ligaments. I have now on my records some 70 cases that have been treated in this way, in which the results are so satisfactory that I am led to pronounce it, as I have said, the ideal operation. In this field of work the method must be contrasted with the Alexander operation and with abdominal fixation or suspension, and to sum up the whole matter briefly in one sentence, my experience justifies me in saying that it accomplishes all of the good results of either the Alexander operation or abdominal suspension and is free from all the objectionable features of both.

DEEP BREATHING AS A CURATIVE AND PREVENTIVE MEASURE.*

BY

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Some observation and experience have led me to the following conclusions, briefly stated:

The efficacy of deep breathing as a curative and preventive measure has not received the recognition which it deserves as one of the most important and rational measures we possess, and it seems fair to state that more attention should be devoted to the value of this remedial agent in medical literature and practice. No method of treatment promises so much in certain affections, and none is so often disregarded. While oxygenation as a

physiologic function is taught and understood, its therapeutic merit is not emphasized sufficiently. Time will not allow anything more than a reference to the many forms of malnutrition characterized by that complex group of symptoms ascribed to nervous exhaustion, toxemia, indigestion, anemia, etc. Scientifically, we know that diminished oxidation is an important causative factor, yet how many times is the patient told to increase the respiratory function or taught how? While iron and arsenic may improve impoverished blood, more oxygenation is a necessary part of thorough treatment. In many cases inhalations of oxygen are used with some benefit, but the result depends largely upon the frequency of its employment and the increase in respiratory effort. Can any one doubt that inexpensive fresh air, which can be obtained at any time, will furnish all the oxygen needed, if the lungs are made to perform their function? Many women never take a full breath after adult life is reached, and the average man, who has given up vigorous exercise, rarely fills his lungs to their full capacity, unless a life-insurance examiner insists upon a full inspiration. As a rule breathing becomes a moderately exercised function after childhood. The conditions of modern life may not demand greater activity, but at times the interdependence of functions is disturbed, and respiration does not perform its part in the labor of repair and waste. Thorough ventilation requires a habit of occasionally filling and emptying the lungs as completely as possible. A certain percentage of individuals are so unaccustomed to forcible breathing that an attempt is followed by exhaustion, dizziness or palpitation of the heart. They may be obese, flabby or chlorotic and short of breath, and the daily practice of respiratory exercises not only relieves these symptoms but helps to remove the cause. The chief object is to direct attention briefly to the usefulness of deep breathing in diseases of the lungs and pleura. The greatest benefit is obtained in subacute or chronic affections, and the results may be developmental, preventive and curative. In the first class we may include the small or deformed chest, with respiratory incapacity. A considerable number of deformities due to rickets might be prevented or overcome by increasing gradually the size of the chest-wall.

In the second group may be included subacute or chronic bronchitis, pneumonia, and consolidation or collapse of lung-tissue due to delayed or incomplete resolution, and fixity or pressure caused by adhesions or presence of air, gas or fluid in the pleural cavities. When forcible or deep breathing is employed at the proper time, the benefits to be derived may be summarized as follows: Increased oxygenation and improved nutrition; changes of a mechanical nature, ventilation and disinfection, massage of the lungs and pleura, and a method of drainage. In the acute diseases of the respiratory organs there is a time for rest and a time for action. This fact can be illustrated by the management of so-called atypical attacks of pneumonia. Of late years the physician meets more cases of pneumonia, with a history of prolonged illness, slow recovery and delayed resolution than the textbooks would lead one to believe. A large percentage of patients suffering from lobar pneumonia or bronchopneumonia do not present the classical symptoms,

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and it is probable that epidemics of la grippe and influenza may explain to a certain extent this clinical observation. To be sure, a knowledge of the causative factors and the recognition of mixed infection help to elucidate a puzzling clinical history, but the lengthy course of the disease, with subacute manifestations, checked or slow resolution, persistent fever, accompanied by relapse or recurrence, are exasperating and often cause perplexity and anxiety. The physician's efforts to secure or hasten recovery are many times unavailing or disappointing. The physical resistance is insufficient, and the infection, reinfection, and invasion of new territory continue. Rest and the exhibition of drugs cease after a time to be beneficial, and the accepted plan is to support the patient, and wait.

There is a time when free, forcible action of the affected lung will be more successful than all other methods of treatment combined. After the acute symptoms have subsided and the period of expected resolution has passed, deep breathing may be tried and gradually increased. The idea is to stimulate return of function and promote the removal and absorption of morbid material. I have repeatedly seen more improvement in a few days by obtaining a forced entrance and expulsion of air than other methods have accomplished during long periods. Normal circulation is promoted and absorption encouraged, air is made to enter collapsed or occluded portions of the lung, and cough, if increased temporarily, assists in removing the exudate and inflates closed areas. It must be remembered that the tendency is to recovery, and the stimulating effect of action is much like motion to a long-disused joint.

Many times the victims of protracted pneumonia or bronchitis are kept too long indoors. When the weather will permit the patient should be made to go into the open air as soon as consistent with wisdom. The dangers of unheated air are apt to be exaggerated, and patients are occasionally kept in heated rooms and deprived of fresh air indefinitely until decided weakness and mental and physical apathy supervene. Pure air and sunlight are the natural and most efficient remedies in thoracic disease. The precautions to be mentioned are warm clothing, protection from inclement winds and accustoming the invalid to the change. It is sometimes entirely unnecessary to wait for a normal temperature before venturing into the outer air. Slight fever may continue much longer if the trial is postponed. In some instances outer air can be supplied through a tin tube extending from the window to the bedside and a number of deep inspirations practised several times a day.

The breathing exercises must be taught and watched, otherwise the effort will be feeble and partial. It should be made a form of hard work, administered several times a day. The patient must be made to take 5 or 10 deep, full inspirations and expire the air as completely as possible. Observation will show that complete expiration of air is much more difficult to obtain than a full inspiration. Paroxysms of coughing produced by distention of unused lung-tissue should not be regarded as a contraindication. The number of respirations may be gradually increased and the task performed with greater frequency. Some device, such as a tube or inhaler, may hold the

patient's attention and insure cooperation. The belief that some medicament will prove beneficial may incline the indolent patient to conscientious trial when admonition fails. Various remedies used in inhalers may soothe the upper air vessels, but any direct effect beyond this has no physiologic or clinical basis. The remarkable results claimed for inhalations in diseases of the chest depend very largely upon pulmonary exercises. Quackery is not always associated with ignorance.

Delayed resolution and lasting consolidation are sometimes regarded as an effect rather than a phase of pneumonia. The fact cannot be emphasized too strongly that recovery is not complete, and no case should be dismissed until conditions which cripple the lung, cause chronic invalidism, and endanger the life of the patient have vanished. Resolution may be delayed for days, months or years. It is difficult to decide when incomplete resolution is permanent. Too often, consolidation with pleuritic adhesions are allowed to remain without a radical attempt to ameliorate or remove them and thus avoid loss of function. The respiratory capacity is lessened, the play of the lung limited, ventilation is inadequate, and chronic changes occur in the form of interstitial pneumonia, bronchiectasis, phthisis and pulmonary collapse or carnification. The symptoms appear soon after an attack of pneumonia. The patient complains of shortness of breath or dyspnea on exertion, palpitation of the heart, weariness and pain over the affected side, often increased by deep inspiration. There is frequently neuralgia of the intercostal or subscapular nerves, and occasionally neuralgia is the only symptom of continued discomfort. These unfortunate conditions do not at all times receive proper attention. They are overlooked or neglected, and proper means are not used to prevent or correct them. The patient should be warned of the danger, and efforts made to eradicate them at an early and opportune time. Functions should be restored, if possible, before irreparable changes occur.

While fully realizing the necessity for constitutional treatment, it is not prompt or effectual as a rule unless the lung is urged to resume its work. If we could handle a consolidated piece of lung tissue, fettered by fresh adhesions, we would squeeze the mass to expel exudate, force air into collapsed vesicles, establish free motion by stretching or tearing adhesions, and, in a word, use massage. The only method by which these simple rules of action can be enforced is by forcible respiration. The exudate is removed principally by absorption, but its expulsion and removal by expectoration can be promoted. The forcible expiratory act and the cough is our only system of direct drainage. If the cough is persistent and troublesome, then the nose and pharynx should be examined and treated. Cough not accompanied by expectoration is almost invariably due to an irritable pharynx and a sedative application will remove the annoying feature.

In considering the benefits of a change of climate, the importance of new scenes, environment and habit must be remembered; but the essential requisites are an atmosphere which will allow out-of-door life and free use of pure air. It is a serious mistake to expect climate alone to cure, and send invalids away with scant instruc-

tion. Most people are naturally inclined to restricted or partial breathing, and a person with a crippled lung is only too likely to complain of difficulty in respiration and shrink from added exertion which may cause discomfort. He must be taught that a change of climate gives an opportunity for proper treatment which must be utilized, for the reason that motion is applied to a joint that may otherwise become ankylosed. The fear of hemorrhage from a free use of a partially collapsed or consolidated lung is slight. Congestion is diminished and the circulation equalized, unless the air admitted is unduly rarefied. Aneurysms of small arteries are not found associated with the conditions described.

When pleuritic adhesions are stretched or the roughened surfaces of the pleura are subjected to greater friction, discomfort may be produced and there may be complaint of pain. This is usually mild in character and evanescent. The greatest deformity and most complete and lasting loss of function follow from continued pressure from effusion in the pleural cavity. This is sometimes unavoidable, but there can be no doubt that needless damage is done by neglecting to remove the fluid before great distention and pressure occur, and by failing to procure expansion of the collapsed lung while it is possible. Compensatory curvature of the spine and retraction of the ribs are permitted to fill a vacuum when repeated and vigorous efforts to repair the damage to the lung might prevent loss of power and usefulness.

It is extremely interesting to observe the return of the breath-sounds and an increase followed by gradual disappearance of friction-sounds when respiratory exercise is successful. Any part of the lung structure which can be made pervious to air is a distinct gain, and it is very important as a matter of relief and compensation to increase the capacity of the unaffected and overburdened lung so far as possible. The residual pulmonary tissue often only supports life under irksome conditions. The respiratory power can be enhanced to a remarkable degree and the chances for a useful life greatly improved by securing supplemental activity and development. In every case when relief is possible, the attempt should be made to lessen or prevent the distress of chronic invalidism. The results may be tardy and the treatment often prolonged. Time, patience and determination are required. The most prompt and promising results are noticeable in subacute bronchitis. Deep breathing removes secretions and the sibilant breathing, particularly if the respiratory effort is thorough. Normal circulation is promoted and local congestion disappears.

No attempt has been made to present the technicalities of this subject, such as pneumatic differentiation and its application in emphysema and asthma. Some years ago the pneumatic cabinet was much employed in the treatment of pulmonary disease and extravagant results have been claimed by enthusiasts. At present its importance as a method of administering aerotherapy is disregarded and underestimated. When the patient can come to the physician's office the pneumatic cabinet will yield results superior to any other method of respiratory exercises. The inspiratory and expiratory effort may be made difficult or easy and graduated as to time and the amount of exertion. The atmospheric pressure

upon the chest wall can be diminished to about 14 pounds to the square inch, and greater expansion can be obtained than by the patient's unaided efforts. The blood is driven out of the congested lung into the general circulation when the air about the patient has been rarefied. As a rule the treatment can be given but once a day, and should be supplemented by instructions to practice at home or in the open air. Physical exercises combined with deep breathing are described by several authors, and a valuable hint is to advise the patient to take a deep breath while walking and count 10 slowly during the inspiration and expiration. The effort can be gradually prolonged or timed by the watch. The voluntary muscles must be called into play and strict attention paid to the expiratory effort.

I purposely refrain from advising or discussing exercises which compel rapid breathing. The subject is too extensive, but a final hint may be of value, viz., strenuous general exercise which increases the heart's action and the depth and frequency of the respiratory efforts may be beneficial or quite harmful if overdone. My remarks have been limited to a simple therapeutic measure and a reference to methods which are safe and applicable in the class of cases mentioned.

"THE MOST USEFUL CITIZEN:" A STUDY IN HUMAN DYNAMICS

BY

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The problem, "what constitutes the most desirable unit of our modern civilization?" is one of which a solution is of great importance to the anthropologist, the political economist and the philanthropist.

The physician is, or should be, in a position to point the way to its solution since its more important factors come almost continually under his observation. Even the medical man, however, needs an occasional broadening of his field of vision if he desires to avoid that modern tendency to anthropological hysteria, which seems to pervade the school, the stage, the press, and even the pulpit; and by reason of which only the marvelous is deemed worthy of serious consideration.

An attempt to define the characteristics of "the most useful citizen of the United States" demands consideration of two main factors, namely: the *organism* and the *environment*, for it is quite evident that, even in our own country and lifetime, the environment is subject to gradual and sometimes to sudden changes; nor is it at any one time precisely the same over any great area of the Commonwealth. We are met at the very threshold of the problem, therefore, by the plain proposition that the term, "most useful citizen" cannot apply to any precisely limited type, except in relation to a specified environment, in other words, the ideal citizen must not be out of place nor out of time.

The ideal *organism*, however, from which "the most useful citizen" for this varying environment *may be developed* is, perhaps, susceptible of definition; and may be characterized, according to the writer's conception, as follows:

The organism which is potentially "the most useful citizen," may be considered from 5 points of view, namely, the PHYSICAL, the INTELLECTUAL, the ETHICAL, the SOCIAL, and the ECONOMIC.

1. *Physically* considered, this ideal individual should possess that combination of congenital factors known as "a sound constitution," which implies a physical vigor correctly proportioned to the mechanism which is to exhibit it. *Physical strength* therefore, is the basis of usefulness in any capacity. Here, however, it may not be amiss to direct attention to the fact that physical strength, in its true meaning, is not synonymous with mere muscular power, or mental capacity, or great size of frame; for any or all of these may exist in an individual of defective makeup and of slight value to the state. True physical strength implies a harmonious development of the organism in all its organs and parts, such an adjustment of structure to function as will admit of the highest efficiency of action in each part with the least wear and tear of itself and of others. In other words, *conservation* as well as *production* of energy must be attained. Nutrition should balance the results of activity; removal of by products should be amply provided for; briefly, metabolism should be as perfect as possible.

As examples of damage to one part by the excessive activity of another, may be cited the risk to bloodvessels and viscera from the action of an overdeveloped heart; and functional strain leading to organic damage of the kidneys by excessive muscular activity, as in the athlete. On the other hand a powerful brain may be compromised in its integrity by a weak or diseased bloodvessel, incapable of withstanding the blood pressure accompanying great mental or physical activity. *Organic balance* then, is an essential element of sustained physical strength. "A chain is only so strong as its weakest link," applies here as forcibly as it does in mechanics.

Next in importance to organic balance, comes *plasticity of organization*, by reason of which the individual organs may adapt themselves to a varying environment, without noteworthy change in organic balance. This implies a capacity for modification in response to changes of climate, season, and occupation, without material damage to the organism as a whole.

Size is another physical factor of importance. While this may vary within certain limits without detriment, it is sufficient to note that any great departure from the average (about 5 feet 8 inches in height to 150 pounds weight) would be likely to contravene one or both of the preceding essentials.

Of *color*, it may be stated, that extreme types are unfavorable to the organism, physically; hence very dark or very light complexion, hair and eyes, would not be desirable features.

Physiognomy is a characteristic of some importance, which, however, admits of such wide variation that it may be dismissed with the general statement that a weak or repulsive physiognomy would not exist in the ideal citizen.

Viability, the chronologic measure of function, is a necessary factor in the aggregate of usefulness. Longevity alone, however, is not sufficient in the ideal citi-

zen, but rather a prolongation of the active and progressive adult period of life. Since the law requires the citizen to be at least 21 years of age, the organism should reach its greatest physical efficiency as near that age as possible, and should preserve its organic power and balance late in life. Mere senile longevity *per se* is of little or no value to the state; is really a detriment from a dynamic point of view, and the same is obviously true of prolonged childhood or adolescence.

2. From the *intellectual* point of view, "the most useful citizen" must conform to the physical standard already laid down. He should possess *vigor* and *balance* in structure of nervous system, training of sense and motor organs, and development of mental powers. This implies the highest possible culture of *all* peripheral sense organs and sensory centers, the possession of quickness and accuracy in the perceptive and associative functions, the basis of reason, judgment, and ideation, and finally, such power, adjustment and relation of the *volitional*, the *coordinating* and the *inhibitory* faculties as will result in harmony and power of concentration in thought, as well as appropriateness (decision, prudence) in its expression by means of equally well balanced motor apparatus; for it is hardly necessary to call attention to the fact that the only useful outcome of thought is through its expression in action, and all expression is by motion, whether it be mechanical, gestural, vocal or graphic.

Such mental balance would necessarily exclude not only the defective and depraved, but also the so-called "crank," the enthusiast, and even the genius, for such are but departures from an ideal type of citizen and useful only in a limited environment. Viewing the matter in another light, some of these may be of great value to the ideal type, but could never replace it with advantage to the state.

The education and training of most value to the mental equipment above sketched, should be characterized by *breadth* in *elementary principles*, not mere acuteness in special lines.

Specialization is not desirable as a *foundation*, but rather a capacity for special development in various directions as may be required by the environment.

To be complete, the education should include *manual training*, as an essential to the proper development of the visual, tactile, and muscular senses. Other senses commonly neglected are those of smell and taste, hence, probably the tendency to their degeneration which exists markedly in the otherwise cultured classes.

Since sensation is the basis of all thought and its expression, the education of the ideal citizen should neglect no sense-organ or sensory center, including in these the esthetic senses generally. To sum up these mental attributes, accuracy, power, and originality in ideation should be complemented by inhibition, tact and harmony in its expression.

3. From an *ethical* point of view the most useful integer of the Commonwealth will not be an extremist in small matters, since morality is not an absolute but a comparative attribute which must vary with circumstance and period. Any absolute standard, therefore, must fail at times to meet the requirements of "the most

useful citizen." He should possess, however, a well-developed moral sense, governed by prudence, liberality and tolerance in its application to the affairs of life.

Toward certain *institutional instincts* as they may be termed however, his code of morals must be most rigid; for instance: marriage relations, the family and the domestic instincts generally; the rights of person and property, and the respect for law and order, also belong in this category, as does the inclination to vigorous effort in some useful direction, variously termed "ambition," "energy," "progressive spirit," "initiative," etc., and which might be equally well-defined as being a state of discontent with existing conditions, joined to a determination to improve them in a lawful manner. *It is the discontented man who moves the world.* A desire for ownership of land to some extent, and a preference for fixity of habitation as opposed to the nomadic tendency as implied in the proverb, "A rolling stone gathers no moss," should also characterize the average well-balanced unit of modern civilization.

The religious instinct, probably possessed in some form by all men, no matter what their professions of it, is important in effect, as a means of enforcing a correct ethical code; hence, leaving out of consideration any further influence claimed for it, its possession and exercise within proper limits, will add to the moral balance and consequently, to the usefulness of the citizen. Finally, it may be stated that true moral strength is only acquired by exposure to, and resistance of, temptation. Hence, the physical appetites and instincts which favor departure from established ethical standards are essential factors in the development of "the most useful citizen."

4. *Socially*, "the most useful citizen" should possess in a high degree that instinct or desire for *permanent organization* which is a marked characteristic of man as compared with the lower animals in general, and is the necessary basis of all civilization, *esprit de corps*, patriotism, and good government. The importance of the *family*, as the social unit in modern civilization has already been referred to under ethical characteristics; and the domestic instincts are essentials of the best social, as they are of the most useful ethical constitution. Equally essential is the vast social network known as "society" of which in some of its forms, political, industrial, religious, fraternal, educational, etc., "the most useful citizen" must be an active member. *The hermit is of slight value as a citizen.*

The comparative importance of social organization is well expressed in the aphorism of Bacon, "Reading maketh a full man, writing an exact man, conference a ready man."

History seems to show, however, that exclusiveness, or "caste" in some form, has been the social rock on which most ancient civilizations have been wrecked; and which threatens also the integrity of some modern ones. It is probable therefore that, while "the most useful citizen" may belong to "the social 400," his usefulness will never be due solely to that fact. *To be of the greatest developmental value the social environment should not be limited in scope*; hence, the most useful citizen should be "persona grata" to the largest possible

number of other useful citizens, whereby his potential usefulness may meet with opportunity to exercise to its highest degree.

5. The *economic* phase of the subject comprises all the means of application of the preceding forces and characteristics that may subserve the best interests of the community of which the citizen is a unit.

Economically considered the organism above sketched would be valuable to the Commonwealth: First, by reason of great capacity and inclination for long sustained force production and its effective expenditure, which necessarily would be, under the conditions cited, in useful directions. *Wasted or misdirected energy is of no value to the state.*

Secondly, because of its adaptability to a varied environment and diversity of occupation, thereby insuring the best development of the Commonwealth in all possible directions.

Thirdly, by reason of its tendency to reproduce and thus transmit to succeeding generations its own type of constitutional vigor and functional versatility. *The sterile are of brief value to the state.*

It is evident that "the most useful citizen," under all preceding conditions, must be of the male sex, not merely because of artificial laws to that effect, but by reason of the possession by that sex of more physical vigor and a nearer approach to organic balance for a greater portion of its life, other conditions being equal.

Since a number of the postulates already laid down, however, e.g., organic balance, the domestic instincts, marriage and the family relations, etc., require woman for their complete evolution, it is equally evident that a highly developed, well balanced female organism is an essential complement to "the most useful citizen" as well as necessary to a continuance of the type. There is consolation for woman, therefore, in the thought that, from an economic standpoint, she is a specialist of the highest type, essential to the greatest usefulness of "the most useful citizen," if not his equivalent potentially as a citizen.

Compared with the existing average, the ideal "most useful citizen" we have postulated may be said to excel in physical and intellectual vigor and training, in organic balance and plasticity of organization, while he should approach the average closely in size, color, general proportions and ethical tendencies. Socially and economically he should exceed greatly in value (usefulness) the present average.

Any marked variation from this ideal type, leads inevitably to degeneracy, which may be briefly defined as a *tendency to extinction*.

Some may object that this ideal type is but a synonym for mediocrity. If so, we may do well to recall the fact that throughout the biologic series it is the "average type" that prevails and gives its characteristics to the Species. The "sports" and "freaks" tend to extinction, as do the corresponding "degenerates" of the human species. In humanity, as elsewhere, it is the great average type that "holds the species true;" perpetuates its kind; does the work of subduing nature and makes possible the march of civilization. True progress, therefore, lies in the improvement, along parallel lines, of the

organic balance in this type, rather than in wide departures from it.

In short, "the most useful citizen," potentially and actually, is the *best developed* and *best balanced* citizen, physically, mentally, morally and socially; for on such depend the safety, the strength and the progress of the Republic.

"He wages all battles and wins them,
He builds oil turrets that tower
Over walls of the city to tell,
Of the rulers and priests of the hour.
Without him the general is helpless,
The earth but a place and a plan.
He moves all, and clothes all, and feeds all,
This sad smiling average man."—GARLAND.

DUST AS A FACTOR IN DISEASES OF THE UPPER RESPIRATORY PASSAGES.*

BY

W. SCHEPPEGRELL, A.M., M.D.,
of New Orleans, La.

[Concluded from page 37.]

In endeavoring to prevent or minimize the effect of dust, which has been shown to be so inimical to health, there are two considerations which require especial attention: First is the normal condition of the nasal chambers and throat. With these in a healthy condition, we are prepared to receive the least injurious effect from the irritation produced by dust. Until recently, the nose has received but little consideration for its preparatory and protective function for the organs of respiration and, even now, the world is but slow in recognizing its importance in this direction. It is a common occurrence when patients present themselves for some disease of the throat or bronchial tubes to find them difficult to convince that the real cause exists in the nasal chambers. Many will even insist that they can have no nasal disease as they have never felt any discomfort in this region, not realizing that the disturbance of the function of one organ is quite frequently felt only in its effect upon some other organ. With the respiratory organs in a proper condition, we are best equipped to oppose the effect of the dust which is in the atmosphere.

The second consideration refers to domestic cleanliness and to public hygiene. Not only should the houses be kept clean, and as free as possible of dust, but the usual method of dusting should be corrected. The sweeping should be so done that as little dust as possible is thrown into the air, and the ordinary dusting-brush should be banished from the household, as it simply distributes the dust which first vitiates the air and eventually falls again upon the surrounding objects. There should be used instead either damp or oily cloths, a method that may occupy more time, but is more thorough and requires less frequent repetition.

In cases of illness every precaution should be taken to avoid contaminating the air with infectious material, and the members of the household should be shown how easily infection may take place, and how by ordinary care it may be avoided. The sputum not only of tubercular patients but of all forms whatsoever, should be

deposited in vessels containing some simple antiseptic solution, and should never be allowed to become dry in cuspidors or on cloth, as is so frequently the case. The same precautions should be taken in diphtheria, scarlet fever, and in all forms of infectious diseases, and were such measures but carefully carried out, they would materially assist the boards of health in stamping out such diseases. Were it but properly understood that in cases where almost entire families die of tuberculous disease, the result is due more to the inhalation of tuberculous-infected dust than to inheritance, the records of such cases would be of far less frequent occurrence.

In regard to public hygiene, the properties for dust-formation should be considered in the very formation of roads. As already stated, oyster-shells for this purpose have objectionable features unless regularly sprinkled, and wooden paving-materials of all kinds should be avoided, as the dust from these, especially when the wood begins to decay, has been found to contain decomposing animal and vegetable debris to a marked degree.

The most practicable roads, which I have seen, are the macadamized roads of northern Europe which are hard and firm, drain well, and yet retain sufficient moisture from occasional sprinkling to be free of dust. The asphalt roads which are becoming so popular in America and which certainly make excellent drives, are especially objectionable in this direction, unless great care is taken to keep them clean. They do not retain moisture, and are therefore dusty a short time after sprinkling or after rain, and these effects can be minimized only by systematic and persistent cleaning.

A source of danger from dust, which is not so conspicuous as the dust in our streets but which is far more pernicious in its effects, is that in the street-cars where hygienic laws regarding spitting on the floors is not enforced. The expectorated material mixes with the dirt of the floor, soon dries and becomes a part of the dust of the air which is inhaled by the passengers, this being especially the case in winter when the windows are closed. Bacteriologists have repeatedly shown the presence of pathogenic microorganisms in the sweepings of car-floors and the possibility of contracting disease from this source is no longer disputed. When the system has been debilitated by sickness, or the normal resistance has been lowered from any source whatsoever, the chances of obtaining disease from this source are enormously increased. In my opinion, many of the sequels of grippe of which we now hear so much, are not due to the effects of this disease directly, but to the lowering of the vitality and normal resistance thus allowing the entrance of pathogenic germs from such sources as I have here described.

This condition of affairs refers not only to cars, but to all forms of public carriers, as railroads and ferries, and to public halls and places of amusement, each of which may be instrumental in causing disease when the laws of hygiene are not observed.

In an interesting communication on this subject in the *Journal of the American Medical Association*, Dr. Elner B. Borland, of Pittsburg, shows that in the last 5 years, New York and Brooklyn, Newark, Columbus, Cleveland, San Francisco, Pittsburg, Washington, D. C.,

* Read February 23, 1901, before the Orleans Parish Medical Society of New Orleans.

Rochester, Louisville and Baltimore have enacted laws prohibiting the spitting on the floors of public carriers, public halls and places of amusement, and Dr. Dillon Brown, of New York, in a recent issue of the *Pediatrics*, states that "2 years of rigid persistence in the same course would have a marked influence on the number of reported cases of tuberculosis and acute infectious diseases, and we should by that time be wondering how we were ever able to condone or endure such a simulation of the pig-sty as now confronts us on every trolley car."

It would be ludicrous were it not pathetic, to see cities spending millions of dollars for drainage, sewerage and other measures intended to improve sanitation, and neglecting the hygiene of the street car, which daily carries its thousands of passengers, whose possibilities for infection is clearly recognized by bacteriologists and hygienists, and the correction of which would cost practically nothing. All that is needed is to pass an intelligent law on this subject and then insist upon its enforcement.

In conclusion I would state that while dust may be a necessary evil in the hurry and rush of the twentieth century, still it may be very much diminished and the effects minimized by using proper precaution. Our houses, offices and buildings should be so cleansed as to avoid the distribution of dust, and every precaution should be taken in cases of illness to prevent the vitiation of the air with germ-bearing dust. Our streets should be frequently watered and cleansed so as to prevent the dust from rising into the air, and the laws of hygiene should be enforced regarding spitting on the floors of public carriers, places of amusement and even the sidewalks. The respiratory passages should be kept in their normal condition as far as possible, and the apathy regarding chronic disorders of the upper respiratory passages overcome. Under such conditions, dust would soon become a far less prominent factor in diseases of the upper respiratory passages.

Domestic Sanitation.—Miss Martha Van Rensselaer, of Ithaca, N. Y., chairman of the department of domestic science in the Western New York Federation of Women's Clubs, is stimulating her fellow-workers to the study of home sanitation. Her aim is to induce farmer's wives and daughters to study it in a practical way, paying attention to the vital questions of water supply, drainage, care of the cellar and disposal of refuse. She suggests practical courses of reading and the formation of clubs to meet and discuss these matters.

"The practice of injecting cocain within the meninges of the spinal cord has already been designated by a remarkable number of names," says the *New York Medical Journal*. "Some of them are the following: 'Spinal-canal cocainization,' 'cocain analgesia from subarachnoid injection,' 'intraspinal cocainization,' 'subarachnoid injections of cocain,' 'intradural injections of cocain,' 'endomeningeal spinal cocainization,' 'medullary injections,' 'subarachnoid cocainization,' the 'subdural infiltration method,' 'subarachnoid injections,' 'medullary narcosis,' 'Corning's method of medullary narcosis,' the 'spinal subarachnoid method,' and (from what evolved we cannot imagine) 'Chicago chloroform.'"

Tuberculosis in Rio Janeiro.—W. Havelburg, Acting Assistant Surgeon U. S. M. H. S., states that 19.5% of the total mortality of Rio Janeiro is due to tuberculosis. During the last year a propaganda was established for combating tuberculosis. General interest in the question was aroused, money was collected, but no definite result has yet been reached. A practical measure for raising money has been adopted by the tramway companies. They issue coupons which are offered to passengers when they pay their fare. Several of the companies are now paying a small sum for the coupons. This money to be used for the benefit of the liga against tuberculosis. One company has offered to pay to the liga the sum of 100 contos (\$20,000) a year, provided all passengers accept the coupons.

SPECIAL ARTICLE

THE DUTY OF THE PUBLIC TO THE MEDICAL PROFESSION.*

BY

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of New York City.

The student of sociology at the opening of the twentieth century finds many curious things to engage his attention. Not the least curious of these is the coexistence of two opposing facts touching the subject of this evening's discussion. The one is that the last two decades have witnessed an unexampled advance in the science and practice of medicine and surgery amounting almost to a revolution, and the other is that the popular mind is daily growing more prone to return to old superstitions in medicine, or to invent new ones even more absurd. On the one hand we have the keenest and best trained minds competing in the field of science and reaching discoveries bewildering in their frequency and their importance to the human race. On the other, we see on a large scale a complete repudiation of the results of science in favor of ideas that had their fitting development in medieval times. Side by side with the astounding achievements of bacteriology, of antiseptics, of skiagraphy, we have the inane drivel of "Christian Science" and the ridiculous pretensions of "osteopathy;" and the public seem to be about as much impressed in one direction as in the other, and entirely incapable of forming a rational judgment in the matter.

That this should be the case at a time when the general intelligence is developed to the extent that it now shows that for some reason or other scientific medicine has failed to be adequately interpreted to the public mind. Otherwise, it would be impossible that persons who discriminate so sharply in other things should be so utterly imbecile in this.

That blame attaches to the medical profession for this anomalous situation cannot, I think, be successfully denied. No idea, however meritorious, is ever sufficiently championed by those not directly engaged in its development. No subject will ever be thoroughly understood by the world, or fully enlist the interest of the public unless those most conversant with it will act as educators in its behalf. Indeed in the absence of such education the importance of a subject, however great, is certain to escape recognition and be overshadowed by baseless claims that are pressed with clamor and persistence.

And this, I believe, is the explanation of the failure of scientific medicine to obtain that hold upon popular recognition and respect which it obviously deserves, while the most impudent and absurd parodies upon it are eagerly accepted by a public which is credulous in this respect only because in this respect it is ignorant. And for this ignorance who is responsible if not the medical profession itself? We have been content to develop our science by original investigation and by accumulation of clinical experience, and to keep the results to ourselves as if they had no interest for those without the pale. And this attitude on our part has been met by a corresponding attitude of the world at large. The world has outgrown the mental habits of the scholastic age, and refuses to accept important conclusions on the simple dictum of authority. It demands to be taken into the confidence of the schoolmen and at least to have the compliment paid it of being thought competent to understand what it is asked to believe. In all other branches of science this is freely accorded. The utmost publicity is given to each new discovery, and the

*Read at the meeting of the Academy of Medicine, New York, on April 4, in a discussion upon this subject.

principles involved are fully discussed in popular language for the benefit of the public. Only in medicine is it considered unprofessional and undignified to give out anything to satisfy the interest of the laity in matters concerning which they are assumed to be incompetent of judging.

A dead language, even, is employed in writing prescriptions. Consultations are conducted in secret, and conversation between medical men in the presence of a layman is veiled in technical terms which are calculated to inspire him with awe, or perchance, distrust. Popular writings or popular lectures on medical topics are frowned upon as ill-disguised attempts at advertising. It seems to be no concern of the profession that the public should have correct ideas in regard to medicine, or in fact, any ideas at all.

Contrast with this the methods of, for example, Christian Science. Here all they have is fully discussed, the only trouble with them being that there is so little of it. If they had more they would tell more. Their candle is not hid under a bushel, but put upon the highest candlestick they can command. Their principles, such as they are, are open to inspection, and many people imagine that they find them sufficient and conclusive. There can be no doubt at all events, that they are thoroughly interpreted by those who stand for them.

To very many fairly intelligent persons this open discussion, however unsound the premises may be, appeals more strongly than the shadowy glimpse they are able to obtain of legitimate medicine. And this will come to be more and more the case unless the profession awakens to a sense of the obligation that rests upon it to impart to the public the information needed for a correct judgment upon matters of this kind. Until this is done the responsibility for the pitiable results of these delusions, as they are constantly being reported to the daily press, will rest chiefly on us.

Papers and lectures in popular language on medical subjects, by medical men of recognized position and ability, and published by the daily press, could be made extremely valuable in bringing the profession and the public into mutually helpful relations. An intelligent comprehension of what medicine has accomplished and what it aims to accomplish, together with its necessary limitations, would remove a great deal of popular misapprehension. This misapprehension includes in about equal proportions extravagant ideas of what medicine can do, and scepticism as to its ability to do anything. It is certainly very desirable that the laity should be able to settle down to a just medium between these extremes. It is as regrettable, for instance, that the notion should find credence that the x-ray has opened to view all the morbid phenomena occurring within the body, as that the idea should take possession of the public mind that in reality we know little or nothing about these phenomena.

The world has a right to know, and it is our duty to tell just what progress we are making day by day; the steps by which results are obtained, the difficulties we meet, the uncertainties which are still to be cleared up, the problems which are pressing for solution; even the errors we have fallen into in making our deductions. Such a frank and open course would command confidence and silence criticism and blatant charlatanry, and thus open the way to greater liberality of feeling and a more complete fulfilment of the duty which the public owes to the medical profession.

No Advantage in Life Insurance.—Having been solicited to insure his life, a puzzled man wrote as follows:

Sur i have reconsider the mator over sem time a go also told Mr. Alen Hofman that i cod not go in that compy under the present sirstance. When you insure for life if one shod die the first year he dont get no advantage of the rest of his life. So i have abanded sutch though And will remain ware i am yours as ever

PRACTICAL THERAPEUTICS

Under the charge of

A. A. STEVENS, A.M., M.D.

Formalin in Glycerin.—Jordan (*Lancet*, February 16, 1901) states that the irritation caused by formalin may be overcome to a great extent by using glycerin instead of water as a medium. For 10 months he has used a mixture of formalin in glycerin, from 1% to 4%. This preparation is useful as an application to the throat, as a mouthwash, as an application to the skin, and as a urethral injection. The author believes that in follicular tonsillitis, formalin is almost a specific. The mixture (2%, 3% or 4%) may be applied with an ordinary pharyngeal brush. No drink should be taken for from a half-hour to an hour after the treatment. After this a simple gargle containing potassium chlorate is all that is necessary. In aphthous stomatitis and thrush a 2% solution should be used and followed by glycerin and boric acid. In ulcerative stomatitis the following combination is recommended:

℞	
Formalin	1 part
Iodin	2 parts
B. Eucain	2 parts
Glycerin	To make 100 parts

With this and the internal administration of potassium chlorate good results are obtained. Formalin is useful in all parasitic diseases of the skin, especially ringworm. The whole area should be thoroughly cleansed with turpentine, followed by soft soap and water, and 4% formalin in glycerin rubbed carefully into the part. The application does not require repetition. The author has never known it to fail. He is not so confident in recommending formalin for general use as a urethral injection.

The Treatment of Acute Rheumatism.—A. P. Luff (*Practitioner*, February, 1901), believes that the best results are obtained by combining an alkaline carbonate with some salicylic compound. He recommends sodium salicylate (20 grains) with potassium bicarbonate (30 grains) every 2 hours until pain is relieved, when the same quantities should be given every 4 hours until the temperature has become normal. Later, sodium salicylate (15 grains) and potassium bicarbonate (20 grains) should be given until the joint symptoms have disappeared, and then 3 or 4 times a day until 2 weeks have elapsed. Absolute rest should be enforced throughout. If sodium salicylate is not well borne salicin may be substituted. If after the lapse of 24 to 36 hours the joints are painful, small blisters around the joint will, as a rule, rapidly remove the pain and swelling. Tincture of iodine over the joint is also useful, but methyl salicylate as a local application is more effective. For the relief of pain, Dover's powder or phenacetin may be employed. Brandy is indicated as heart stimulant, especially when there are cardiac complications. The disease is rarely cured within 4 or 6 weeks, and hence patients should not be allowed to move about after the pain has subsided. The slightest exertion is liable to cause a relapse or to induce cardiac complication, when there is latent rheumatism. In the treatment of children, especial caution against exercise is necessary. Opium is of great value in the early stages of cardiac inflammation, and strychnin and ammonium carbonate are considered to be more efficacious than digitalis when there is dilation and failing heart-power. Ice-bags, leeches and opium are valuable remedies in pericarditis. Hydrotherapeutic procedures are necessary in hyperpyrexia.

Cough in Phthisis.—Daly (*New York Medical Journal*, January 5, 1901,) recommends for the hard, dry cough of phthisis the following combination:

℞	
Camphor	2 grains
Heroin	$\frac{1}{2}$ grain
Creasote	1 drop.

To be made into a pill with a proper vehicle. The camphor does away in large part with the general depression.

Acute Intussusception in an Infant Aged 4 Months; Laparotomy; Recovery.—Tynms (*British Medical Journal*, February 9, 1901) reports the following case: A well-nourished suckling infant, aged 4 months and 10 days, was suddenly seized with colic and vomiting, quickly followed by collapse. On examination an hour later a tumor was discovered on the left side of the abdomen. The vomiting became more frequent, and tenesmus developed with the passage of bloodstained mucus. No injections were given or sedatives administered. The abdomen was opened and the invagination reduced 5 hours after the onset. A few hours after the operation the temperature rose to 102° F., but it soon returned to normal. Recovery was uninterrupted.

Bromids in Epilepsy.—L. P. Clarke, of the Craig Colony for Epileptics (*Buffalo Medical Journal*), draws the following conclusions concerning the use of bromids in epilepsy: (1) bromids still hold a very important place in epileptic treatment. (2) tonics must be given constantly while administering bromids; (3) bromid salts should be given gradually to find the epileptic's sedative level; baths, high enemas, alimentary antiseptics, massage and electricity are absolutely essential to successful bromid-medication; (5) bromin is a worthy successor to the bromids in many cases; (6) salt-starvation or semisalt starvation is a great adjuvant to the bromid-treatment.

Serotherapy in 1,778 Cases of Diphtheria.—Richardière (*Rev. men. des Mal. de l'Enfance*, September, 1900,) presents a study of 1,778 cases of diphtheria treated in the Hôpital Trousseau. Of these cases 280 died, a mortality of 15.7%. Including the cases which ended fatally within 24 hours after admission, the mortality was only 11.5%. Of 1,115 cases in which no operation on the larynx was required the mortality was only 5.5%. The mortality of the operative cases was 27%. The treatment consisted in the injection of Roux's serum, and washing the fauces with calcium permanganate (1 to 4000). No serious complications resulted from the use of the serum. Eruptions—erythematous, urticarial, roseolis, purpuric—were observed in 198 cases, arthralgia or slight arthritis occurred in 15 cases. The chief cause of death was bronchopneumonia, and the next in frequency toxemia. Heart failure was treated with spartein sulfate, and copious injections of artificial serum.

The Value of Rest and Potassium Iodid in Case of Aortic Aneurysm.—Byron Bramwell (*British Medical Journal*, January 12, 1901) reports the case of a man, aged 68, who 24 years ago had been under the care of Balfour, suffering from weakness, cough, severe, persistent pain in the chest, shooting from the left shoulder down the arm, and difficulty in swallowing. He was treated for 14 weeks with rest and potassium iodid, and was then discharged free from pain and cough, but still complaining of some dysphagia. After 6 weeks he returned to work, and for nearly 24 years he was employed as a hawker, walking 12 to 20 miles a day and carrying a pack weighing from 20 to 40 pounds. The pain and cough recently returned, and when seen by Bramwell the physical signs of aneurysm of the transverse and descending thoracic aorta were well marked. The author states that he has seen many cases of aneurysm which were remarkably benefited by the iodid plan of treatment, but had not met with any case in which the aneurysm had been so completely cured by the treatment that the patient had been able to follow an occupation involving much strain and hard work for a period of 24 years.

Chloreton as a Hypnotic.—Stevens (*New York Medical Journal*, January 23, 1901) presents a clinical report on the use of chloreton as a hypnotic. The best results were obtained in the insomnia which was unassociated with organic disease. In neurasthenia, chronic heart and kidney diseases, and in sleeplessness occurring during convalescence of acute diseases, the results were very favorable. In acute febrile diseases, painful affections and delirium tremens the drug was commonly ineffective. In none of the cases did chloreton give rise to any untoward symptoms or to unpleasant after-effects, except in a few instances in which it caused a feeling of drowsiness on the day following its administration. Nausea and vomiting were

never excited by it. As a hypnotic its action is prompt, sleep usually following in from half an hour to 2 hours after its administration. The drug seems to have little effect on the circulation; even in chronic heart disease there was no evidence of a depressed action. It often lost its power to induce sleep when used continuously, and in this respect it was probably inferior to opium, chloral, sulfonal, or paraldehyd. In ordinary doses it appears to be a safe drug. The author has never given more than 30 grains at a single dose, but Houghton and Aldrich state that as high as 60 grains have been given at one time without producing any untoward symptoms. The conclusions are that we have in chloreton a safe hypnotic of moderate power, which rarely gives rise to unpleasant after-effects, but of which a toleration is quite rapidly acquired; which is specially adapted for use in cases of insomnia unattended with pain, high fever, or pronounced nervous excitement.

Calomel Injections in Syphilis.—Fournier (*Revue de Therapeutique*, November 1, 1900,) considers calomel injections the best means of obtaining a powerful action on syphilis. This method must not be regarded as a routine treatment, but only as an exceptional one to be used in certain severe conditions; such as spinal and cerebral syphilis, iritis, phagedena, chronic plantar and palmar syphilids, ulcerating tuberculous syphilis, glossitis and tertiary laryngeal and pulmonary syphilis. Technique.—The needle should be introduced deeply into the gluteal muscles, and a short interval allowed to elapse before the calomel is injected in order to see if any blood comes; if there is blood, no injection should be made, as there is danger of pulmonary embolism. The calomel employed should be sublimed and not precipitated, as the latter is apt to form lumps. It should be washed carefully in boiling alcohol and then dried. The best vehicle is sterilized olive oil. The average dose to begin with is $\frac{3}{4}$ of a grain and if this is well borne it may be increased up to $1\frac{1}{2}$ grains. The injections are made weekly, or every 10 days, and 4 to 6 are usually sufficient. The author quotes the following cases in his clinic: (1) Phagedenic chancre of tongue, cured in 15 days by 2 injections; (2) case of malignant syphilis cured quickly; (3) tuberculous syphilid of face, improved after 3 injections; (4) enormous phagedena of nose, previously rebellious to all mercurial treatment, cured in 3 weeks; (5) tertiary glossitis, cured; (6) syphilis maligna, with laryngitis and impending asphyxia, cured by one injection. Good results do not always follow; in many cases calomel fails to cure and is sometimes dangerous. The chief complications of the treatment are stomatitis, gastroenteritis, toxic effects, local reaction and pain. With doses of $\frac{3}{4}$ of a grain the author has seldom observed more than a slight stomatitis, gastroenteritis or intoxication. In women he advises doses of $\frac{1}{2}$ a grain. Local reaction includes swelling of the buttocks and abscess; the former is common, but usually subsides in a few days. Induration at the seat of puncture may occur and last for some weeks. Abscess is rare, and its frequency diminished by antiseptic precautions. The author concludes that the frequent occurrence of severe pain is the chief objection to the treatment, but that the method should not on this account be condemned in the cases in which he considers it useful.

Hemostatic Medication.—Vaquez (*La Presse Medicale*, December 22, 1900,) in discussing the methods of controlling hemorrhage classifies them into those which act by promoting vascular constriction, by lowering arterial tension and those increasing the natural coagulability of the blood. Among the drugs which produce vascular constriction the author considers ergot as variable in its results and limits it to some cases of uterine and pulmonary hemorrhage. Digitalis has been used but its employment is best restricted to cases of circulatory troubles of central origin associated with pulmonary stasis (cardiac hemoptysis). The salts of quinin and hydrastis canadensis have been employed as hemostatics but are neither powerful nor reliable. Ipecacuanha and antimony have been employed as hemostatics by lowering arterial tension. Of the drugs which increase the coagulability of the blood, the salts of calcium and of strontium, certain colloids and gelatin have been most commonly used.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

March 23, 1901. [No. 2099.]

1. On the Diagnosis and Treatment of Intussusception. CHARLES P. B. CLUBBE.
2. Auto-Reduction of Hernia en Masse as a Cause of Abdominal Obstruction. W. J. WALSHAM.
3. Some Practical Points in the Diagnosis and Operative Treatment of Perforated Gastric Ulcer. R. C. B. MAUNSELL.
4. A Case of Hour-Glass Stomach: Non-Malignant: Gastroenterostomy. CHARLES P. CHILDE.
5. Ulcer of Stomach: Acute Hematemesis; Gastrotomy. H. BRUNTON ANGUS.
6. A Case of Gastric Fistula: Operation: Death. C. F. M. ALTHORP.
7. Perforated Ulcer of the Stomach. WILLIAM H. HORROCKS.
8. A Case of Subphrenic Abscess: Operation: Recovery. H. J. CAMPBELL and T. JASON WOOD.
9. Four Cases in Which the Murphy Button was Used. G. P. NEWBOLT.
10. A Case of Acute Intestinal Obstruction Due to a Papillomatous Ovarian Cyst and a Carcinoma of Small Intestine. H. SAVORY and W. G. NASIR.
11. Case of Extreme Stenosis of the Small Intestine in an Infant. ERNEST W. HEY GROVES.
12. Notes on the Anatomy and Surgery of Meckel's Diverticulum. GEORGE A. CLARKSON.
13. Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. J. MITCHELL BRUCE.
14. Intestinal Sand. A. G. S. MAHOMED and OSWALD BAKER.
15. Case of Intestinal Obstruction. H. J. HILDIGE.
16. Transposition of Rectum. JOHN J. BINGHAM.
17. Two Cases of Perforating Gastric Ulcer. D'ARCY POWER.
18. Case of Ileo-colic Anastomosis. GILBERT KEMPE.

1.—Dr. Clubbe in referring to the **diagnosis and treatment of intussusception** states that during the last 7 years he has operated on 49 cases with a mortality of 45.5%. In those in which recovery followed, the operation was performed 24 hours after the onset of the symptoms—showing the importance of the early recognition of the condition. Diarrhea may precede the attack, during which sudden, severe pain with the passage of small bloody slimy stools occur. A sausage-shaped tumor may be felt through a distended abdomen. The intussusception sometimes descends into the rectum and through the anus. In acute cases after 24 hours there will usually be symptoms of intestinal obstruction. Reduction, under anesthesia, with the buttocks elevated, by means of the injection into the bowel of a pint of warm water or oil should be tried. Should this fail the abdomen should be opened at once, and the invagination reduced by making gentle traction on the intussusceptum, and pressure on the intussuscipiens. Should the bowel be torn or this method fail, resection must be done. [J.W.M.]

2.—Walsham refers to a condition which he considers to be of not infrequent occurrence, that of **intestinal obstruction due to the reduction of a hernia en masse**. This may occur in the hands of the physician when it is usually recognized, or it may be done by the patient and the latter is the usual history. There are symptoms of obstruction, with a sense of fullness, and increased resistance and diminished resonance over the inguinal canal. An attempt should be made to reestablish the hernia by pulling down the sac and then returning the intestine. Should this fail, the abdomen must be opened, the strangulation reduced and the sac removed. [J.W.M.]

3.—In referring to the **diagnosis and treatment of gastric ulcer**, Maunsell states that statistics to date show that of those cases in which operation was performed within 12 hours after the occurrence of the perforation 45 to 50% recover. The diagnostic points are: Sudden epigastric pain, vomiting, collapse, which is variable, temperature normal or subnormal, and tympany with diminishing or absent liver dullness. Treatment should consist of the early opening of the abdomen, suturing of the perforation, followed by the toilet of the infected parts. [J.W.M.]

4.—Dr. Childe reports a case of **hourglass contraction of**

the stomach in a female aged 51, in which the symptoms, with the exception of the presence of free HCl, resembled those of malignant disease of the pylorus. On operation the pulsatile mass, which was felt in the pyloric region, was found to consist of the thickened and puckered up pancreas, to which the aortic pulsation was transmitted. Gastroenterostomy was done. On postmortem 5 days later, the stomach was found to be divided into 2 portions, united by a small opening. The cardiac portion, being hidden underneath the costal arch and diaphragm, was overlooked during the operation. [J.W.M.]

5.—Angus reports a case in which a young lady, who had frequently suffered from attacks of gastric pain and vomiting, was taken with an **acute hematemesis**. On operation, by opening the anterior wall of the stomach, the perforation was found and sutured. Convalescence was complicated by a thrombosis of both legs which was not believed to be septic. Recovery was complete. [J.W.M.]

6.—Althorp reports an operation for the cure of **gastric fistula**, in which the fistulous tract was excised by making an incision into the abdomen outside of all adhesions. The edges of the opening into the stomach, which was the center of a large ulcer, were freshened and the opening closed with silk sutures, as the condition of the patient would not permit of the excision of the entire ulcerated area. The patient developed pneumonia and died on the sixth day. Postmortem showed that there was no leaking from the wound, though it showed no disposition to heal. [J.W.M.]

7.—Horrocks reports a case of **perforated gastric ulcer** in a female, successfully operated upon, in connection with which the following points of interest were observed: The absence of any indications of the existence of an ulcer before perforation; the absence of any existing cause for perforation; the location of the pain and tenderness indicated the position of the ulcer; the movements of the patient after the perforation infected the whole abdomen. [J.W.M.]

8.—Campbell and Wood report a case of **subdiaphragmatic abscess**, successfully operated on which presented the following symptoms when first seen: Pain in the left hypochondria and epigastric regions which had existed 3 days; dullness which extended up to the fifth rib, displacement to the right of the heart apex, with diminished liver dullness, irregular temperature and wasting. An incision was made in the epigastric region, a walled-off abscess from which gas and pus escaped was found and drained. It is of interest to note that there never had been any symptoms of gastric trouble. [J.W.M.]

9.—Newbolt cites 3 cases of **intestinal anastomosis** and 1 of gastroenterostomy in which he used the Murphy button with satisfaction. In the latter the button probably dropped into the stomach, as it never passed. [J.W.M.]

10.—Savory and Nash report a case of **acute intestinal obstruction due to ovarian cyst, and cancer of the small intestine**. Both were successfully removed. Following the removal of the latter an end to end anastomosis was done, in which the Allingham bobbin was used. It was passed on the fifth day. [J.W.M.]

11.—Groves reports a case of **chronic intestinal obstruction in a child** which is of rare interest and importance. The patient was 1 year and 8 months old, of good family history, and during its first year enjoyed good health. When first seen there was much emaciation, with evidence of pain, abdominal distension, but no tenderness. There was no vomiting and the bowels were regular. The child while under observation grew suddenly worse and died before permission to operate was procured. On postmortem a stricture of the ileum which only admitted a probe was found. The condition is considered to have been congenital and is supposed to have arisen in connection with the involution of the embryonic vitelline duct. Had the condition been recognized, by feeding the child on soft, easily digestible food its life might have been prolonged. By way of operative treatment the intestine just above the stricture might have been brought out of the abdominal wound, opened, and a subsequent anastomosis done. [J.W.M.]

12.—Clarkson makes reference to the **anatomy and surgery of Meckel's diverticulum** a fetal relic representing the vitellointestinal duct and which usually undergoes

complete atrophy. When this fails to occur it may be entirely or partly patulous, or entirely fibrous. Statistics show it to be present in about 2% of cases, situated within the last 3 feet of the ileum, though this varies widely. It averages 3 inches in length. It is important surgically from the fact that when, due to the mobility of the ileum, the cord is severed and the umbilical portion atrophies, the intestinal portion may become adherent to some viscera and cause strangulation. It is important in such cases to determine whether the duct is patulous or fibrous. [J.W.M.]

13.—See the *Lancet*. Abstract 3.

14.—Mahomed in referring to **intestinal sand** mentions a case which he observed some years ago in which during an intractable attack of diarrhoea a patient passed in his bowel movements a quantity of sand granules. D. Baker states that when in Burmah he has frequently observed this but has been unable to attach special significance to it. [J.W.M.]

15.—Hildige mentions an interesting case presenting all the symptoms of **acute intestinal obstruction** which persisted for 2 days and for the relief of which an operation was about to be performed, when the obstruction was spontaneously relieved and the patient recovered. [J.W.M.]

16.—Bingham reports an **anomalous position of the rectum** found postmortem; it occupied the right iliac fossa. He also reports a case in which he found a complete horseshoe kidney. [J.W.M.]

17.—Power records 2 cases of **perforated gastric ulcer** which were operated upon 5 and 6 hours after the onset of acute symptoms and recovered. In the first the perforation was closed by Lembert sutures; in the second the stomach wall was much thickened and pliable and would not hold sutures, so a piece of omentum was sewn over the perforation and healthy stomach wall sewn over this by means of Mathew's sutures. The variation in the degree of shock following perforation is mentioned. [J. W. M.]

18.—Kempe records a case of **intestinal obstruction** due to nonremovable carcinoma of the ascending colon for the temporary relief of which he did an **ileocolic anastomosis** using a Murphy button. The subsequent progress of the case was slow, bearing out what has frequently been observed in such cases—that if the feces can be prevented from passing over the diseased area the progress of the disease and the development of cachexia are retarded. [J. W. M.]

The Lancet.

March 23, 1901. [No. 4047.]

1. Public Health and Housing; Influence of the Dwelling Upon Health in Relation to the Changing Style of Habitations. JOHN F. J. SYKES.
2. Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. J. MITCHELL BRUCE.
3. Blackwater Fever. J. W. W. STEPHENS.
4. Three Cases of Acute Diffuse Septic Peritonitis Resulting from Appendicitis: Operation: Recovery. W. G. RICHARDSON.
5. Resection of the Superior Cervical Ganglion of the Sympathetic for Glaucoma and its Results. H. WORK DODD.
6. The Elimination of Arsenic Through the Hair and its Relation to Arsenical Poisoning. EDMUND KNECHT and W. F. DEARDEN.
7. A Short Account of a Fatal Case of Laryngeal Diphtheria Complicating Measles. GEORGE J. MAGUIRE.
8. History of Renal Surgery. DAVID NEWMAN.
9. Wasted Quinin Pills. JOHN CURNOW.
10. A Case of Hydropneumothorax. EDWARD FRAZER.
11. Note on a Case of Enteric Fever with Severe Hemorrhage from the Sigmoid Flexure. STEPHEN G. LONGWORTH.
12. A Case of Peritoneal Cyst Simulating Ovarian Cyst; Laparotomy: Recovery. GILBERT KEMPE.
13. A Case of Dermatitis Following Acute Lichen Planus. T. SYDNEY SHORT.

1.—See *British Medical Journal*, March 16, abstract No. 6.

2.—Bruce, in the second Lettsomian lecture on diseases and disorders of the heart and arteries in middle and advanced life, describes the clinical characters and course of the affections of the heart and arteries as he has observed them

in association with the various influences that may provoke them. Pointing out that the causes of cardiovascular disease in the second half of life are complex, he states that to discover the effects of each pathogenic influence as distinguished from the others we must begin our study with the simplest, or purest, or most definite of all, and proceed from it toward those that are more difficult, as well as to combinations of causes. He discusses in elaborate detail the clinical manifestations of the tobacco-heart, the heart in alcoholism, in gout, and in obesity and glycosuria, and he illustrates each with notes of cases under his personal observation. He then proceeds to discuss cardiac strain, its mode of production and clinical manifestations, and he directs particular attention both to cardiac strain occurring past middle life, and to that strain which, experienced in early life, impels the patient to seek advice in advanced life. Finally consideration is devoted to the relationship of syphilis to the more serious cases of heart-disease occurring in elderly people, and to the clinical aspect of cardiovascular disorders and disease the result of nervous strain. [A.O.J.K.]

3.—Stephens, in a discussion of **blackwater fever**, expressing the conviction that it is malarial in nature, considers briefly the evidence of malarial infection in a supposed case of ordinary "fever." This may consist of the presence of parasites in the blood. In the absence of parasites, the presence of pigmented large mononuclear leukocytes is a means of proof. Concerning the pigmented large mononuclear leukocytes it is only necessary to state that they may be very few. As regards the change in the relative proportion of the large mononuclear leukocytes, they often constitute 20% to 30% of the total number of leukocytes, and may constitute even 50%. The opinion is expressed that a value as high as 20% of large mononuclear leukocytes is proof of malarial infection. From the finding of such values the diagnosis of malaria has in some cases been possible even in the absence of parasites—the latter being found subsequently. This relative increase in the large mononuclear leukocytes bore an inverse relation to the tertian temperature curve; that is, during the pyrexia the value was normal or low, whereas during the apyrexia periods the value was high. Except the clinical features, the presence of pigmented leukocytes and the change in the relative proportion of the large mononuclears, may be the only means of diagnosis in a case of malaria, as for instance if the patient has been taking quinin. From his own observations of 16 cases as well as from a study of the observations of others, he adduces the following as evidence of the malarial nature of blackwater fever: (1) the existence of parasites during the attack; (2) pigment and mononuclear percentage increase; (3) parasites before the attack; (4) parasites after the attack; and (5) the postmortem evidence. The opinion is expressed that there can be no doubt that quinin is the immediate cause of blackwater fever, though it is admitted that other causes may occasionally induce the disease. Observations on the **isotonic point of the blood in malaria and blackwater fever**, revealed that in malaria the isotonic value is constantly increased, while in blackwater fever it is below normal. It is suggested that the raised isotonic value in malaria may give some indication of the extent to which the corpuscles of the patient have been subjected to an injurious influence and so give some indication of those cases of malaria in which it would be dangerous to give quinin. Another factor said to be of some use as an index of danger is the presence of albuminuria or a high-colored urine. It is stated finally that complete protection from malaria in Africa may be obtained without taking any quinin, by paying scrupulous attention to clothing and the use of the mosquito net. [A. O. J. K.]

4.—Richardson cites 3 cases of **acute fulminating appendicitis, followed by general septic peritonitis**, in which recovery followed operation. The symptoms presented in each case were: Slight abdominal pain, which in a few hours became intense; vomiting, high temperature, rapid pulse, with later abdominal distention and tenderness. Such cases differ only in rapidity and virulence from those which terminate in resolution, or abscess-formation. Early recognition of the condition and prompt action are emphasized. The following rule is suggested with regard to operation in these cases: Namely, in very acute cases which do not improve in all the symptoms in 24 hours the appendix should be removed. The

operation consisted in an oblique incision, upward, outward, and backward from the edge of the right rectus muscle, removal of the appendix, which was perforated in each case, the toilet of the abdominal cavity and the establishment of drainage by means of the strands of gauze, 1 into the pelvis, 1 amongst the small intestines, and 1 up to the liver. [J.W.M.]

5.—Dodd reports in detail 2 cases of **glaucoma**, in which he removed the **superior cervical ganglion** of the sympathetic nerves for their relief. The primary results were very gratifying, but the final results were *nil*, leading him to the conclusion that the operation will not prove successful. [J.W.M.]

6.—Knecht and Dearden, writing of the **elimination of arsenic through the hair and its relation to arsenical poisoning**, state that some method of detecting arsenic in the hair should prove of clinical value in the endeavor to discriminate between arsenic and alcoholic neuritis, as well as of medicolegal value in the postmortem examination of cases of chronic arsenic poisoning, and particularly in exhumed bodies, since hair is one of the last parts of the body to undergo organic decomposition. By the employment of the Sanger modification of the Marsh test, they were able to detect arsenic in the proportion of 0.3 in 10,000 in the hair of a patient who had been taking arsenic, and in the proportion of 0.3 in 10,000 and 1 in 10,000 respectively in 2 cases of arsenical neuritis. In the hair of 3 healthy individuals arsenic was found in quantities too minute to be estimated in 1 gram of substance. [A.O.J.K.]

7.—Maguire reports a **fatal case of laryngeal diphtheria complicating measles** in a child aged 18 months. The child ill with measles began to suffer with dyspnea that increased to orthopnea requiring tracheotomy, without there appearing any clinical evidence of diphtheria of the throat, or other cause to explain the embarrassed breathing. At the necropsy it was found that the larynx was almost occluded by a thick, tough membrane that bacteriologic examination revealed to be diphtheric. [A.O.J.K.]

8.—Curnow reports an instance of **wasted gulain pills**—a number of pills apparently unaltered being found in a stool provoked by enema several days after they had been administered to a typhoid fever patient. The pills were not coated, but had been made up with water, instead of glycerin. [A.O.J.K.]

9.—An interesting case of **hydropneumothorax** is reported, in which relief was not obtained after 3 aspirations and the removal of 4½ pints of fluid. The air still remained at the apex of the pleural cavity. This was removed by aspirating upward along the upper border of the third rib. The chest was then tightly strapped and complete recovery followed. There being no evidence of tuberculosis, or injury, the way in which the air entered the pleural cavity is a question.

10.—Longworth reports a case of **enteric fever with severe hemorrhage from the sigmoid flexure**, in a female patient, aged 36 years. The enteric fever ran a somewhat atypical course; the temperature reached 103.4°; there occurred 2 colapses with marked fall in the temperature (on the fourteenth and seventeenth days respectively), and followed by the discharge from the bowel of a quantity of dark red blood. On the nineteenth day another hemorrhage occurred and the patient succumbed. At the necropsy the sigmoid for about 6 inches of its course was dark purplish in color, its mucous membrane free from ulceration, but markedly thickened, and to this blood-clot was firmly attached. The remainder of the large intestine was normal, and the ulcerations in the ileum showed no signs of hemorrhage. [A.O.J.K.]

11.—Kemp reports a case of **encysted peritonitis** which simulated very closely an ovarian cyst. Laparotomy was performed, and on opening the abdominal cavity the parietal peritonium was found to be closely adherent to what appeared to be the cyst wall, but an attempt to separate it failed. Fluid amounting to 21 pints was drawn off and the tubes and ovaries apparently healthy were found within the sac. The wound was closed with a drain inserted in the lower angle. The condition was due to a serum-containing pseudocyst of encysted peritonitis. The interesting point is the difficulty of differentiating this accumulation from ovarian cysts. [W.K.]

12.—Short reports a case of **dermatitis** involving almost the entire body, and following **acute lichen planus**, in a woman,

aged 31 years, whose mother suffered with chronic lichen planus. [A.O.J.K.]

Journal of the American Medical Association.

April 6, 1901. [Vol. xxxvi, No. 14.]

1. Chloralose. JAMES TYSON.
2. Postoperative Nervous Phenomena or Artificial Menopause. JOSEPH PRICE.
3. Syphilis as a Nonvenereal Disease. With a Plea for the Legal Control of Syphilis. L. DUNCAN BULKLEY.
4. Recent Clinical Observations on Tinea Versicolor. CHARLES WARRENNE ALLEN.
5. Experiments with an Epidemic of Rabies in Buffalo. ERNEST WENDE.
6. Pure-Food Legislation vs. Poor Food-Legislation. MURRAY GALT MOTTER.
7. A New Leg-Splint for Transverse Fracture of the Tibia. EDWARD A. TRACY.
8. Some Observations in Renal Surgery. W. H. ALLPORT.
9. The Relation of Indicanuria and Oxaluria to Gastro-Intestinal Fermentation. J. A. WESENER.
10. Some Additional Observations on the Effects of Injury to Peripheral Nerves. D. S. FAIRCHILD.
11. An Operation for Cystocele. GEORGE H. NOBLE.
12. Individual Prophylaxis. W. A. EVANS.
13. Statement Made Before the Committee on Public Health of the New York Assembly, at the Public Hearing on Assembly Bill 759, Regulating and Legalizing the Practice of Osteopathy in the State of New York, and Fixing Penalties for the Violation Thereof. JACOB BOLIN.

1.—Cases are cited to show that **chloralose** is prompter than any hypnotic except morphin, and is safe, though occasionally causing fantastic involuntary actions. The maximum dose is 5 grains in capsule repeated once after 1 or 2 hours. [H.M.]

2.—The **nervous phenomena of the artificial menopause** could be prevented by following operation with prolonged rest-treatment, massage, nonstimulating and nutritious diet and avoidance of drugs. [H.M.]

3.—The antiquity and world wide distribution of syphilis are presented with allusions to the epidemic of 1494 and others, when harsh legal measures were successfully used to hinder further dissemination, the disease not being looked upon as venereal. Owing to the thousands of cases of **syphilis insontium**, marital, hereditary and extragenital, Bulkley thinks physicians should labor to spread the knowledge that it is acquired otherwise than by sexual intercourse in order to remove the stigma and pave the way for the legal restriction of syphilitics. If members of a community are guarded from those infected until the contagious stage is passed the malady will cease to exist. Here there are no sanitary safeguards and few hospital opportunities for isolation as compared with Europe. The first step in legal control should be to make it as criminal to transmit syphilis wittingly as to communicate smallpox. [H.M.]

4.—Allen cites cases of his own and others which contradict the common statements of text-books, etc., and show that **tinea versicolor** is sometimes seen in children and on the face, palms and soles, and is not confined to those with pulmonary tuberculosis or those who have seborrhea and diphthesia. Many cases of recurrence are due to overlooked patches in the pubic region which have escaped treatment. Diagnosis without the microscope is not always easy. Iodin gives a mahogany-brown color to the lesions containing the fungus, distinguishing it from chloasma, macular syphilids, etc. [H.M.]

5.—A history of the **epidemic of rabies** beginning in 1898, and bacteriologic and physiologic verification of the nature of the disease, with observations on the peculiar actions of dogs affected by it are recorded. Popular misconceptions, skepticism, sincere and dishonest, in the profession, and the subject of municipal restriction are considered. Opposition to legislation is strongest among those to whom the possible discomfort of dogs is of more moment than the protection of human beings. Regulations should be such as would cause a decrease in the number of useless curs, thus benefiting the community as well as the breed of dogs. These should include registration, tagging, license, penalties, muzzling and leashing when at large,

stringent quarantine against infected localities, extra dog-catchers, shooting by police of unmuzzled and unleashed dogs, destruction of all bitten animals at once, disinfection of infected premises, cremation of carcasses, etc. [H.M.]

6.—Food legislation has failed from lack of comprehensiveness and a sensitive public conscience. The solution of the problem demands greater interest and intelligence on the part of physicians, the adoption of definite standards and the establishment of a national department of health to act as a sort of clearing house for the various governmental laboratories. When a bill has been formulated it should be submitted to all specialists and all the trades whose interests are involved before action by Congress. [H.M.]

7.—The combination of fixation, massage and in some cases passive motion is the most effective treatment for fractures. A splint of wood-plastic material, suitably cut, moistened, placed next the skin and bandaged on, gives immobility and is easily loosened in case of swelling and removed for inspection and massage. [H.M.]

8.—Allport gives the history of 14 real or apparent renal cases, his own and others, in which the diagnosis was tentatively or absolutely wrong owing to careless history taking or to relying too much on subjective symptoms or the patient's recollections, or on the preservation of the normal relation of organs, or on what seemed pathognomonic and neglecting certain accompanying signs and symptoms. Among operative errors he notes failure to perfectly care for the ureter after nephrectomy, injury to pelvis and ureter from too deep incision in kidney structure, closing wounds without drainage attempted preservation of a kidney riddled with sinuses. [H.M.]

9.—Traces of oxalates from food are found normally in urine. Crystals usually denote gastrointestinal fermentation after exclusion of foods rich in these. Hyperacidity on a meat diet contributes to putrefaction and indican and oxalic acid are increased. The symptoms of the oxalic diathesis associated with indicanuria are not due to the oxalic acid or indol but to other products formed during the fermentation. [H.M.]

10.—Fairchild continues the history of a case reported 2 years previously in which 5 operations were performed for relief of symptoms due to pressure of scar tissue on the median nerve with relapse a short time after each operation. Believing that the dense connective tissue formation was the result of trophic changes from neuritis he dissected out all this tissue again, lifted the nerve-end on a strabismus hook and surrounded it with gold sheet $\frac{3}{4}$ inch wide, $1\frac{1}{2}$ inches long and 1-500 inch thick, closing the wound with rigid asepsis. After 2 months the patient resumed work and at the end of $1\frac{1}{2}$ years there were no signs of nutritive irritation. [H.M.]

11.—A diamond-shaped denudation is made over the cystocele with one angle at the base of the urethra, one anterior to the cervix and the lateral angles so far apart that tension is required to make them meet. A purse string suture is inserted in such manner as when drawn to convert the middle of each side into the apex of a right angled triangle, the 4 apexes meeting in the center, the wound now forming a cross with the points of the original diamond at the end of each arm. This suture is partly in the denuded area and partly submucous, and silver wire is preferred. The margins of the wound are closed with a whip-stitch. The operation is illustrated by cuts, modifications are suggested and cases described. [H.M.]

12.—Mental depression, overexertion, habitual cleanliness, and protective clothing, as woolen underwear and rubber shoes, lower resisting power to germ infection. [H.M.]

13.—In the name of the New York Medico-Gymnastic and Massage Society, Bolin protests against the passage of Assembly Bill 759, as degrading the standard of education required in this branch of therapeutics. The bill, drawn in favor of the osteopaths, proposes to give independent practice to persons who may have taken only a month's course of training. In Sweden a 3 years' course is required and the government forbids independent practice, requiring the cooperation of legalized physicians. [H.M.]

Boston Medical and Surgical Journal.

April 4, 1901. [Vol. CXLIV, No. 14.]

1. Diseases of the Myocardium. HENRY JACKSON.
2. The Condition of the Myocardium as Affecting Cardiac Murmurs. H. D. ARNOLD.
3. A Further Note on the Treatment of Epidermoid Cancer. FRANCIS H. WILLIAMS.
4. Report of Cases from the Second Surgical Service of the Children's Hospital, Boston. I. Multiple Plexiform Fibromas; II. Paraplegia Existing from Birth. Laminectomy at the Age of $5\frac{1}{2}$ Months; III. A Case of Ununited Fracture of the Femur of a Child in which the Non-union was due to the Formation of a Cyst at the Ends of the Fragments. H. L. BURRELL, R. W. LOVETT, and J. E. GOLDTHWAIT.

1.—Pathologically, diseases of the myocardium are circulatory disturbances, inflammations, degeneration, neoplasms, hypertrophy and dilation. The article deals only with changes causing symptoms of heart disease. Coronary thrombosis or embolism may cause immediate death, or, if in the small branches, acute softening and rupture or slow connective tissue substitution, followed by aneurysm. Myocarditis is often due to general infectious diseases, or may be caused by arteriosclerosis. Fatty degeneration is usually found in dilation. Gummas are the only tumors usually presenting symptoms of heart disease. Hypertrophy is recognized by a strong pulse, heaving apex-beat and forcible heart-sounds, but causes no perceptible increase in area of cardiac dulness. Dilation does increase this area and when uncompensated causes gallop rhythm, or irregularity, or intermittence. The most important sign of weakness is discrepancy between heart and radial pulse-beats. The causes of enlargement within the heart are valvular disease, diseases of the wall, newgrowths. Those lying without are pericardial adhesions, kidney disease, chronic pulmonary disease, drugs and poisons, overwork, unknown causes, arteriosclerosis. Enlargement in renal disease and alcoholism may occur without arteriosclerosis. Nervous disturbances, hydremia and plethora may explain obscure cases. In arteriosclerosis the enlargement is much greater than in valvular disease; heart murmurs are often heard and the etiology, while largely due to alcohol, etc., is in many cases unknown. [H.M.]

2.—The importance of the condition of the myocardium in valvular disease is generally recognized. Theories as to the cause of murmurs are: (1) the vibration of a fluid forced from a narrow into a wider space; (2) the vibration of a stiffened valve; (3) changes in density and velocity as related to the vessel wall. The closure of the aortic valve depends on a fibrous mechanism, the mitral on a muscular mechanism. Weakening of either the cardiac or papillary muscle may account for mitral regurgitation. This weakening is generally curable because the cause is curable. When the valves themselves are diseased the condition of the myocardium is of still greater importance for on it compensation depends. A systolic apex murmur in rheumatism may not signify endocarditis but muscular weakness as in other toxin-producing diseases. Rheumatic endocarditis can be diagnosed absolutely only from murmurs of obstruction. Anemic murmurs are probably due to a poorly nourished heart muscle causing relative insufficiency. If left sided, even though showing various areas of distribution, they are probably due to mitral regurgitation, the paths of conduction being not yet understood. [H.M.]

3.—Cuts show a case of epidermoid cancer of the lip treated by radiation from an excited Crookes' tube. Cure was complete and healing without caustic action. Treatment can be stopped when improvement begins, the inference being that the rays destroy the life of that which causes the cancer. [H.M.]

4.—Burrell reports a case of multiple plexiform fibromas in a girl of 10. The left knee was swollen, involving the thigh and calf. A large tumor mass involved the popliteal space. This was found to consist of multiple plexiform fibromas apparently developing about nerve-bundles. The mass was encapsulated. Lovett's case was a child of $5\frac{1}{2}$ months who had paraplegia from birth. An incision was made at the dorso-lumbar junction and the spinous processes of 3 laminae were removed. A director was passed up and down the spinal canal

after the dura had been opened with the escape of much fluid. The nerves appeared small and adherent to the dura. They were partially freed and the dura left open. The child made a perfect convalescence and in a few weeks it was better as regarded the swelling of the legs and nervous irritability. Since that time there has been no improvement and the paralysis still continues. Goldthwait records a case of **ununited fracture of the femur** in a child of 11. The accident occurred in May, and in October the patient was operated upon. At the seat of the break was a cyst the size of a lemon containing a clear fluid under high pressure. The wall of the cyst was a plate of bone callus. The edges of bone were refreshed and healing has been normal. [A.G.E.]

Medical Record.

April 6, 1901. [Vol. 59, No. 14.]

1. The Relation of the Public to the Medical Profession. D. B. ST. JOHN ROOSA.
2. The Importance of Aseptic Vaccination, with Remarks on Vaccination in General. WILHELM KARL KUBIN.
3. The Field for Ethyl Chloride Narcosis. MARTIN W. WARE.
4. On the Diagnosis and Prognosis of Diabetes Mellitus. HENRY S. STARK.

1.—The fact that physicians may make or mar the physical fortune of the community in which they live should be sufficient inducement to that community to increase by endowment or otherwise facilities for obtaining a thorough **medical training**, and to prevent the practice of medicine by the irresponsible and ignorant. [H.M.]

2.—Kubin discusses the **importance of aseptic vaccination**. He quotes copious statistics proving the undoubted value of vaccination as a preventive measure. He mentions as causes which give rise to untoward results: (1) impure virus; (2) abnormal or paradoxical cause of the comox itself; (3) improper performance of the act of vaccination; (4) neglect on the part of the vaccinator to exercise supervision and control of the patient until the time of complete healing. (5) Coincident diseases: scarlatina, measles, etc. The following abnormalities as complications of vaccination are mentioned: Intensification of local reaction, alivary lymphangitis delayed healing, defective crust formation, ulcerated vaccinia, hemorrhagic vaccinia, hemophilia, keloid, tetanus, erysipelas, gangrene, paralysis, septicemia, syphilis and otitis media. His method of vaccination is by scarification, rubbing in of the virus and protecting by a shield. He insists on the patient returning for inspection at the end of a week. He concludes by suggesting the passage of a national law making vaccination and revaccination compulsory. Also that its importance be taught in the public schools, and that special instruction in vaccination be given in all medical colleges. The number of cases in which complications arise is small in comparison with the number of unvaccinated persons who die from smallpox. [J.W.M.]

3.—Wade, in a paper on the use of **ethyl chlorid as a general anesthetic** states that its death rate is 1 in 11,207 cases. His method of administration consists in spraying it onto a piece of gauze held in a tin or vulcanite funnel which fits the patient's face. On an average narcosis is produced in from 1 to 2 minutes after 10 cc. have been used. During narcosis the breathing becomes somewhat stertorous, the pulse accelerated with no appreciable fall in pressure. There is flushing of the face, followed by free perspiration, slight jactitation, followed by a spastic state of the muscles which subsides as the narcosis deepens. The chest muscles are not thus affected. Narcosis is reached when the pupils begin to contract, the muscular contractions to abate and the breathing becomes slightly stertorous. There is some variation in these phenomena in the case of drunkards, neurotics and children. He believes it to be preeminently the best anesthetic for minor surgery, its advantage being safety, rapidity of narcosis and recovery, small cost, and portability. [J.W.M.]

4.—Typical **diabetes mellitus** includes glycosuria and one or more classical clinical features, as polydipsia, polyuria, etc. Among evidences not mentioned in textbooks are periodic headaches in the obese, extreme and lasting fatigue after exertion, falling vision, acid saliva, receding germs, red and fissured

tongue, attacks simulating angina pectoris or cardiac hypertrophy, premature signs of age, etc. Anomalous types include those with the diabetic dyscrasia without glucose in the urine and those with glucose and no clinical manifestations. The tolerance for carbohydrates can be tested by means of the standard meal, increasing daily the carbohydrates in it until glycosuria is produced. Bremer and Williamson's blood-tests are described. No test for sugar is infallible, that with yeast being best. Many substances in urine, including drugs, will reduce copper. For clinical purposes Rudisch's test is one of the quickest, most delicate and most certain. The majority of cases are amenable to treatment. Prognosis depends on the power of assimilating carbohydrates. If sugar persists after complete exclusion of these from the diet, the case is severe. Early recognition is important. Early age, exhausting work, and presence in the urine of diacetic and B-oxybutyric acids or excessive amounts of acetone make the prognosis grave. [H.M.]

New York Medical Journal.

April 6, 1901. [Vol. LXXIII. No. 14.]

1. The Active Principles of Digitalis Leaves. JOSEPH W. ENGLAND.
2. The Comparative Pathology of the Jews. MAURICE FISHBERG.
3. The Pathology of Intrauterine Death. NEIL MACPIATTER. (Continued.)
4. Rectal Feeding in Throat Diseases. A. C. BARDES.
5. The Medical Aspect of Christian Science. W. M. POLK.

1.—An argumentative consideration of recent papers upon the **constituents of digitalis**, particularly deprecating a recent statement that digitoxin is the chief constituent of digitalis leaves. The digitoxin of the leaves and of the seeds differ in chemical formula. Digitoxin does not represent the medical value of the leaves; this may be proved by the fact that results are obtained from infusions of leaves, yet digitoxin is wholly insoluble in water. England reviews the action of tincture of fat-free digitalis and gives the method of obtaining it from the leaves. He thinks it seems clear from the properties of digitoxin—its difficulty of absorption, the length of time necessary to yield cardiac and renal effects, its slowness of elimination, and the relative rapidity of absorption of digitalis tinctures, that it cannot be the most important therapeutic principle of digitalis leaf. The severe local pain following hypodermic injections of digitoxin, the prolonged sensitiveness of injected tissues, and the slowness of physiologic effects indicate a great difficulty of absorption and assimilation. Digitalis is sometimes cumulative in action. When taken for a long time there are occasionally exhibited symptoms without any increase in the use of the drug. This has been thought to be due to the fact that the proximate principles of the drug were not excreted by the kidneys as fast as absorbed, and that they therefore accumulated in the body. But it would seem to be more reasonable to believe that cumulative action, when existent, is due to the slow absorption and elimination of digitoxin. [G.C.C.H.]

2.—After a careful and comprehensive study of the **comparative pathology of the Jews**, Fishberg concludes: (1) The death-rates of the Jews, at all ages, are relatively and absolutely lower than those of the people among whom they live. (2) The marriage rates and birth-rates of the Jews are smaller than those of the Christians; the Jews increase in number more rapidly than non-Jews because they bring more children to maturity. (3) The Jews are less liable than their neighbors to infection from cholera, smallpox and tuberculous. (4) Syphilis and alcoholism and diseases due mainly to their poisons are comparatively rare among the Jews. (5) Diabetes is very frequent among the Jews, 25% of all the recorded cases having occurred among them. (6) All the functional neuroses and psychoses, particularly neurasthenia and hysteria, occur more frequently among Jews than among non-Jews; while all the organic nervous diseases, as tabes, general paralysis, etc., are less frequent, commensurate with the infrequency of syphilis or alcoholism, among them. The greater majority of cases of amaurotic idiocy occur in Jewish children, and among Jews insanity is 2 to 5 times more frequent than among Christians.

(7) Blindness, colorblindness, trachoma and glaucoma, also varicose veins, particularly hemorrhoids and hernias, are very frequent among Jews. (8) These peculiarities are not due to any ethnic, biostatic or racial characteristics of a purely anatomic or physiologic nature in relation to non-Jews. They have their origin in the past history of the Jews and their habits of life, and in the rareness of syphilis and alcoholism among them. (9) When the Jew commingles with his Christian neighbors and adopts their customs and habits of life he sooner or later loses his "racial characteristics," and his comparative pathology presents no special peculiarities. [O.R.]

3.—Will be abstracted when concluded.

4.—Bardes, from observation of a number of cases which come under his care, is impressed with the importance of **artificial feeding in throat diseases**, as it obviates the irritation of the throat and shortens the progress of the disease. The danger of food entering the larynx is also avoided and the physician is able to give such food and stimulant as he wishes and the food is not bolted, as it is when swallowing is painful: struggling in children is also avoided. [O.R.]

5.—Polk shows that **Christian Science** is merely a reaffirmation of the spiritual as a therapeutic agent, a variety of psychotherapeutics, related to and a part of hypnotism, and familiar to all medical men. All physicians have long recognized the state of mind of the patient as having its influence upon morbid functional processes, and all use mental suggestion. But when this is pushed into command to ignore disease, in a state of mental exaltation, and "the line of safety has been passed," the limits and the laws of suggestion as a therapeutic measure are yet to be defined. The diseases affected are functional, the neuroses, the borderlands of insanity, etc. [G.C.C.H.]

Medical News.

April 6, 1901. [Vol. LXXVIII, No. 14.]

1. Advertising in the Profession. FRANK LYDSTON.
2. Resection of the Cervical Sympathetic. HOWARD J. WILLIAMS.
3. The Question of Drainage in Appendicitis. A. M. POND.
4. New Methods in Charity, with Better Results and at Less Cost. WM. P. SPRATLING.

1.—Lydston would substitute frank and respectable **advertising** for the surreptitious methods now in vogue as the giving of commissions, through college, hospital and free clinic routes, through church, secret societies, etc. The medical profession today has no particular social, commercial, financial or political importance and cannot command legislation because of the unwritten law that its members should keep themselves in the background. It should be considered ethical for doctors to write for newspapers, etc., signed articles of a quasi-scientific character for the instruction of the public. [H.M.]

2.—Williams discusses the value of the **removal of the cervical sympathetic** for the relief of glaucoma, exophthalmic goiter and epilepsy, and cites illustrative cases. The physiologic effects of sympathectomy have suggested its application in these conditions. The results in glaucoma are relief of pain, reduction of intraocular tension, widening of the visual field, with a doubtful improvement in vision. He concludes his reasoning with regard to its application in this condition as follows: "Sympathectomy is indicated in glaucoma simplex, inflammatory glaucoma where iridectomy has failed, hemorrhagic glaucoma early in the disease; and it should be tried in absolute glaucoma with pain, in preference to enucleation. In unilateral trouble the ganglion of the corresponding side should be excised. While sympathectomy may not be curative in every case of glaucoma, the results thus far have been sufficiently satisfactory to make it a desirable procedure in this much dreaded disease." In exophthalmic goiter bilateral removal of the 3 cervical ganglia is followed by decrease of the pulse-rate, relief of pericardial pain, retraction of the eyeballs and later a diminution in the size of the tumor, results which justify its performance after medical treatment has failed. The rationale of its application, and the results obtained when performed for the relief of epilepsy, are much less substantial and do not suggest the possibility of its adoption as a surgical procedure in

this condition. As yet no harmful results have followed the operation. [J.W.M.]

3.—Pond is an earnest advocate of **nondrainage in operations for appendicitis with pus**. He thinks that in any case the peritoneum takes care of the greater portion of the septic material. This method consists in attempting to dissolve and render sterile the pus and pus-forming elements and to increase the absorptive properties of the peritoneum. This he claims to accomplish by thorough irrigation of all parts of the abdominal cavity, and afterwards filling it with hot saline solution, stimulating hepatic activity, establishing postural drainage. He mentions 6 cases in which he successfully employed this method, and believes that the maxim "when in doubt drain" will soon be revised to read "when in doubt do not drain." [J.W.M.]

4.—**Cost of maintaining the dependent classes** can be lessened and **improvement in condition** achieved in 4 ways: (1) by legal prohibition of marriage among the insane, feeble-minded and epileptic; (2) by building less imposing structures; (3) by more economical methods of maintaining the incurable, leaving more to expend on those who may be cured; (4) by giving industrial training to all capable of receiving it. [H.M.]

Bulletin of the Johns Hopkins Hospital.

March, 1901. [Vol. XII, No. 120.]

1. The Genesis of Carcinoma of the Fallopian Tube in Hyperplastic Salpingitis. E. R. LE COUNT.
2. Report upon a Case of Gonorrhoeal Endocarditis in a Patient dying in the Puerperium. NORMAN MACLEOD HARRIS and WILLIAM M. DABNEY.
3. An Experimental Study concerning the Relation which the Prostate Gland bears to the Fecundative Power of the Spermatic Fluid. GEORGE WARKEL.
4. Further Observations on Epinephrin. JOHN J. ABEL.

3.—From his experiments Walker draws the following conclusions: (1) **Removal of the anterior lobes of the prostate gland** in rats has no effect on breeding; but in a certain number it diminishes the **fecundating power**; and in a few it is destroyed entirely; (2) complete excision has a very marked effect on fecundity, reducing it to almost nil when the gland is entirely removed; (3) partial or complete removal of the prostate has no effect upon the sexual desire and capacity; (4) complete removal of the gland in the adult animal has no effect on the histological structure of the testicles. Complete removal of the prostate in the young animal has no effect upon the subsequent development of the testes. [C.S.D.]

THE PUBLIC SERVICE

Changes in the Medical Corps of the U. S. Navy, for the week ended April 6, 1901:

- SCHOFFIELD, W. K., medical director, retired from active service, April 28, upon which date he will have reached the age of 62 years; with the rank and three-fourths the sea pay of the next higher grade, under the provisions of section 11, Navy personnel law.
- PICKRELL, G., surgeon, granted sick leave for 3 months.
- BLACKWELL, E. M., assistant surgeon, detached from the Abarenda, upon reporting of relief, and ordered home and to wait orders.
- MARCOUR, R. C., assistant surgeon, detached from the Havana Naval Station and ordered to the Abarenda, via temporary duty on the Philadelphia, May 4.
- DAVIS, E., assistant surgeon, granted sick leave for 3 months.
- STOKES, C. F., surgeon, detached from the New Orleans and ordered to the Solace, upon arrival of the Solace on the Asiatic Station.—April 3.
- BRYAN, S., passed assistant surgeon, order of February 8 modified; ordered to transfer accounts to Assistant Paymaster R. Nicholson, instead of to Arms.
- WINSLOW, G. F., medical director, detached from the Boston Navy Yard, April 18, and ordered home and to wait orders—April 4.
- BOGERT, E. S., medical director, retired, ordered to the Boston Navy Yard, April 18, as relief of Medical Director G. F. Winslow.
- STITT, E. R., surgeon, commissioned lieutenant from June 7, 1900.
- PECK, A. E., assistant surgeon, appointed assistant surgeon from March 27.

Changes in the U. S. Marine-Hospital Service, for the 7 days ended April 4, 1901:

- CARMICHAEL, D. A., surgeon, relieved from duty at Honolulu, H. I., and directed to proceed to San Francisco, Cal.—March 29.
- PECKHAM, G. T., surgeon, granted 20 days additional leave of absence on account of sickness—March 30.
- HASTINGS, HILL, assistant surgeon, to proceed to Bakersfield, Cal., for special duty—April 1.
- LAVINDER, C. H., assistant surgeon, granted leave of absence for 10 days from March 26—March 27.
- WHITE, M. J., assistant surgeon, to report to Surgeon J. H. White for duty—March 29.
- BILLINGS, W. C., assistant surgeon, to proceed to San Francisco, Cal., for special temporary duty—March 29.
- CURRIE, D. H., assistant surgeon, to proceed to San Francisco, Cal., for special temporary duty—March 30.
- PRIMROSE, R. S., acting assistant surgeon, granted leave of absence for 5 days from March 30—March 29.

Changes in the Medical Corps of the U. S. Army for the week ended April 6, 1901:

- BATH, THOMAS W., acting assistant surgeon, will proceed to his home, La Harpe, Ill., for annulment of contract.
- GREGORY, VERDO B., acting assistant surgeon, will proceed to his home, Dam, Wis., for annulment of contract.
- MADARA, JAMES W., acting assistant surgeon, will proceed to his home, Lexington, Ky., for annulment of contract.
- THOMASON, Major HENRY D., surgeon, will proceed to Benicia Barracks, Cal., where he will report for temporary duty at that post during the absence of Acting Assistant Surgeon Charles Y. Brownlee. Upon the return of Acting Assistant Surgeon Brownlee to Benicia Barracks, Major Thomason, surgeon, will stand relieved from temporary duty at that post, and will proceed to San Francisco, Cal., for further orders.
- KIERSTED, HENRY, acting assistant surgeon, is granted leave for 1 month.
- COX, Captain FREDERICK W., assistant surgeon, is relieved from temporary duty at the Army general hospital, Presidio, and will report to the commanding officer, squadron 6th cavalry, for duty with that command on the Army transport Hancock, to sail for the Philippine Islands. Upon arrival at Manila, Captain Cox will report for assignment to duty.
- KENYON, Captain FRANK P., assistant surgeon, is relieved from temporary duty at the Army general hospital, Presidio, and will report to the commanding officer, battalion 7th infantry, for duty with that command on the Army transport Hancock, to sail for the Philippine Islands.
- LITTLEFIELD, Captain HENRY A., assistant surgeon, is assigned to temporary duty with troops on the Army transport Hancock, to sail March 25. Upon arrival at Manila, Captain Littlefield will report for assignment to duty.
- JACKSON, FREDERICK C., acting assistant surgeon, is granted leave for 1 month, on surgeon's certificate with permission to apply for an extension of 1 month.
- ESTERLY, MILTON T., hospital steward is relieved from further duty at the muster out camp on the military reservation of the Presidio, and will proceed to Fort Lisicum, Alaska, for duty at that post.
- BOWEN, Major WILLIAM, surgeon, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, Philippine Islands, where he will report for assignment to duty.
- HORR, Captain EDWARD F., assistant surgeon, recently appointed, now on duty at Manzanillo, Cuba, will, as soon as his services can be spared by the commanding general, department of Cuba, proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
- WINTERBERRY, Captain W. HOEPFNER, assistant surgeon, recently appointed, will proceed from Fort Mason to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
- ALLEN, Captain IRA A., assistant surgeon, recently appointed, is relieved from duty at the Army and Navy General Hospital, Hot Springs, Ark., to take effect upon the expiration of the leave granted him March 26, and will then proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
- DAYWALT, Captain GEORGE W., assistant surgeon, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, Philippine Islands, where he will report for assignment to duty.
- JAMES, H. M., acting assistant surgeon, leave granted March 1, is extended 1 month.
- BAILEY, Captain GUY G., assistant surgeon, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, Philippine Islands, where he will report for assignment to duty.
- The following changes in the stations and duties of officers are ordered: Major GEORGE W. MATTHEWS, surgeon, is relieved from duty in the division of the Philippines, and will proceed to Fort Warren for duty, to relieve First Lieutenant FREDERICK HARTSOCK, assistant surgeon. Lieutenant HARTSOCK will proceed to San Francisco, Cal., and report for transportation to Manila, Philippine Islands, where he will report for assignment to duty.
- The following changes in the stations and duties of officers are ordered: Major HENRY C. FISHER, surgeon, is relieved from duty in the division of the Philippines, and will proceed to Jackson Barracks for duty, to relieve Major AARON H. APPEL, surgeon. Major APPEL upon being thus relieved will proceed to San Francisco, Cal., and report for transportation to Manila, Philippine Islands, where he will report for assignment to duty.
- GILCHRIST, First Lieutenant HARRY L., assistant surgeon, is relieved from duty in the division of the Philippines, and will proceed to San Francisco, Cal., and report by telegraph to the adjutant general of the Army for further orders.
- BANISTER, Major JOHN M., surgeon, leave granted March 26, is extended 10 days.

WIATE, Captain JUSTUS M., assistant surgeon, recently appointed, will upon the expiration of leave granted him March 12, proceed to San Francisco, Cal., and report for transportation to Manila, Philippine Islands, where he will report for assignment for duty.

JACKSON, Captain FREDERICK C., assistant surgeon, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, Philippine Islands, where he will report for assignment to duty.

MOSELEY, Major EDWARD B., orders of February 14 which assign him to duty at Fort Sheridan are revoked.

The following changes in the stations and duties of officers are ordered: Major EDWARD B. MOSELEY, surgeon, will upon the expiration of the sick leave granted him December 8, proceed to Denver, Colo., and report to the commanding general, department of the Colorado, for duty as chief surgeon of that department, to relieve Lieutenant Colonel HENRY LIPPINCOTT, D. S. G. Lieutenant Colonel LIPPINCOTT will proceed to Governors Island, and report to the commanding general, department of the East, for duty as chief surgeon of that department.

IVES, Major FRANCIS J., surgeon, is relieved from further duty with the United States forces in China and will proceed to Fort Sheridan for duty, to relieve Major George Adair, surgeon, who upon being thus relieved will comply with the requirements of previous orders.

CONN, Captain FREDERICK A. W., assistant surgeon, recently appointed, will proceed from Philadelphia, Pa., to San Francisco, Cal., and report for transportation to Manila, Philippine Islands, where he will report for assignment to duty.

The following named officers, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, Philippine Islands, where they will report for assignment to duty: Major FREDERICK MADRA, surgeon; Captain FRANCIS J. FURCELL, assistant surgeon; Captain THOMAS W. JACKSON, assistant surgeon.

HENDERSON, CLINTON F., hospital steward, now at Fort Skaguay, Alaska, will be sent to San Francisco, Cal., for assignment to duty.

LEHARDY, Julius C., acting assistant surgeon, will proceed to Fort Wood and relieve Captain Charles R. Gill, assistant surgeon, and acting assistant surgeon Adrian S. Williams. The latter will return at once to Fort Columbus for duty with the 1st battalion 7th infantry.

BYRNE, Colonel CHARLES C., is granted leave for 1 month from April 7, with permission to go beyond sea.

MUNSON, Captain EDWARD L., assistant surgeon, is relieved from further duty at Washington Barracks, and will proceed to Buffalo, N. Y., and assume charge of the exhibit of the medical department of the Army at the Pan-American Exposition to be held in the latter city.

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The Recrudescence of Plague everywhere is an alarming fact. In China, Cape Colony, Mauritius, Russia, and especially in India, the reports are all the same. In Peking 10,000 deaths are reported in six weeks, and in Bombay 1,770 cases with 1,293 deaths in one week. Fully 1,000 people are dying of plague every day in India. In San Francisco, there can be no longer any doubt that bubonic plague has existed for several years; the number of reported cases is about 30 for the last year with perhaps three or four times as many unreported. According to the *Journal of the American Medical Association*, during the 13 days in which the Federal Investigation Commission (Drs. Flexner, Novy, Barker) inspected the Chinese quarters, 13 deaths occurred, of which 6 were proved due to the bacillus of bubonic plague. The fact that the disease has not spread argues no security for the future, because in Calcutta for two years there was a similar mild form of the disease prevalent prior to the general outbreak. While this is going on, we should note that almost all governments, civilized and uncivilized, are devoting almost all their energies to decivilization. War and ambition and national hatreds are wildly at work to produce ruin and disease. The old fires of barbarism are relighting, masked under the specious guises of national egotism and pseudopatriotism. The enormous sums of money, almost the whole energies of all peoples, are being expended in war, luxury, and expansion. It is not accidental, it is not merely intercurrent, it is absolutely a causal nexus that unites this with the awful increase of plague. We need first a national professional unity, then an international union of all medical men, to appeal to the submerged religious and humanitarian instincts of the people of all governments to recall the world to sanity. Let us as a profession throw our united influence against war and the waste of the world's energies in ruthless ambitions which are a mockery of civilization. Disease is the certain outcome, the unvarying punishment of sin. Ours is the duty to search out and to prevent the causes of disease.

Emasculating the Anatomy Act.—We call especial attention to the letter of Professor Forbes in our present issue. Much of modern legislation seems to be motivated upon anything except the public good. All public-spirited citizens have to be on the watch for dangerous legislation by their own misrepresentatives. Here is an instance: The "amendment" of House Bill 61, which

has passed the House, will amend the most beneficent law, secured by Professor Forbes in 1883, out of existence. The change is to make it possible for "friends" to claim the dead bodies, instead of, as now, relatives only. Thus the popular prejudice against dissection (the very foundation of medical science and art) will make it impossible for our medical colleges to obtain the requisite material. The present law is perfectly just and satisfactory, harms no one, and protects the feelings of all that would really be outraged by any other wording. The physicians of Pennsylvania are not alone concerned, but they at least should send a remonstrance to their Senators at Harrisburg.

Enlistment as Soldiers, of the Insane, according to the *New Orleans Times-Democrat* is not impossible. It cites four illustrative cases of "fitful insanity." The patients were recognized at the St. Elizabeth's Hospital, in Washington, by the superintendent of the State asylum of Kentucky as men who had escaped from his asylum two years ago. It was then found that these four men after escaping had been accepted by the recruiting officer and examining surgeon of a regiment in Louisville as volunteers in the army. In the Philippines each at once developed his peculiar type of insanity and they were, of course, sent home again. The story has some elements that make it seem improbable, but, if true, it points to the need of greater care in enlisting men as to their histories, personal and medical. If the probable pensions of these four men be added to the expense of their shipment to Manila and back, detention in hospital, etc., it will be seen how costly was the lack of the foresight which should have been exercised. How many similar cases may there have been which have not been discovered?

A Change in the Methods of Teaching Physiology in Public Schools, is necessary and indeed imminent, according to many of our best educators. The present method is usually a bad mixture of bad anatomy, physiology, hygiene, and biology. As to human anatomy and physiology the younger pupils can learn little of any great value, and this little can be better learned by the biologic route at a later time in the course, say in the high school. When it comes to this time the new plan is to give the biologic teaching by laboratory methods. The day of teaching any biologic branch by textbook and didactic methods is, we trust, forever past. Moreover, in teaching hygiene, which is

at last the chief object of public school work in physiology, the practical method should be preferred. There is no reason why a short elementary course in practical bacteriology should not prove an instructive and interesting part of hygienic study in high-school work.

To Encourage the Endowment of Medical Journals, the publishing company should be incorporated and should have as its principal object the establishment of a professional organ, the profits of which shall go to its purification and perfection, and to progress in general professional concerns. We frankly state that it is our aim to make of AMERICAN MEDICINE such an endowed journal. We have already secured the promise of a small endowment of about \$100,000 upon the death of two persons now living, upon certain conditions. We ask every physician in making his will to consider seriously that the profoundest need of the profession today is a medical journal placed permanently and absolutely beyond commercial temptations and dangers. Nothing else can free us from many abuses that now cripple and disunite us. Nothing else can bring the united power of the whole profession to bear upon the problems of city, state and national legislation and sanitation. To a journal thus founded endowments may be made under the conditions desired by the giver, such, for example, as the elimination of criticised advertisements, the support of reforms, the prevention of disease, the payment of commissions to investigate and abrogate abuses, to aid good and to prevent bad legislation, etc., etc. We shall be glad to correspond concerning endowments and to consult with those having the future welfare of the profession at heart.

Hipjoint Amputation, to which unfortunately recourse must be had in some cases of traumatism, malignant and other diseases, technically considered is usually a matter of comparative ease. In some cases, however, the conditions are such that it is impossible to follow the ordinary and desirable methods of procedure, and resort must be had to various devices that do not meet the unqualified approval of the surgeon. A case of this sort is reported by DaCosta (*American Journal of the Medical Sciences*, March, 1901). The patient was a girl, aged 15 years, who suffered from an ulcerated sarcoma of the thigh from which blood oozed constantly in such quantity as to give rise to the fear of a sudden furious hemorrhage. Such was the situation of the ulcerating mass that it was necessary to take the flap from the posterior aspect of the thigh. The patient made a good operative recovery, but the involvement of the tissues by the sarcoma was so extensive that more could not be expected. The making of this posterior flap was looked upon as an unfortunate necessity, being attended by positive disadvantages—the flap being heavy and tending to tear open the wound. DaCosta states that were he obliged again to perform such an operation, he would make the flap devoid of muscle and he would use at least four button sutures to give support.

The Association of Medical Librarians is an agency of incalculable possible good to the entire medical profession of America. Its object is to encourage the for-

mation of permanent and useful public medical libraries in medical centers, and to render more efficient those already established. The *Exchange* of the Association is designed to act as a sort of literary clearing-house for all its associate members, whereby may be utilized perhaps a million volumes of books and periodicals at present wasted because no mechanism has heretofore existed to act as the intermediary of the distribution. The *Exchange* is now in active working order, under the charge of Miss M. C. Noyes, the zealous and capable Librarian of the Library of the Medical and Chirurgical Faculty of Maryland, located at 847 North Eutaw street, Baltimore, Md. The Association has already secured for its members gifts of periodicals and books which are worth many times more than the annual dues of \$5. Many of the membership-libraries also subscribe in addition \$25, and all so doing secure contributions through the *Exchange* of greater value than the contribution, although the institution is really as yet but in its infancy. Correspondence as to joining the association should be addressed to Mr. C. Perry Fisher, Library of the College of Physicians, Philadelphia. All business concerning the gift or the distribution of books and periodicals should be addressed to Miss Noyes.

“Prescribing Drugs and Medicines” is defined by Judge Elliott, of New York, as necessary to the practice of medicine. Those who do not do these things are not liable to legal damages for practising medicine without a license. So when little Irma Grossenbach died after being prayed over by the unchristian unscientist, then the unchristian unscientist was not to blame because she was not “practising medicine.” If this is to be the law and such is to be its interpretation one of two things is needed:

1. The law should be amended by some one with a grain of common sense, and made so explicit that the silliest pseudopath can understand it, that modern medicine has neither necessarily nor even generally anything to do with drug-giving.

2. Or, if medicine-prescribing is required to constitute one a legal practitioner, then a new law is demanded to the effect that those who practise pseudopathy without giving medicine are criminals. To kill a child by not giving drugs is as much criminal malpractice as to kill it by wrong drugs, or by too much drugging.

Postinfluenzal Melancholia.—There is a strange mystery about the peculiar and overwhelming depression of mind following the grip in many cases. Either in his own person or in his patients, every physician has been startled by the illogical malignancy of this psychic insult. The distressing death of Dr. William N. Guernsey last week in New York, followed close upon the suicide of a leading Brooklyn physician from the same cause. The last death was, it is said, only a few days after the physician had argued long and seriously with a patient suffering from influenzal melancholia, against the suicide he felt compelled to commit. The impulsion is, frequently, doubtless almost irresistible, and terribly insistent. One, at other times most optimistic and life-loving, will acknowledge the illogicality, even the stu-

pidity of his pessimism, and yet he overcome with the utter worthlessness of life, and even be filled with a loathing for it. We come here face to face with one of the horrid mysteries of personality, and are shocked and paralyzed to see how dependent is mental poise and control upon disease. With all our professional recognition of the serious nature of the malady, it is still true that we must attack the problem of the etiology and therapeutics of this frightful affection with the greatest scientific resolution.

The Midwife Evil.—The obstetrician often has a graver responsibility than either the medical or surgical practitioner; for he has charge of two lives at the same time instead of one; and must often decide the most serious questions in casuistry, involving the life of one individual, while directing his efforts toward saving both. While legislation is being directed toward the suppression of illegal practitioners and the enactment of laws regulating medical practice and the qualifications of students, the untrained, unskilled, unclean midwife is permitted to flourish unmolested. The fact that four cases of puerperal infection occurred within four weeks in the hands of one Italian midwife and that three of these unfortunate women died, and that recently an infant was permitted to strangle because the midwife became panic stricken, are forcible arguments against allowing these ignorant, presumptuous individuals to continue jeopardizing the lives of parturient women. Midwives will rarely give up a patient, or call in a regular practitioner until she is nearly moribund, or all chance for effectual aid has been lost. Indeed, such a mass of evidence could be collected against midwives as would convince a "Committee of husbands who can count coincidences and draw conclusions as well as a synod of accoucheurs," and might even influence a body of legislators, if properly presented before them. Midwives are indeed a relic of medieval medical barbarism and by no means a necessary evil; for it would be far better to trust these patients to trained medical students working under the immediate supervision of instructors in obstetrics—earnest, trained men—than to leave them to the mercies of these ignorant women.

A Plea for General Biologic Training in Medical Schools.—A recent discussion by Dr. Ch. Wardell Stiles of the frequent misuse of generic and specific names by physicians, and an article on the "Teaching of Bacteriology in Medical Schools," which appeared in a late journal, are indications of the feeling among more thoroughly trained physicians, especially those who have had advantages of foreign study, for the necessity of bringing into the curriculum of American medical colleges some instruction in botany and zoology.

Recent discoveries in the etiology of infectious diseases, and in the phenomena of fertilization emphasizes very strongly the need of some systematic teaching along these lines.

For a time many of our colleges offered courses in general biology preparatory to medicine, wherein students were made familiar with the nomenclature, systematic relationships and life histories of at least selected types of

lower organisms, organisms which in increasing instances are found to act as the exciting causes of infectious diseases, or through their relations as parasites to produce severe disturbances of the circulatory and nervous systems. Such instruction has, however, of late been largely replaced by courses in morphology and ecology, and the study of general biology by means of types is for the present considerably neglected.

While the crowded courses of our medical schools will not permit of special courses in zoology and botany, nor in most cases even of systematic training in bacteriology and parasitology, it is becoming more and more essential that some course should be established in which the student may be made familiar with the life phases of simple organisms.

Not every one is able to supplement his medical training by working under such masters as Leuckart or Blanchard; but there is no reason why American medical students should not receive at least some of the advantages, which are now offered only by European medical schools along the lines indicated.

Why not revive the course in general biology so largely abandoned and bring it into the medical curriculum. The wisdom of Huxley in the establishment of a general course of training of this character is more than ever apparent, and though it may have failed to meet the needs of the botanist, the zoologist, the embryologist or the morphologist and to have trespassed to too great an extent on these special domains; yet it might be made to include, in medical colleges, those subjects for which there seems at present to be no place, and to furnish a foundation of biologic facts and a sufficient knowledge of the relationships of lower organisms among themselves, and, in their developmental phases, with the higher organisms, to form a valuable introduction to many of the most interesting phenomena of clinical medicine.

The Red Blood Corpusele—the Erythrocyte.—A Shanghai correspondent of the *British Medical Journal* laments the fact that the "little physiological orphan," the red blood corpusele, is without a proper cognomen. Doubtless therefore in China, though numerically superior, circulating with its fellow the leukocyte, it feels the degradation of unappreciated importance. In consequence, the correspondent suggests the term "xanthocyte," as "expressing the yellow-red color of the corpusele and at the same time placing it on a footing of equality with the leukocyte which has for so long been treated with proper ceremony by medical authors." We would suggest that the term "erythrocyte" is sufficiently dignified and expressive, and it has assuredly been employed in this country at least quite long enough for the knowledge to have percolated even to Shanghai.

A Warning as to Certain Emergency Cases was the lesson derived from a recent experience in private practice. A patient was suspected of an attempt at suicide, and there was much doubt as to the drug which may have been taken. Naturally, the condition of the pupils was carefully and repeatedly observed, and conclusions drawn therefrom. But in this case the conclusions were, in a double sense, omissions, and were

subsequently proved erroneous, because the patient had a chronic iritis, with the irises bound to the capsules of the lenses by old adhesions. It occurs to us that such an error may have frequently occurred, or may any day lead to incorrect inferences in the practices of hospital surgeons in emergency cases generally, and even in some nervous diseases. It follows that whenever the pupillary reactions are studied the examining surgeon should be able to detect occlusion of the pupil if it exists, and should be on his guard against assumptions drawn from their nonreaction to light or darkness. Doubtless a somewhat large proportion of alcoholics have had iritis.

“**The College of Fine Forces,**” or to use its extended title, *The California Institute of Suggestive Therapeutics and College of Fine Forces*, according to local newspapers, has “found the elysium of its founder’s dreams” in Santa Barbara, California. The Dean of the College, and a Ph.D., LL.D., of course, says his institute is “established for the treatment, by suggestion, of all Human Diseases, and Functional Disorders,” and that “instruction will be given to Physicians and Students, with practical work in Psycho-Therapeutics.” He cures astigmatism by hypnosis, although “formerly it was believed by the most skilled oculists [*sic!*] that the only relief was the use of properly selected glasses.” What a pity it is that as a people we are fast losing our sense of humor. If Mark Twain should live a few years longer he would hardly be able to find an appreciative public. Fun has no effect either upon the fool, the fooler, or the fanatic.

Pierie Acid as a Local Remedy in Affections of the Skin.—During the last two or three years many writers have testified to the value of pierie acid as an anti-septic, sedative and keratoplastic agent in various inflammatory affections of the skin. It has proved especially valuable in superficial burns, acute eczema and herpes zoster. The strength of the solution employed is usually 1%. Compresses are wrung out of this, applied to the part, covered with a thick layer of cotton, and retained by a gauze bandage. Redressing is not necessary for two or three days. For a few minutes there is some smarting, but this soon gives way to a sense of relief. The advantages claimed for this treatment in burns are simplicity, painlessness, rapidity of healing, minimum of suppuration, and a smoother cicatrix than is obtained with other methods. It should not be employed in old, deep or suppurating burns. Like certain other local remedies, pierie acid seems capable in some instances of causing a generalized cutaneous eruption, as in a case reported by Aehard and Clere (*Gaz. Hebdomadaire de Med. et de Chirurg.*, October 11, 1900) in which the application of the acid to a small burn on the face induced a universal scarlatiniform and vesicular eruption with edema and well-marked eosinophilia.

The New Cancer Parasite.—It has been the misfortune of editors in all centuries to criticize, at times wrongly but according to their light, those who rise up and proclaim their discovery of some great new thing—

some boon to mankind or some shattering blow to his cherished convictions. Still it is not clear that even such eriticism has ever obliterated the truth and it may be as well that they should continue. Dr. Gaylord, of Buffalo, whose discovery of the parasite of cancer has been so bravely heralded abroad by the daily papers, presented the results of his work with his preparation before the Johns Hopkins Hospital Medical Society April 15.

Parasites were practically constantly found in cancers and could be observed under the microscope to pass through a cycle of development, many of the forms of which could be found in scrapings from the tumor. Of these the youngest form resembled a coccus—then came a larger form like an oil droplet, but not soluble in ether and not stained by osmic acid—then a form indistinguishable from a polymorphous clear leukocyte—finally one seen only post mortem forming the spore sac and difficult to distinguish from an infected epithelial cell. In this cycle the young forms are said to arise in the spore sac or perhaps to begin in the leukocyte-like stage as granules which grow larger in the next stage. The first two stages show an evidence of the presence of a nucleus except in taking a general stain with anilin dyes; the third has a well defined nucleus like a leukocyte, and protoplasmic granules, and the spore sac has a nucleus or the remains of one—an unusual phenomenon in the sporozoa to which group these organisms are referred and in which the nucleus of the mother-cell goes to form the nucleus of the spores. Here however the spores apparently arise in the protoplasm, perhaps in the third stage in the presence of a well formed nucleus, or in the fourth or spore-sac stage, leaving the disintegrating nucleus quite visible. Such variations from the analogies of related organisms require at least a zoological explanation.

The results of inoculation varied; in most cases peculiar changes not of the nature of tumor-formations were found in the tissues, explained as the result of overwhelming the animal with the organism. In one or two animals tumor-like formations appeared, but the most definite of these had been inoculated, not with the cancer parasites, but with a yeast. Nevertheless it was thought not to have been infected with the yeast but rather to have been accidentally infected afterward with the cancer parasite.

These bodies which are identical with “Plummer’s bodies” and Russell’s “fuchsin bodies” are also found in other tumors of the most various kinds; indeed it occasions no surprise to find them in any sort of other lesion the etiology of which is obscure—syphilis, the various exanthemata, Hodgkin’s disease, primitive splenomegaly, etc., etc. This might seem to detract from their character for specificity in cancer, were it not explained that all these other diseases of which we do not know the cause are the result of a protozoan infection.

Thus we have an “organism” occurring indiscriminately in cancer and in the most various other conditions (the different species characteristic of each disease to be distinguished at a later date), said to be culturable or at least to change its form in a culture medium, passing through a cycle of development which departs in

many respects from that of analogous organisms, producing an inoculation into animals' various lesions, but not as yet definite tumors in any convincing numbers.

Taken all in all, although there is no doubt of the occurrence of peculiar cell-inclusions in carcinoma, the resemblance of the various stages of this parasite to other familiar anatomic elements, the anomalies of their cycles, the indiscriminate distribution of the parasites, and the results of the inoculation, lead us to the view that while possibly the cause of cancer is laid before us it is not convincingly proved.

Home Study for School-children has most wisely, as we believe, been prohibited by the legislature of California. To test the wisdom of the prohibition, experiments were conducted in three San Francisco schools, and in all cases the teachers were satisfied that the work of the no-home-study classes and their percentages were equal or superior to that of the classes in which home-study was kept up. Improved deportment was also noticed. Upon the celebration of the conclusion of her fiftieth year as a teacher in the Philadelphia public schools, Miss Anna Lyle said that nowadays "we have too many studies, and give too much attention to the higher branches." Is there any physician who has not, almost daily, little patients brought to him whose health has been injured or positively broken by school-studies and overpressure? We do not say it is the teacher's fault, and sometimes it is not directly due to the great grinding system, but to be charged to parental pride or to the pupil's ambition. But it is at least all permitted or made possible by the school system. Before all other things the health of the child and his normal physical development is to be assured. All education that forgets that is false education, and there can be little doubt that our pedagogs have often come far too near to forgetting it.

Cross-education is the name given by Professor Scripture of Yale to the results upon the organs of the opposite side of the body from exercise of a limb or organ. The simplest instance is that a gain of 70% in strength of the right hand from exercising it alone secures a gain of 50% in the unexercised left hand. The law holds not only as regards strength but also in other qualities. The fact helps to explain why in right-handed people, for instance, the left retains so much strength and expertness. The question also arises if other organs than corresponding ones may not be influenced, for example, the left foot by means of exercise of the right hand. (Why are right-handed soldiers required to step off with the left foot first?) Finally the development in the defective classes of mental and moral characteristics by systematized physical instruction which teaches order, rhythm, accuracy, judgment, etc., is explained and put upon a rational basis. The claims of the manual training advocates are justified and made clear. The experiments at the Elmira Reformatory thus elicit the greatest interest. How far it may be possible to educate into something like normality the weak-minded, criminally inclined, and even the idiotic, becomes an important study. Professor Scripture calls this "the principle of character-building by motor activity."

Marriage of the Unfit.—In a recent number of *Lestie's Weekly*, Bishop Doane had contended that in order to suppress vice in our cities conscience must be appealed to, offers made of the means of grace, hating the sin and loving the sinner, and behind all, the patience of God. In reply Dr. William Lee Howard, of Baltimore, emphasizes the role played in the continuance and increase of vice by marriage of the unfit, about which the Church has been too little concerned. It is, he rightly says, by preventing the propagation of the vicious, that we shall stop vice, not by reclaiming them; and such prevention can be best effected by forbidding marriage of the diseased, alcoholics, criminals, the semi-insane, the defectives, etc. We think this is true, and just because it is true we hesitate to mention a modifying factor, fearing it may serve to prevent the acceptance by some of the greater truth. Nevertheless it is a lesser truth that stringency in the preventive measure rightly urged by Dr. Howard would undoubtedly to some extent increase prostitution and illegitimacy. The thing to be aimed at is the application of the known laws of biology and stirpiculture to human social life. In enacting our laws not the Church alone, but all institutions and professions have been guilty of indifference to and ignorance of this duty is beyond dispute.

The Journal of Hygiene, the new quarterly periodical edited by Drs. G. H. F. Nuttall, John Haldane and Arthur Newsholme, and issued by the Cambridge (England) University Press, nobly illustrates the scientific spirit of its founders. It is designed to serve as the medium of publication of original work on which all genuine hygiene is based. We commend it in every way and trust it may secure the professional support it deserves.

The Success of American Medicine, and of the ideals it strives to realize, depends upon the efforts and zeal of its founders, stockholders and subscribers. So far there is only the possibility and the probability of success. So far only the opportunity is presented. Here is the well-planned, and as we believe, the perfectly builded machine, awaiting only the energy, the living steam, of professional life and cooperation. When this shall fill and drive it, a great mechanism will have been created to help on our professional progress and unification. (It comes practically to this, of securing for us new subscribers and endowment.) This is your journal, and it is dependent upon your help. For the sake of its future, and also for the interest of the subscribers, our *Life-endowment* offer is the best of the several propositions made. We beg you to commend it to your friends. We trust that every present subscriber will secure for us three, two, or at least one, additional name, according to one of the offers made, within the next month. This would more than place AMERICAN MEDICINE on a self-supporting basis. Commercial medical journals do not require looking after. The more genuinely professional our journals seek to become the more spontaneous and insistent must be the help of every physician who loves his guild, and its function in the world's life.

BOOK REVIEWS

Diseases of the Nose and Throat.—By D. BRADEN KYLE, M.D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia; Consulting Laryngologist, Rhinologist, and Otologist, St. Agnes' Hospital. Second Edition, Revised. Octavo, 646 pages; over 150 illustrations and 6 lithographic plates. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$4.00 net.

Anyone who has carefully perused this work cannot be otherwise than impressed with the thought that the author has mastered his subject and has set it forth in this book in such a way that his views of the subject matter may be understood by the student or general practitioner and at the same time be sufficiently thorough and complete for the specialist. Dr. Kyle's vast clinical experience in his specialty gives him the necessary confidence and makes his writings have the ring of authority about them.

One would gather that it was the author's object to lay particular stress upon the pathology of the disease under consideration. We believe that is as it should be, especially when accompanied by colored illustrations of sections which so clearly show the existing conditions as seen through a microscope. The cuts are mostly original and illustrative of the points made, and are one of the best features of the work, and show a great breadth of knowledge and skill in the author as a pathologist. It is our opinion, however, that looking at it from the standpoint of the average man who needs a work of this class that the author has given too much space to histologic pathology, as comparatively few physicians now practicing can appreciate what Dr. Kyle sees through his microscope. They must have his trained eye to do that. The classification is systematic and complete and leaves nothing to be desired in that direction.

A Text-book of the Diseases of Women. By HENRY J. GARRIGUES, A.M., M.D., Gynecologist to St. Mark's Hospital in New York City, etc., with 367 illustrations. Third Edition, thoroughly revised. Price, \$4.50 net in cloth, and \$5.50 net in sheep or half morocco. Philadelphia: W. B. Saunders & Co., 1900.

The appearance of a third edition of this work after so short a period of time is a measure of success indicating its substantial worth. In the preface to the first edition Dr. Garrigues stated that he had endeavored to make his work a practical one. How well he succeeded is evident by the continued demand for it. The material is so simply arranged that we are scarcely aware that any art has been used at all. From embryology, the beginning of things, we are led on through anatomy to physiology, and so throughout the book, from general to special, each subject preparing the way for that which follows. The chapter on embryology is set forth almost completely in pictorial form and by reason of this graphic method will be correspondingly useful to the student. The space devoted to anatomy is quite large and it might be objected that such information could be secured from general works on that subject; but even the anatomy of the female pelvis must be approached from the gynecologist's viewpoint in order that its problems may be best understood. The histology of the uterine mucosa and menstrual changes therein are wisely left without dogmatic assertions. Many of the illustrations of this chapter are unusually good. The several divisions of physiology are admirably handled. Just a short, clear statement of the essential facts of each. The subject of "Etiology in General" covers only 4 pages, but is well handled and full of good ideas. Under "Treatment in General" are taken up the various procedures usually employed in this department of medical practice. The subject of curettage has not been as prominently set forth as its gravity demands, in view of the large place it has assumed in the hands of even the general practitioner. A little more than one-third of the book is devoted to preliminary and general topics, while the remainder is occupied by special chapters on each portion of the tract in order, from the vulva to the ovaries. The treatment of perineal lacerations is perhaps the weakest chapter. Its illustrations are not equal to those in other sections of the book. A subsequent chapter is added,

which treats of pelvic conditions not classified under any of the preceding heads. Finally, there is an appendix which contains an admirable reference to some methods of intestinal surgery. The operative procedures advocated throughout the book are, as a rule, well described, and a very judicious selection of methods is apparent. The pathology of the various conditions is thoroughly treated. The indexing is well done, which adds materially to the usefulness of the book. As a whole, it is a reliable guide to the subject of gynecology, and will prove a useful addition to any medical library.

The Hygiene of Transmissible Diseases: Their Causation, Modes of Dissemination and Methods of Prevention. By A. C. ABBOTT, M.D., Professor of Hygiene and Bacteriology, University of Pennsylvania. Octavo, 311 pages. Numerous illustrations. W. B. Saunders, Philadelphia, 1899. Cloth, \$2.00 net.

In this volume, just as the author says, there is no effort to present the subject of hygiene in the broad, comprehensive sense usually implied by the word. The purpose is rather, by dealing with that phase of hygiene embracing a knowledge of preventible specific diseases, to impress the student with the various factors bearing upon the suppression of such diseases. In this way the author emphasizes general sanitary importance. Much has been written on this topic that is too glitteringly general to avail the student or practitioner anything. What has been needed is specific information as to the detailed management of transmissible diseases, and to this—the weightiest aspect of hygiene—Dr. Abbott has devoted his book with conspicuous success. While not overtechnical in its method, the volume is scientific enough to satisfy the most exacting, and it carries the student as far as the present state of our sanitary knowledge permits. The book is thoroughly characteristic of the author in its clearness of statement, its thoroughness of method and its soundness of teaching throughout. It certainly deserves to be widely and carefully read by both student and practitioner.

Retinoscopy (or Shadow Test) in the Determination of Refraction at one Meter Distance, with the Plane Mirror. By JAMES THORNTON, A.M., M.D., author of "Refraction and How to Refract," Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Fourth edition, revised and enlarged; 51 illustrations. Philadelphia: P. Blakiston's Son & Co.

That this volume has reached a fourth edition in so short a time and is demanded in French and German, speaks for itself. One element of its popularity is the author's clearness in presenting his subject, making it possible to acquire this invaluable method of refraction without further instruction. New illustrations and other additions give the volume increased value.

Diet and Food.—Third edition. By Alexander Haig, M.A., M.D., F.R.C.P. Philadelphia: P. Blakiston's Son & Co. 1901. Price, \$1.00.

In the third edition of this monograph, the author further emphasizes his well-known conviction that most organic disease is the result of excessive uric acid and the poisonous xanthins, derived from improper alimentation. The essence of the work is a plea for a "diet free from all animal flesh, tea coffee, and similar alkaloid-containing vegetable substances."

A Laboratory Guide in Elementary Bacteriology.—By William Dodge Frost, instructor in bacteriology, University of Wisconsin. Illustrated; 1901. Published by the author. Madison, Wis.

This work, as its name implies, is designed to aid the student of this subject in classifying and preserving the results of his laboratory experiments. It is an octavo volume of 205 pages. Only the alternate pages, however, are printed leaving the others for notes. The paper is of excellent quality permitting the use of ink in note taking. It sets forth a model laboratory technique for each procedure in bacteriology. The adoption of such a systematic plan in all our teaching laboratories would soon turn out a body of trained observers to "leaven the whole lump" of the medical profession.

AMERICAN NEWS AND NOTES

GENERAL.

Pneumonia in the Klondike is reported as very prevalent and a number of deaths have occurred.

Plague.—Rio de Janeiro city and port were declared, on March 9, free from plague, no case having occurred there for 20 days.

Ration for Philippine Soldiers.—It is reported that pickled pigs' feet and tomatoes are to be added to the list of rations for the soldiers in the Philippines.

Nonimmunes from Cuba.—Assistant Secretary Spaulding, of the Treasury Department, has issued a circular extending until May 1, 1901, the provisions of department circulars issued March 22, 1901, permitting travel from Cuba to nonimmunes after their inspection at port of departure and necessary disinfection of effects, including northern ports.

Yellow Fever.—The news of the appearance of a case of yellow fever at Port Simon, Costa Rica, has been cabled to the Surgeon of the Marine Hospital. A suspected case of yellow fever was removed from the transport Rawlins at Key West en route from Havana to New York. Two cases of yellow fever and 1 death are reported April 10 at Port Royal at the entrance to Kingston Harbor, Jamaica.

Tuberculosis in Hawaiian Islands.—In view of the decision of the authorities of Honolulu and the Hawaiian Islands that the increased death-rate from tuberculosis during the past year is due to the importation of the disease a bill has been framed and will be brought before the Territorial Legislature prohibiting the landing at any port in those islands of any person suffering from tuberculosis or any other contagious disease. Any person who aids or abets the landing of such persons will be considered guilty of misdemeanor.

Mosquito Theory Accepted by Surgeon-General Sternberg.—Surgeon-General Sternberg has just given his approval, without reservation, to the report of the Special Medical Board, composed of Surgeons Reed, Carroll, and Agramonte, upon the "Etiology of Yellow Fever," in which the conclusion was reached that the mosquito is responsible for the transmission of this disease. Moreover, the medical department of the army is moving energetically to put into practical operation the methods of treatment to prevent yellow fever, involving a radical reversal of existing methods.

A Petition from Porto Rico.—Senor Santiago Iglesias, delegate of the Federation of Labor of Porto Rico, brings word of a terrible condition of affairs among the workingmen of that place. He is the bearer of a petition having 6,000 signatures in which the Porto Ricans say: "Misery, with all its horrible consequences, is spreading in our homes with wonderful rapidity. It has already reached such an extreme that many workers are starving to death, while others, who have not the courage to see their mothers, wives, sisters and children perish by hunger, commit suicide by drowning themselves in the rivers or hanging themselves from branches of trees."

Obituary.—HENRY MANCHESTER of Pittsburg, April 8, aged 75.—WILLIAM JAY YOUMANS, for many years editor of *Popular Science Monthly*, at Mt. Vernon, N. Y., aged 62.—FRANK WAYLAND ABBOTT of Buffalo, April 9.—A. E. HERNERT of Quebec, April 7.—SETH W. WEBB of Houlton, Maine, April 5, aged 35.—J. C. HOFFER at Columbia, Pa., March 22.—REUBEN B. NISBET of Eatonton, Ga., April 11, aged 71.—J. P. DILLARD of Martinsville, Va., April 10.—EDWIN C. BALDWIN at Dover, N. J., March 25, aged 87.—JOHN POWELL HUNTER of West Chester, Pa., March 27, aged 35.—JOHN S. SCOFIELD of Hillsboro, Texas, March 23, aged 74.—JOSEPH S. MCCORD of Iowa City, Iowa, March 30, aged 51.—HENRY C. MARTIN of Harper, Kansas, March 26, aged 70.—CHARLES E. COATES of Abilene, Texas, March 25, aged 73.—JOHN M. GLASGOW of Omaha, Neb., March 30, aged 65.—HENRY A. ROBERTS of Wakefield Corner, N. H., January 19, aged 35.—E. F. MEACHEM of Nashville, Tenn., March 24, aged 49.—THOMAS COUTURIER ROBERTSON of Columbia, S. C., March 21.—JAMES DATON GALLAGHER of Steubenville, Ohio, April 1, aged 27.—JAMES R. NELAN of Pittsburg, Pa., March 28, aged 50.—WILLIAM McCLELLAND of Denver, Colorado, April 13, aged 80. He was the first physician to make a study of the climatic influences of the mountain regions upon pulmonary diseases.—H. M. HOUSER of New Albany, Miss., April 9.—THOMAS A. O'CALLAGHAN of Worcester, Mass., April 13, aged 45.—GEORGE W. CARMAN of Brooklyn, April 11, aged 50.—CHARLES KELLY GARDINER of Huntingdon, W. Va., April 14.—DR. BLOCK, of San Francisco, in Berlin, Germany, April 12.—GEORGE W. SHILLING of Sharon, Pa., April 12, aged 58.—N. D. GADDY of Seymour, Ind., April 12, aged 72.—J. ARCHER WATSON of Montreal, Canada, April 11, aged 45.—H. B. BELL of Athens, Ga., April 12.—JOHN A. MEYERS in San Francisco, April 11, aged 50.—C. G. ADAMS of Portland, Me., April 12, aged 70.

EASTERN STATES.

Insane Hospital.—In 2 months the new hospital for the insane at Bangor, Me., will be furnished and in readiness to receive patients. About 150 patients will be transferred from Augusta to the new hospital. After these patients are gone the old buildings at Augusta will be thoroughly renovated.

Forest Preservation.—A Society for the Protection of New Hampshire Forests has been organizing and is endeavoring to obtain the support and cooperation of lumbermen, railroad authorities, hotel owners, farmers, manufacturers, summer residents and State officials, that they may work together to conserve their own rights without injury to any.

Veterinary School to be Closed.—Harvard University, on finding that no satisfactory work could be carried on in its Veterinary department without endowment, and that such is not forthcoming, has decided to close this department. Some who have gone there to study and who expected to have the benefit of clinical work feel themselves wronged. The department will be continued until those who are in it have been graduated. Surprise is expressed that some one has not suitably endowed this department.

NEW YORK.

Gastrectomy for cancer of the stomach was performed on a citizen of Newark, 59 years of age, on March 30 last. He died April 12 from weakness of the heart.

To Parole Prisoners.—A bill has been passed providing for the creation of a board of parole, by which prisoners confined in the State prisons and in the Eastern Reformatory at Elmira may be paroled.

Roof-gardens for Public Schools.—In connection with the vacation schools of New York there is a proposition to teach the children practical gardening, and for this end to remodel some of the roofs of the public school buildings into gardens.

Home for Incurables.—The Trustees of Albany, N. Y., Home for Incurables have secured a bill authorizing the city to grant a license to "Albany Home for Incurables" to erect such buildings upon a certain property described as are adapted for their purpose.

Inebriates' Home.—A bill to incorporate the Inebriates' Home for New York City has been introduced by Senator Trainor. The bill provides that the city shall maintain the home by the payment of a sum not exceeding 5% of the annual revenues of the liquor-tax law, for the support of habitual inebriates committed to it by any magistrate. The home may receive private patients at private rates, but the cost of their care is not to be charged to the city.

Vaccination.—The Assistant Sanitary Superintendent of New York, F. H. Dillingham, laments the indifference of the public to the smallpox situation and fears that unless people awake to a realizing sense of the importance of vaccination the smallpox will continue through the summer, as official reports show that there has been no actual advance made in decreasing the number of cases. The totals of cases reported to the Health Department for the various months since the discovery of the disease are: November, 35; December, 68; January, 78; February, 142; March, 194; April (to date), 73. Three deaths were reported for the period from November 5 to January 1. The records for the succeeding months show 8 deaths in January, 34 deaths in February, 37 deaths in March, and 7 deaths for April to date. In the Girls' High School in Brooklyn an order issued very recently by the principal that no pupil who failed to show a certificate of having been vaccinated within the last year would be allowed to attend the school, was met by such a storm of excited protest on the part of the 2,000 pupils, in many cases upheld by their parents, that the order was revoked.

PHILADELPHIA, PENNSYLVANIA, ETC.

Marriage of First Cousins will be illegal in the State of Pennsylvania on and after January 1, 1901, and all such marriages contracted in the State after that date will be declared void.

Crime and Capital Punishment.—In the House at Harrisburg a resolution was offered on April 8 appointing a commission to inquire into the subject of capital punishment, with a view to ascertaining its effect on the repression of crime.

Communion Cups.—The Huntingdon County Medical Society, at a late meeting, passed a resolution recommending all the churches of the different denominations in the county to use the individual communion cup, for sanitary reasons.

A Strange Endemic which puzzles the physicians, is reported as scourging the town of North Bellevue, Westmoreland county, Pa. The disease is marked by vomiting and yellowing of the skin and after spasms of hiccoughs and coma the first patient died; 6 other victims within a radius of 100 yards are similarly affected and no hopes are entertained of their recovery. The public schools have been closed in consequence and active measures are afoot to fathom the causation.

Vital Statistics of Philadelphia for the week ended April 13, 1901:

	Cases.	Deaths.
Total mortality		469
Apoplexy 13, paralysis 7,		20
Brain—congestion 2, disease 2, dropsy of, 2, hemorrhage 1, inflammation 20, softening 1, sarcoma of, 2, surgical shock 1		31
Convulsions 14, puerperal 1		15
Diphtheria	59	6
Heart—diseases of, 29, fatty degeneration 1, neuralgia 4		34
Kidneys—Bright's disease 12, uremia 11, inflammation 24, dropsy 1, diabetes 2		50
Inanition 10, debility 5, teething 2		17
Liver—cirrhosis 8, carcinoma 1		9
Lungs—congestion 4, inflammation 68, edema 21, pleurisy 2, tuberculosis 44		139
Scarlet fever	77	6
Typhoid fever	37	5
Old age		23
Stomach and bowels—inflammation 11, peritonitis 9, indigestion 1, carcinoma 6, dysentery 3, diarrhea 2, obstruction 1		33
Marasmus		18
Abortion 1, alcoholism 1, asthma 3, atheroma 2, burns and scalds 4, carcinoma of tongue 1, carcinoma of uterus 1, casualties 7, cellulitis 1, childbirth 1, membranous croup, 1, cyanosis 5, spinal disease 8, drowned 1, erysipelas 1, puerperal fever 1, goiter 1, senile gangrene 1, hernia 2, influenza 4, cystitis 1, bronchitis 3, laryngitis 1, jaundice 1, rheumatism 3, septicemia 3, suffocation 1, suicide 8, coroner's case 2, whooping cough 6.		

SOUTHERN STATES.

Cigaret Law.—At the twenty-seventh session of the Texas Legislature a bill was passed prohibiting the sale of cigars in that State.

The Medical College of South Carolina has graduated 2 young women physicians, the first in the history of the medical profession of that State.

New Hospital for Atlanta.—On April 2, a board of trustees was elected and the plan of work outlined for the Presbyterian Hospital, to be erected in Atlanta. The proposed hospital will be nonsectarian, and will be modeled after similar institutions conducted by the Presbyterian Church in New York, Philadelphia and Baltimore.

The Tennessee State Board of Medical Examiners, at a meeting held April 4, urged the passage of the bill now before the State Legislature, which provides that no one shall practise medicine in the State until he has passed an examination before the State Board of Medical Examiners. Reports show that there are 2,120 medical students in Tennessee.

WESTERN STATES.

Christian Scientists are not practising medicine while engaged in their calling, therefore are not amenable to medical regulations, was maintained by a recent decision of the Supreme Court of Minnesota.

The Colorado Medical Library Association at its eighth annual meeting, held recently, elected Dr. C. D. Spivak president and Dr. Edward Jackson secretary-treasurer. The Denver and Arapahoe Medical Society donated to the association the sum of \$150.

The Samaritan Hospital of Chicago keeps a record of each case treated and gives each patient, on leaving the institution, a metal tag bearing the inscription: "In case of accident telephone this number to Samaritan Hospital, Chicago. They will notify my friends and give you instructions."

Pure Food Legislation.—A new law to be strictly enforced in the State of Washington provides that all compound articles must have their ingredients designated on their labels. Retailers are authorized to demand from wholesalers a guarantee of the purity of each article.

CANADA.

Cremation.—Sir William Macdonald is interested in a movement to educate the poorer classes of Montreal to a less ostentatious display in disposing of the dead. He is the originator of a proposal to endow the crematory with \$50,000, or an amount to enable their making incinerations at a nominal price, say \$5.00, or in deserving cases free. He is not likely to win French Canadians to sanction this method, as their Church does not approve it, but he depends on the force of example to lessen the extravagance of their ceremonials.

FOREIGN NEWS AND NOTES

GENERAL.

State Lunatic Asylums in India.—The Secretary of State for India has sanctioned a plan for 5 large central asylums for the insane in India where hitherto there has been only a number of small asylums under the care of the local civil surgeons. It is hoped that men skilled in psychologic medicine will have the superintendence of these asylums and the special rates of pay offered, indicate that it is the intention of the government to attract such candidates. The salaries will range from 600 to 1400 rupees per month—about 50% higher than full regimental pay in the Indian Medical Service, with a house provided and leave to conduct a private consulting practice. The appointments which are open to the officers of the Indian Medical Service are not restricted to them.

Obituary.—RICHARD MARTIN DANE of Millbrook, Southampton, England, March 27, aged 87.—JOHN LAWRENCE GROWSE, at Bildeston, England, March 30, aged 69.—THOMAS MORRIS of Hayes, Kent, March 27, aged 82.—WILLIAM SKENE of Buckley, Cheshire, March 24, aged 55.—WILLIAM RICHARD ROGERS of London, aged 84.—ARTHUR K. F. McCUTCHEON of Dublin, March 27, aged 43.—RICHARD JEFFREYS OWEN of Slandover, England, aged 42.—DR. OLAVIDE of Madrid, a distinguished dermatologist. RUFINO FERRANDO FENOLL, of the University of Valencia aged 70.—ALBERT GAMBA of Turin. ALBRUCHT BERGER of Munich, aged 54.—JOSEF V. FODOR of Budapest, aged 58.—JOHN DUDGEON of Glasgow, Scotland, at Peking, China.—LEO E. F. NELL of Sydney, Australia.

GREAT BRITAIN.

Vaccination Fees.—At a meeting of the Chippenham Board of Guardians lately, J. P. Martin declined by letter the appointment of public vaccinator for that parish at the fee of 5 shillings per case.

Smallpox in Glasgow.—During the week ended March 29, there were 54 new cases reported, 104 patients were dismissed recovered, and 11 deaths were recorded. Over 319 patients remained under treatment.

Sir William MacCormac, for many years consulting surgeon to the Italian Hospital in London, has been promoted by the King of Italy to the degree of Grand Officer of the Order of the Crown of that country. This is the second grade of that order, the first being the Grand Cordon.

Annuities for the Blind.—Under the will of Dr. George Seale, who retired from practice in 1872 on account of blindness, the Corporation of Portsmouth, England, has received recently a sum of £20,000 to provide annuities for the blind. The applicants must be necessitous and over 30 years of age; the amount of each annuity is fixed at £30.

CONTINENTAL EUROPE.

Influenza in Turkey.—Influenza was quite unknown to the physicians of Turkey before 1890. Since that time the disease has raged epidemically in spring, summer, fall and winter.

X-Ray Burn.—In a suit before the Paris lower court recently a physician was fined 5000 francs damages and expenses on account of a burn caused by 3 long x-ray exposures in the course of 3 weeks.

The Department of Public Instruction in France has made an official reaffirmation that the diploma of a technical school is not an open sesame to the university courses of law, literature or medicine.

The Vrach.—It is announced that this well-known Russian medical journal, according to the expressed wish of Professor Manassein, its recently-deceased editor, will close its course at the end of the current year.

A Portuguese Medical Expedition.—The Portuguese Government has appointed a Commission to study the sleeping sickness in the Province of Angola, and also to investigate the etiology and transmission of malaria.

Malaria.—A commission of 5 has been appointed by the *Sociedade das Sciencias Medicas*, of Lisbon, to study prophylactic measures against malaria in Portugal, as that disease is said to decimate the population of that country.

German Physicians Demand Higher Pay.—The municipal physicians of Leipzig, following the example of those of Munich, have struck for higher pay and better treatment. The Munich physicians have declared themselves in sympathy with the movement.

Pasteur Monument.—A statue of Pasteur in bronze, mounted on a pedestal 8 meters high, the work of Antonin Carlès, is to be erected in the town of Dôle, Department of Jura, the birthplace of Pasteur, during the present year. He is represented in a meditative attitude; at the base of the monument Humanity is represented, holding out 2 children to Pasteur, while Science offers him a palm.

SOCIETY REPORTS

College of Physicians of Philadelphia.—A regular meeting was held April 3 with the President, Dr. W. W. KEEN, in the chair.

Dr. JAMES TYSON read a memorial of the late Dr. William Pepper.

Dr. S. ORMOND GOLDAN, of New York, was the guest of the evening, and read a paper on **Nitrous Oxid and Oxygen as a Surgical Anesthetic**; description of a new apparatus for administering these gases; report of 100 operations, the narcosis lasting half an hour and upward; remarks regarding the use of nitrous oxid as a preliminary to ether in general anesthesia. The sole effect of nitrous oxid is not to cause asphyxia, its anesthetic power being proven by the fact that it will anesthetize when oxygen is also given. The latter must be below 30%, better 10%. Anesthesia is caused in from 1 to 2 minutes. The 100 cases reported included almost all major operations, the longest being 2 hours and 40 minutes. The respirations and pulse remain practically normal. Nausea and vomiting or headache occur in some cases, but they are generally not severe. The quantity of the gases used make this the most expensive method in use. The general sentiment of the college was that the method seemed good, but that it was not applicable to hospitals where short term residents were the anesthetizers, as a specialist was needed to manipulate the apparatus.

A paper by Dr. ORVILLE HORWITZ, entitled **Hydrocele—its treatment**; summary of 338 operations; description of a new method by Doyen for the radical treatment of hydrocele of tunica vaginalis testis, was read by title.

Section of General Medicine.—College of Physicians of Philadelphia.—At the meeting of April 8, Dr. HARE exhibited a case of **aneurysm of the right carotid artery**. The aneurysm can be pushed about in a remarkable manner, being saccular.

Dr. J. A. SCOTT exhibited a case of **endocarditis resulting from typhoid fever**. The diagnosis was based upon the occurrence of pain, cardiac symptoms, leukocytosis, and the appearance of a murmur which persists and increases.

Dr. A. O. J. KELLY reported a case of **enlargement of the spleen and liver** accompanied by no obvious symptoms.

Dr. S. McC. HAMILL reported a case of **thoracic aneurysm** of 13 years' standing in a patient recently operated upon for an enormous intraligamentary cyst. No untoward symptoms developed because of a dilation of the ventricle.

Dr. J. M. SAILER detailed a case of **aortic regurgitation with Flin's murmur**. The cause of this murmur was discussed, the theory advanced being that it was due to a relative stenosis caused by a dilation of the ventricle.

Dr. D. J. MILTON MILLER showed specimens of a **multiple thrombosis of the innominate, external and internal jugular, and axillary veins** from a case of aortic and mitral disease.

The New York Academy of Medicine.—A stated meeting was held April 4, 1901. Papers were read on the subject, "The Duty of the Public to the Medical Profession," by D. B. St. John Roosa and W. H. Thomson.

Section on Surgery held a meeting April 8, 1901. A paper was read by J. P. Tuttle on **Cancer of the Rectum**, with Demonstration of New Methods of Examination; this was preceded by presentation of patients who had undergone successful operations for cancer.

Section on Otolaryngology held a meeting April 10, 1901. Presentation of cases was followed by the presentation of specimens of tuberculosis of the ear with the history of the case by H. L. Swain and a paper on **Tinnitus Aurium** by Thos. J. Harris and one on **Tympanic Vertigo**, due to obstruction in the eustachian tube, by Wm. P. Brandegee.

New York Academy of Medicine.—At a meeting on April 4, Dr. D. B. St. JOHN ROOSA introduced a discussion upon the **duty of the public to the medical profession**. He began by referring to an article which had appeared in one of the lay press ridiculing a proposal that the State should endow a chair of electrical engineering. The writer of the article referred to objected to the proposal on the ground that it savored too much of paternalism, and incidentally he remarked that medicine, horseshoeing and landscape painting might be regarded as equally desirable subjects for the patronage of the State. This, remarked Dr. Roosa, was in keeping with what they must always expect from the laity as to the value of medical education. He was not there, however, to make any argument for the endowment of medicine by the State. He wanted rather to show what the public as individuals owed to medicine. Every provision should be made in order that the education of medical men should be of the highest order. The national Government made adequate provision for the education of medical officers who were to look after the well-being of the army and navy. Christian scientists and osteopaths had no chance of obtaining recognition there. Few State governments were equally careful to see that aspirants to the medical profession were subjected to a proper examination. The theory seemed to be that any one might be tried as a doctor, just as if

he were a mechanic or a tradesman. Now, it required a large investment of money, and a considerable amount of time, to make a qualified doctor.

Formerly it was sufficient, after a young man had got a very ordinary education, for him to spend a few years in **desultory work with a medical practitioner**. Then he was supposed to be qualified to practise. Now it was necessary for him to go through a 4 years' course at one of the universities, and then to spend a few more years in attendance at the hospitals. The general result was that a medical graduate had to reach the age of 30 or thereabouts before he began to earn a moderate living. For his hospital work the young medical man must look for reward to what he might acquire in the way of renown and to the satisfaction of his conscience. Dr. Roosa then asked what the medical profession had achieved to deserve the confidence of the public, and by way of answer quoted the articles by Dr. Osler and Dr. Keen on the progress of medicine and surgery during the last century. All things considered, he contended, the public ought to take a greater interest in the progress of medical science and extend a more generous treatment to the medical profession, with a view to the bringing about of the millennium spoken of by one of the prophets when the people should no longer have to complain that they were sick, and when human ingenuity and skill, foresight and care should be used to the end that no accidents should occur and no epidemics should prevail, and human beings should not die prematurely.

Dr. WILLIAM H. THOMSON said there were some reasons why the public failed to appreciate the services of the medical profession. First, there was the conception of the profession as a trade. That it was anything else than the means of getting a livelihood was seldom thought of. Besides there existed the impression that the medical profession was a particularly close corporation, that it was very jealous of all competitors, and that it was hostile to all innovation. Even the code, which was designed to regulate their conduct to one another and to the public, was looked upon as purely a trades-union protective measure. As a consequence the profession was powerless to do anything for the exposure of quackery. If they moved at all in this direction, it was regarded as persecution, and the result was to give new life to the persons or bodies proceeded against. Physicians were not regarded as having a **monopoly of knowledge** in regard to disease. As life was a mystery, so was disease, and the door was opened to the believers in occult influences, the disciples of Mrs. Eddy, the osteopaths and others. Apart from these classes, there would be found to be a widely spread belief that doctors did not know so much more than other people. They lived in a world of male and female eritics. These evils were the result of ignorance, and nothing but ignorance.

The most intelligent man in town was likely to come in with his **diagnosis already made**: "Doctor, there is something wrong with my liver," or the like. Very few even among the intelligent classes had any reasonable conception of matters pertaining to medicine. It did not matter that all the professional men of America and Europe, as well as of some outlying countries like Japan, were working with all the appliances of modern science to discover the causes of disease and the possible remedies, nor yet that the discoveries made in the last century in the domains of medicine and surgery had done more as regarded the welfare of the human race than the inventions in any other branch of science, say the steam engine or the telegraph. Theories and speculations were swept aside with contempt and only strict scientific results paid heed to in the investigations of medical men of the present day. There was no living man who knew one-fourth of what was known by the profession as a whole about the human body and disease. Physicians knew that they were not capable of dealing with every class of disease, and this surely showed the absurdity of ignoramuses claiming to be able to treat any disease. The public would not put inexperienced men in charge of a locomotive or a dynamo; yet so great was its ignorance in regard to the human body and disease that it did not hesitate to trust their ailments to persons who had had no training for the practice of medicine. He thought it was the duty of the profession to take concerted action to counteract this great evil. One means by which they could do this was by teaching anatomy and physiology in the high schools devoted to both sexes. Surely it was as important that people should know something about themselves as it was that they should know about grammar, *belles lettres* and the dead languages. He did not advocate the teaching of medicine as such, but only the imparting of sufficient elementary knowledge to prevent them being duped by quackery, just as they were taught enough about astronomy to make it impossible for them to place credence in astrology.

Dr. ANDREW H. SMITH remarked on the singularity of the coexistence at the beginning of the century of **2 opposing facts**—one, that the last 2 decades had witnessed an unexampled advance in the science and practice of medicine and surgery, amounting almost to a revolution, and the other, that the popular mind was daily growing more and more prone to return to old superstitions in medicine, or to invent new ones even more absurd. He suggested as a remedy for this the education of the public through the lay press and the schools, not in medicine but in the elementary facts in regard to their bodies about which there was such lamentable ignorance.

Dr. F. R. STUNGIS contended that the medical profession was itself to blame for the want of confidence the public had in

it, because even it did not attach sufficient importance to sound medical education. There were too many medical schools and too much cut-throat competition among them, which was sufficient to account for the fact that so many of them were not able to support themselves. He questioned the value of much of the gratuitous medical service. Physicians who had large clinics had not time to study their cases properly, and the public was pauperized without having its ailments adequately treated.

Dr. A. JACOBI said the existence of jealousies in the profession and the sight commonly seen of experts swearing against one another in courts of law had something to do with the want of confidence shown by the public. No doubt it was to be desired that the public should be educated, but he objected to the method by which the lay press usually wished to do it—by sending reporters to interview medical men and wanting them to tell all they knew about a subject off-hand.

The Chairman (Dr. GEORGE L. PEABODY) said he thought the public got a great deal more from the medical profession than it showed that it wanted or cared to pay for. It was more to the interest of the public than the profession that quackery should be stamped out, but there was always the danger that if doctors moved in matters of this kind it was thought it was because they were concerned about their own interests. Were it not for the harm done the public the Christian scientists and other bodies of the same sort might be looked on with tolerance as people who added to the gaiety of nations.

Dr. ROOSA, in replying on the debate, said that although there might be objectionable medical men here and there, there was no class that more conscientiously did its work, and he believed the public would be willing to give them more support if it only knew what they were doing.

New Hampshire Surgical Club.—The regular meeting was held at Concord April 9, with a good attendance of members from various parts of the State. An interesting case of fracture of the skull was reported by Dr. G. P. CONN, of Concord. Dr. FRED. B. LUND, of the Boston City Hospital, read a paper on The Surgical Treatment of Ulcer of the Stomach, with report of several cases. The report of a case of dermoid cyst, with operation and recovery, was read by Dr. S. A. TOLMAN, of Dover.

Pediatric Society of Philadelphia.—At the meeting of April 9, the guest of honor was Dr. L. EMMETT HOLT, of New York, who addressed the society on some forms of indigestion in infants and young children, with especial reference to their dietetic treatment. Dr. Holt stated that direct inheritance of indigestion is questionable. As his experience increases he is more and more impressed with the sensitiveness of infantile digestive apparatus. This is deranged as frequently by bad nursing as by bad feeding. Obstetricians in general have but little knowledge of the management of infants. If Dr. Holt is to look after the feeding of a child he wants it from the first and not at the end of a month. Infants become used to cow's milk only after a most careful training. The Walker-Gordon Laboratory milk is preferred to any other infant food. An initial formula often used is 1% fat, 6% sugar, .5 proteids. The comfort of the child is the guide to the modification to be used. Constipation should not cause alarm as it disappears when the food is made stronger. If the child is entirely comfortable the lack of gain in weight and constipation should occasion no concern.

The symptoms of indigestion belong to one of 2 groups, those where the stomach is at fault and those in which the intestines are involved. Indigestion is rarely caused by gastric dilation. The organic acids formed from the fat of high percentage milk is the most frequent cause of vomiting. In such cases milk and water instead of milk and cream must be used. Stomach washing or irrigation may be used in some cases. When mucus is causing the vomiting stomach washing is the only efficient remedy. Acute indigestion is often dangerous. A number of cases were cited. This condition may be caused by an exceedingly small quantity of cow's milk. Infection from the milk is generally said to be the cause, but other things may cause the same condition. The trouble may not lie in the milk but in the child. If there be a previous history of indigestion from the use of cow's milk do not begin it at once. An immense amount of harm may be done by nursing infants when they should not be fed in this way. Satisfactory results are not obtained from the analysis of breast milk in cases of indigestion. The correct test is the effect of the milk upon the child. Persistent indigestion with no gain in weight marks the case as hopeless and nursing should be stopped. Change in diet is often of great importance. Less milk with higher percentages and water between meals may prove a valuable expedient.

Some of Dr. Holt's conclusions were as follows: (1) The comfort of the child should be the guide as to the kind of feeding employed; (2) no mother should nurse a child that has persistent indigestion and no gain in weight. If there is a gain the indigestion may be overcome; (3) a change in diet is of great importance in cases of indigestion; (4) symptoms of inanition should be carefully studied, as they may demand the employment of a wet-nurse; (5) vomiting is generally due to too high fat percentage, hence the fat should not be increased too rapidly; (6) too much attention should not be paid to traditional opinion regarding the amount of fat and proteids in

a formula. Dr. Holt's paper was discussed by Drs. Griffith, Graham, Packard, Stengel, Miller, Westcott and Taylor.

Philadelphia County Medical Society.—A stated meeting of the society was held April 10, at which Dr. JAY F. SCHAMBERG exhibited a case of **dermographism**.

Dr. J. MADISON TAYLOR read a report of the committee on the Jay Hospital for Contagious Diseases. Attempts are being made to interest physicians in the project. Two pavilions are planned, 1 for scarlet fever and 1 for diphtheria. A third is needed for emergency cases.

Dr. JOHN B. ROBERTS read a paper on the Doctor's Fee—a plea for honorable dealing.

Dr. RICHARD F. WOODS reported the results in 212 cases of **ventrosuspension of the uterus**. They were from the practice of Drs. Penrose and Beyea and were especially valuable in that some of them dated back 8 years. Of the 212 cases, 129 were entirely cured and 53 greatly improved. Hernia had not followed in any case.

Philadelphia Pathological Society.—The first paper at the meeting of April 11 was by Dr. H. F. HARRIS on 1. **Experimental Dysentery in Dogs**. 2. **A new Method of Staining Elastic Tissue with Hematein**. Various organisms, including amebas and Bacillus dysenteriae were used. Bouillon cultures which were first employed caused no pyogenic infection. Fresh feces of cases of dysentery were used, and dysentery was induced in puppies, but not in old dogs or cats. The conclusion reached was that the ameba was the cause of dysentery.

Dr. FLEXNER said that there was no pathologic anatomy nor symptom-complex in dysentery. It is possible to separate the acute from the chronic. Shiga's bacillus has a good claim to being the cause of the former. Experiments have been unsatisfactory but there is probably a bacterial dysentery as well as that form due to the ameba. The latter may be grafted upon the acute form.

Dr. HARRIS said that amebic dysentery seemed to be a disease of cities while the so-called bloody flux was found in the country. He looks upon Shiga's bacillus with suspicion until further proof is obtained.

Drs. E. W. ROBINSON and D. J. MCCARTHY exhibited a **brain weighing 52 ounces from a child 6 years of age**. The brain was remarkable not only for its size but because of the great irregularity of the fissures. These distorted the normal lobes and marked out various new ones.

Dr. RANDLE C. ROSENBERGER reported the results of a **bacteriologic examination of clinical thermometers**. Cultures made from thermometers used in various diseases were made, and in every instance a number of colonies grew. These were found to consist of staphylococci, sarcinae, etc. Cultures made from thermometers cleaned in an antiseptic fluid were sterile. The time which elapsed from the use of the thermometer in the former set of experiments was as high as 56 days. The use of an antiseptic fluid as is done in hospitals is to be commended. If this cannot be obtained each individual should have a thermometer.

Dr. GEO. B. WOOD exhibited an **endothelioma of the cheek**.

Dr. W. E. ROBINSON exhibited a **cyclopaen monster**.

Wills' Hospital (Philadelphia) Ophthalmic Society.—At a meeting held March 25, Dr. CONRAD BERENS presented a case illustrating the secondary stage of **primary sarcoma of the iris**. The patient, a young man, who was free from any symptoms and obtainable history of syphilis or tuberculosis, first noticed the affection some 3 years previously. Imbedded in a partially degenerate and comparatively uninfamed iris-tissue were 5 irregular tumor-masses, over and through which some fine vessel ramifications could be plainly seen. The plane of the iris was pushed forward. The pupillary area, which was slightly distorted, contained some meshes of glistening lymph. The crystalline lens occupied its normal position. No view of the fundus could be obtained. Intraocular tension was increased to plus 2. There was not any ciliary tenderness.

Dr. FRANK FISHER exhibited a series of water-color sketches of several stages of a case of **embolism of the central retinal artery**. The patient, a young subject with a mitral murmur, gave the usual history of sudden blindness. Besides the characteristic eyeground of the affection, all of the main retinal blood currents, both arterial and venous, were found to be interruptedly flowing in their proper directions, the curious fact being that the venous currents were traveling with twice the rapidity of the arterial.

Dr. SCHWENK showed a man of 45 from whom he had successfully removed a piece of manganese steel from the left lens, the form of steel which was imbedded in the lens substance was but feebly attracted by the magnet, and much of the lens matter which had appeared transparent at the time of the removal of the foreign body afterwards became opaque and greatly swollen.

Dr. OLIVER exhibited a Hungarian boy of 9, from whom he had successfully removed 2 **congenitally opaque lenses** by free dissection, obtaining a corrected vision of normal in each eye. The case was of interest as showing the good effect of diametrically opposed forms of treatment in the 2 eyes, necessitated by an attack of secondary glaucoma from stoppage

of lymph flow caused by a blocking of the pupillary area. He did not consider such a complication of any great moment in the young otherwise healthy eye as it rapidly subsided under appropriate treatment without any damage to the organ. Dr. SCHWENK presented a case of congenital cataract in a white male of 30 years of age, 3 brothers being similarly affected, while 3 sisters had normal eyes.

Dr. OLIVER showed the immediate results of a Mules' operation in a case of panophthalmitis. The patient was a sailor aged 23, who had lost his eye about a year previously from gonorrhoeal infection. In less than 5 days' time without any reaction, the conjunctival sac was clean and the eyeball was freely mobile. He had employed pressure bandages instead of the usual iced compresses.

New York County Medical Association.—The annual meeting of this association, the first under its new charter, was held April 15. Dr. WILLIAM S. GOTTHEIL presented 2 cases showing respectively sarcoma cutis in its early stage and naevus uncus lateralis. He also exhibited drawings of a case of adenoma sebaceum of the scalp.

Dr. AUGUSTIN H. GOELET read a paper: **The Diagnosis and Surgical Treatment of Prolapsed Kidney**, with a demonstration of a simple method for its detection. He said his observations led him to believe that prolapsed or movable kidney was much more common, especially in women, than was supposed, and one reason why it was frequently not suspected was that it did not always give rise to symptoms directly referable to the kidney. Chronic digestive disturbances with distension of abdomen was among the commonest indications of prolapsed kidney. Examinations should be made with the patient in a standing position, and it was important that more than one examination should be made, as a full colon or other internal conditions might prevent its discovery the first time or the patient might be nervous which would cause rigidity of the abdominal muscles. It was by no means easy except for experts to make a diagnosis. His experience convinced him that operative interference was desirable in a large number of cases, and the operation was not so serious that patients need shrink from it.

Dr. GEORGE TUCKER HARRISON took exception to a statement which seemed to imply that traumatism was a frequent cause of prolapsed kidney; if that were so, it would be more common in men than in women, whereas the reverse was well known to be the case. While agreeing to some extent with Dr. Goelet's method of examination, he said there were many cases in which it would be found impossible to make a satisfactory diagnosis without producing a state of narcosis by the use of chloroform or some other medicine. He had seen a great many cases of movable kidney which existed only in the mind of the diagnostician. It was necessary to guard against being misled by their enthusiasm, especially if they had a fondness for surgery. In regard to the operation itself, he had no faith in sandbags or other material aids for holding the kidney in place. The hand of a competent assistant surpassed all mechanical contrivances.

Dr. HEINRICH STERN thought a movable kidney was only an indication of the general prolapse of the enteric organs. Therefore he was opposed to operative interference, especially as one-third of the operations were failures. They could accomplish quite as much, in his opinion, by bandages and general treatment.

Dr. J. RIDDLE GOFFE discussed the technic of the operation. In replying on the discussion Dr. GOELET said that out of 100 women examined in his clinic 20 were found to have prolapsed kidneys, and half of these he put down as requiring operation.

The ballot for new office-bearers resulted as follows: President, Dr. Parker Linns (relected); first vice-president, Dr. Alex. Lambert; second vice-president, Dr. Francis W. Murray; secretary, Dr. Ogden C. Ludlow (relected); corresponding secretary, Dr. M. L. Maduro; treasurer, Dr. Charles E. Denison (relected).

A Novel Petition.—A man from New Boston, Michigan, has petitioned Congress to grant him a pension for injuries received before he was born. It seems a brother, 20 years older than the applicant, was engaged in the war, and after one of the battles was reported dead. This report was afterward contradicted but at the time the shock was so serious to the mother that her next child was born a cripple, and claims that the war and the act of the Government in reporting his brother dead are responsible for his injuries.

Child-Labor.—According to the report of the State Factory Inspector of Illinois, the child-labor laws are only partly successful. They have succeeded in excluding children under 14 years of age from employment in certain occupations, but in the protection of children over that age they have been a total failure. The factory inspectors have again and again insisted that children must leave work and return to school, but each time they have been circumvented in some clever manner by the parent or guardian of the child. In some cases even marriage has been resorted to, the parents knowing that a married woman must be adjudged of legal age.

CORRESPONDENCE

THE ANATOMY ACT OF 1883.

BY

W. S. FORBES, M.D.,

of Philadelphia.

To the Editor of AMERICAN MEDICINE:—In view of Bill Number 61, House of Representatives, Harrisburg, now pending before the Senate and tending to destroy the Humane Anatomy Act of 1883, I desire to place before your readers the speech of Macaulay, the historian, delivered before the House of Commons advocating the passage of the Anatomy Act, known as the Warburton Bill, which is kindred to our Anatomy Act of 1883. This speech of Macaulay is so forcible and carried such conviction that in medicine and surgery England is what she is today.

Let us hope that the thoughts of this great and good man and sincere patriot may assist us today to defeat this House Bill, No. 61, so destructive in its intent. For, to disturb the Anatomy Act of 1883 will be to go backward and do great injustice to the poor and the afflicted suffering from accident and disease.

A SPEECH DELIVERED IN THE HOUSE OF COMMONS, FEBRUARY 27, 1832, ON THE WARBURTON ANATOMICAL BILL, BY THOMAS BABINGTON MACAULAY.

"Sir, I cannot, even at this late hour of the night, refrain from saying two or three words. Most of the observations of the honorable Member for Preston I pass by, as undeserving of any answer before an audience like this. But on one part of his speech I must make a few remarks. We are, he says, making a law to benefit the rich at the expense of the poor. Sir, the fact is the direct reverse. This is a bill which tends especially to the benefit of the poor. What are the evils against which we are attempting to make provision? Two especially; that is to say, the practice of Burking, and bad surgery. Now to both these the poor alone are exposed. What man, in our rank of life, runs the smallest risk of being Burked? That a man has property, that he has connections, that he is likely to be missed and sought for, are circumstances which secure him against the Burker. It is curious to observe the difference between murders of this kind and other murders. An ordinary murderer hides the body and disposes of the property. Bishop and Williams dig holes and bury the property, and expose the body to sale. The more wretched, the more lonely, any human being may be, the more desirable prey is he to these wretches. It is the man, the mere naked man, that they pursue. Again, as to had surgery; this is, of all evils, the evil by which the rich suffer least, and the poor most. If we could do all that in the opinion of the Member for Preston ought to be done, if we could prevent disinterment, if we could prevent dissection, if we could destroy the English school of Anatomy, if we could force every student of medical science to go to the expense of a foreign education, on whom would the bad consequences fall? On the rich? Not at all. As long as there is in France, in Italy, in Germany, a single surgeon of eminent skill, a single surgeon who is, to use the phrase of the Member for Preston, addicted to dissection, that surgeon will be in attendance whenever an English nobleman is to be cut for the stone. The higher orders in England will always be able to procure the best medical assistance. Who suffers by the bad state of the Russian school of surgery? The Emperor Nicholas? By no means. The whole evil falls on the peasantry. If the education of a surgeon should become very expensive, if the fees of surgeons should consequently rise, if the supply of regular surgeons should diminish, the sufferers would be, not the rich, but the poor in our country villages, who would again be left to mountebanks, and barbers, and old women, and charms, and quack medicines. The honorable gentleman talks of sacrificing the interests of humanity to the interests of science, as if this were a question about the squaring of the circle, or the transit of Venus. This is not a mere question of science; it is not the unprofitable exercise of an ingenious mind; it is a question between health and sickness, between ease and torment, between life and death. Does the honorable gentleman know from what cruel sufferings the improvement of surgical science has rescued our species? I will tell him one story, the first that comes into my head. He may have heard of Leopold, Duke of Austria, the same who imprisoned our Rlehard Coeur-de-Lion. Leopold's horse fell under him and crushed his leg. The surgeons said that the limb must be amputated; but none of them knew how to amputate it. Leopold, in his agony, laid a halchet on his thigh, and ordered his servant to strike with a mallet. The leg was cut off, and the Duke died of the gush of blood. Such was the end of that powerful prince. Why, there is not now a bricklayer who

falls from a ladder in England, who cannot obtain surgical assistance infinitely superior to that which the sovereign of Austria could command in the twelfth century. I think this is a bill which tends to the good of the people, and which tends especially to the good of the poor. Therefore I support it. If it is unpopular, I am sorry for it. But I shall cheerfully take my share of its unpopularity. For such, I am convinced, ought to be the conduct of one whose object it is not to flatter the people, but to serve them."

The noble heart from which sprung these thoughts and many others that have elevated our race, has long since been at rest. Let us hope that his spirit still animates the English-speaking people to dare to do that which is right and good for the whole body politic.

THE CLINICAL VALUE OF TRACHEAL TUGGING AS A SIGN OF ANEURYSM OR MEDIASTINAL TUMOR.

BY

GEORGE W. NORRIS, A.B., M.D.,

of Philadelphia.

To the Editor of AMERICAN MEDICINE:—The following case which was seen at the Pennsylvania Hospital within the last month has seemed worth recording:

G. H., a negro, aged 42, was admitted to the medical ward in a condition of anasarca, with ascites and intense dyspnea. He admitted having used alcohol to excess, and said that he had been in good health and able to perform his duties as janitor up until within 5 weeks. About this time his feet began swell and he was troubled with shortness of breath.

Physical Examination. Pupils equal; radial arteries sclerotic; the right radial pulse synchronous with the left but perceptibly smaller in volume. The lungs were markedly congested; and following notes were made upon the heart: Cardiac impulse feeble and diffuse, felt in sixth interspace in the anterior axillary line. A distinct, rather coarse presystolic thrill was felt over the whole precordium. Dulness begins at right border of sternum and upper border of third rib. At the apex a soft low-pitched systolic murmur is heard, which completely replaced the first sound, and was transmitted to the axilla and angle of the scapula. At the aortic area a loud, high-pitched musical double murmur is heard, the systolic and diastolic elements of which were transmitted into vessels of neck and down the sternum respectively. Traube's murmur was present. Distinct forcible tracheal tugging synchronous with the cardiac rhythm was felt. The patient improved under treatment, but died suddenly and without warning 6 days after admission.

Necropsy showed moderate bilateral pleural effusion, with marked congestion of the lungs. The heart was markedly hypertrophied and dilated. There was moderate thickening of the aortic leaflets. The aorta was slightly atheromatous, but there was no aneurysm of any of the vessels or other abnormality of the mediastinal tissues.

PURPURA IN TYPHOID FEVER.

BY

DR. W. L. GRANT,

of St. Thomas, N. D.

This condition in typhoid is extremely rare, mention of it seldom being made in the standard works on practice. Anders, in his late work, says: "Out of 250 cases of typhoid fever among the soldiers in the Spanish-American war treated in the Medico-Chirurgical hospital, 2 manifested purpuric spots." But he gives no hint as to prognosis or treatment.

Mrs. J. G. B., aged 37, was of good family and personal history, except that she was a subject of chronic constipation. The family had but lately moved into a house newly painted, and as the weather was cold, it being in December, there was not much ventilation and the air was laden with turpentine fumes. The father and 3 older children who spent much time out of doors were not affected thereby, but the mother and girl of 5 who were confined to the house were taken with nausea, vomiting and severe headache. This continued for a week or more, neither of them developing any rise of temperature and as the smell of turpentine disappeared the symptoms improved. The child recovered perfectly but the mother failed to gain strength and a week later developed signs of beginning typhoid. The case ran an ordinary course except that the headache was uncommonly severe, requiring morphin or codain to keep it in control. Then too, the stomach rejected milk, which later caused a great

deal of gaseous eructation and tympanites aside from the vomiting. For the first 2 weeks she was fed almost entirely on Wyeth's beef, milk and gluten, which was well borne and caused no eructation. After that peptonized milk was taken with the other food.

At the end of the third week small, bright purpuric spots began to appear upon the neck beneath the band of the gown. They increased but little in size, but fresh ones appearing in close proximity merged themselves into the older spots until they were the size of a split pea, ranging from this down to that of a mere pin point. They gradually increased in numbers covering the breast, abdomen, back, arms and face until the whole surface had the appearance of being sprinkled with fresh blood from the vigorous shaking of a whisk broom dipped into it. At no time was there any bleeding from the bowels or bladder, but all the visible mucous membranes of the lips, mouth, tongue, and the conjunctivas, were spotted with the same minute hemorrhages. In the left eye they were so numerous and pronounced that the whole marginal looped plexus (the circle of vascular loops about the cornea) was apparently broken down and all nourishment shut off from the cornea so that it became soft and cloudy and the vision entirely destroyed. This eye was the only point from which blood flowed at any time, and here for 4 days it oozed a little.

There was mild delirium for the full period of purpura, but no more pronounced than is often seen in uncomplicated cases of typhoid. But during the night of the twelfth day of purpura the stupor was deeper than it had been previously, and the cheeks were puffed out with each expiration, as in a hemiplegic attack. Also the tongue was protruded laterally, leading me to suspect a small cerebral hemorrhage. The stertorous respiration and dribbling from the mouth lasted for 36 hours, and the slight paralysis of the tongue not quite so long. These signs reappeared a few days later, lasting for about the same length of time.

The temperature was but little above normal when the purpura made its appearance, but it rose with each fresh crop of spots, making a very irregular record, varying from 96.8° to 105°, and at times running the whole gamut in 12 hours. The pulse varied from 112 to 160 during the purpuric period, strychnin and whiskey with digitalin or nitroglycerin being administered at frequent intervals.

After consultation the patient was put on aromatic sulfuric acid in very small doses, with the only result of disturbing the stomach and producing a good deal of vomiting with consequent weakness. Then ergotin was tried hypodermically, with no results as far as the purpura was concerned. As soon as the stomach would retain it I put her on tincture of chlorid of iron, beginning with minimum doses every hour and increasing as rapidly as possible until she was getting a dram and a half in the 24 hours. After a few days of the iron treatment the spots began to fade and no new ones made their appearance, but the disease had produced such asthenia that death supervened at the end of the sixth week of illness and the third of the purpura.

Should I have the care of such another case I would begin the administration of tincture ferric chlorid at the beginning, irrespective of temperature, and push it to the point of toleration on the part of the stomach.

As no necropsy was made, I can give no particulars as to the condition of brain and internal organs, but I should have expected to see the same small hemorrhages in all the tissues.

THE OYSTER AS A CARRIER OF TYPHOID.

By DR. A. B. FARNHAM,

of Milwaukee, Wis.

To the Editor of AMERICAN MEDICINE:—Last December a family of 7, 6 women, 4 between the ages of 18 and 24, received a present of shell oysters from Baltimore. Two of the younger women partook freely of raw oysters. The others avoided them uncooked. The two young women who ate the oysters raw were attacked by the premonitory symptoms of typhoid fever some 5 days after eating them. They have not yet recovered. The others were not attacked. The surroundings were such as to exclude with a good show of probability other sources of infection. I know the weak points in the case. What is the fuller bill of indictment against the oyster?

Hospital Closed.—Mercy Hospital, known as the Emergency Hospital of Iron Mountain, Mich., was closed April 3, by order of Bishop Eis, and the nuns were ordered to leave the diocese. Last January a novitiate of the hospital was arrested on a charge of insanity preferred by the Mother Superior. The Probate Court judged her sane. After being released from custody she brought severe charges against the Mother Superior, one being drunkenness. An investigation resulted in the order to close the institution.

ORIGINAL ARTICLES

HOW TO DEAL WITH THE VERMIFORM APPENDIX. SOME FORMS OF COMPLICATED APPENDICITIS.

BY

HOWARD A. KELLY, M.D.,
of Baltimore, Md.,

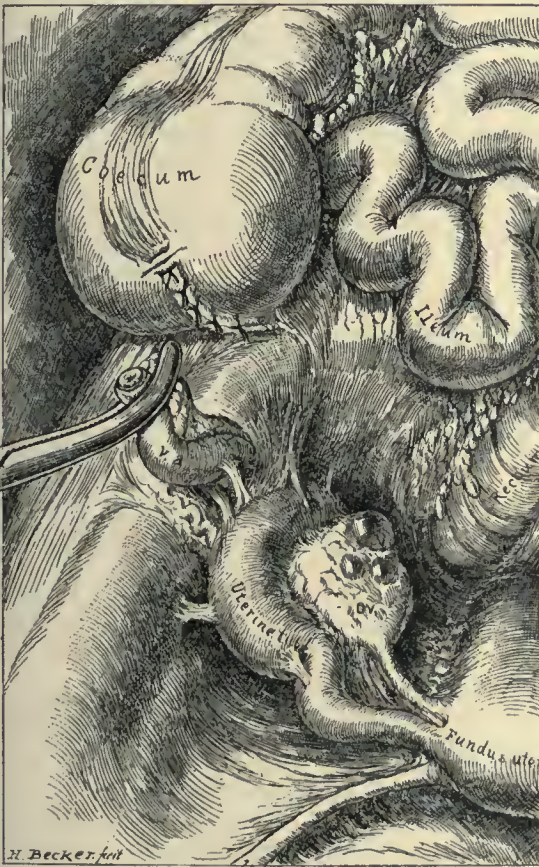
Professor of Gynecology in the Johns Hopkins University.

The removal of an appendix, in which the organ is still free, or in which it is but lightly adherent to the surrounding structures, may now be considered a fairly routine procedure which presents but few difficulties, and in consequence has become one of the safest of all major surgical operations.

The case is, however, quite different when the appendix is found densely adherent, or when it opens into an

all avoidable injury to the coats of the adherent intestines.

I have long since found, in common with other operators, that when the appendix is diseased and densely



adherent at its tip, the best plan often is first to seek out and expose its base, which I detach and divide so as to free the appendix from the cecum. The distal freed portion is now wrapped for protection in a bit of gauze, while the opening into the bowel is sewed up by whatever plan

abscess, or when there exists a more or less general peritonitis. Under such circumstances there is wide room for the exercise of good judgment and the special features of the case demand careful attention in order to adopt just the right course of action.

Success will often crown the right move, while a failure to realize the individual difficulty frequently results in a mishandling of the tissues and the death of the patient, or at best a protracted convalescence.

The operator who is most successful in dealing with complicated cases of appendicitis dreads two things, firstly, all avoidable contamination of the surrounding tissues with any part of the appendiceal abscess, and secondly,



An ovarian cyst with omental adhesions above on the left and an adherent vermiform appendix below.

the operator likes best. Then as a final step the severed appendix is dealt with and dissected out of its bed with much greater facility than was possible with both ends anchored, one to the cecum and one to the adhesions.

This plan of procedure applies especially in the gynecological field when the vermiform appendix is attached to a pyosalpinx, or an ovarian or a fibroid tumor; in these cases, after severing it from the bowel, it is then enucleated with the tumor or with the pelvic abscess.

When the appendix lies imbedded in strong old adhesions there is often considerable risk run in sewing the adhesions, either of tearing the subjacent structure or of exciting hemorrhage from numerous small vessels which are difficult to control in the matted tissues. I have found in such cases, in the absence of an abscess and perforation, that an excellent plan of dealing with the adherent organ is to detach its base, in the way just described. I then catch the free end with a pair of artery forceps and lift it up, and circumsise it just below the forceps, cutting through the peritoneal and the external muscular coats; a longitudinal incision, still including only these two coats, may also be carried on down the dorsum of the appendix as far as it is visible. The appendix is now stripped out of its bed by pulling it toward the end, or pulling it straight out; if it begins to break, it is grasped afresh with the forceps and the stripping continued.

In this way the entire mucosa is removed with the circular muscular coat, while the longitudinal muscular coat is left behind. There is often no bleeding at all, but if any occurs it is more easily dealt with than when the entire organ is dissected out.

I have often had recourse to this plan since I first adopted and reported it to the Johns Hopkins Medical Society some two years ago. The same procedure has also been found useful by Dr. Mixter, of Boston, who, on the occasion of a recent visit to his clinic, gave me the specimen here figured, which shows how perfectly even an unusually long appendix may be skinned out in this way.

Another plan of treatment is advisable when the end of the appendix enters an abscess-cavity surrounded by adherent intestines which cannot be stripped off with safety. In such a case, recently, after freeing the base of the appendix from the cecum, I traced it up until it entered an abscess-cavity under the ascending colon. I could not separate the adhesions without injuring the bowel, so I grasped the appendix close to the abscess with a pair of forceps on either side. I then split the appendix open and followed its lumen as a guide by using a groove director and a pair of open scissors with one blade in the appendix. I was thus enabled with certainty to enter the very middle of the abscess-cavity, to lay it open and clean it out and sterilize it without doing any damage to the colon. I followed the cleansing of the cavity by drainage and the patient recovered without any interruption.



Dr. Mixter's Case.

THE GOOD AND BAD EFFECTS OBTAINABLE FROM DIGITALIS USED AS A THERAPEUTIC AGENT.*

BY

WILLIAM HENRY PORTER, M.D.,
of New York City.

The further study of so old and well tried a remedy as digitalis might at first seem uncalled for, yet as one follows the current literature upon this subject, it is quite apparent that its action upon the system is not fully understood. Therefore a review of its physiological action and therapeutic possibilities may not be without profit.

Thoroughly to comprehend the action of any drug, its chemical composition must be fully understood. At the same time the laws that govern the action of all chemical compounds introduced into the system must be accurately apprehended, and correctly applied to those that are introduced as medicinal agents. When this is accurately done much new light is let in upon the action of our remedial agents. In this manner many a drug, so called, has been taken from the speculative and empirical class and transferred to the exact or truly scientific, thus raising the whole field of therapeutics to a higher standard.

With digitalis there still appears to be considerable doubt and difference of opinion prevailing in regard to its mode of action, and also as to the therapeutic utility of this drug and its various preparations; some praising it highly, while others vociferously condemn it.

Digitalis like many other vegetable substances appears to develop in its anabolic growth numerous chemical compounds, all of which are composed of the atomic elements carbon, hydrogen, and oxygen, in varying proportions. This particular group of compounds has been classed as glucosids, in contradistinction of those containing nitrogen, and which are, in consequence, known as alkaloids.

The glucosids which have thus far been isolated and identified in connection with digitalis are digitalein $C_{25}-H_{40}-O_{15}$, digitoxin $C_{21}-H_{32}-O_7$, digitonin $C_{31}-H_{52}-O_{17}$, digitalin $C_5-H_8-O_2$, digitin $(C_4-H_9-O_2)_n$.

Exception is taken however to digitoxin as a glucosid; still its atomic construction is very similar to the other 4 which are classed as true glucosids. Why the digitoxin is excepted is not clearly stated, but it is probably due to the fact that when boiled with dilute acid it does not yield glucose, which is the critical test for those substances designated as glucosids. Be it a glucosid or otherwise makes little difference so far as the chemical problem is concerned, for they are all composed of the same class of atomic elements and being composed of the same class of chemical elements they are all amenable to the same chemical laws; all are oxidizable substances and they all yield the same products as the result of their oxidation reduction, to wit, heat, carbon dioxide, and water.

Owing to the varying proportion of these atomic elements, the amount of oxygen required to reduce each one will vary; likewise the amount of heat generated

*Read before the Litchfield County Medical Society of Connecticut, January 8, 1901.

will vary, both in amount and in the intensity of its action upon the various portions of the nervous mechanism. The following table illustrates at a glance the possible chemical products of the oxidation-reduction of the principles contained in digitalis, while they all yield at the same time a heat equivalent :

Digitalein $C_{25}-H_{40}-O_{15}+55(O)=25(CO_2)+20(H_2O)$.

Digitoxin $C_{21}-H_{32}-O_7+57(O)=21(CO_2)+16(H_2O)$.

Digitalin $C_5-H_8-O_2+12(O)=5(CO_2)+4(H_2O)$.

Digitonin $C_{31}-H_{52}-O_{17}+71(O)=31(CO_2)+26(H_2O)$.

Digitin $2(C_4-H_9-O_2)_n+21(O)=8(CO_2)+9(H_2O)$.

Thus it becomes apparent in the very beginning that the problem before us is not a simple one, but one that is very complex and difficult to elucidate.

Of the 5 medical compounds contained in digitalis 4 are said to influence the animal economy actively while 1, digitin, appears to be absolutely inert. Of the remaining 4, 3 have actions in common, while the fourth absolutely antagonizes the other 3.

Beginning our study of the action of digitalis with the powder, which is the simplest preparation to use, and one which does not involve the question of varying solubilities of the contained, active ingredients, its action can be pretty closely analyzed. When this preparation is used there is introduced into the animal economy a substance containing chemical compounds capable of being oxydized, and as a whole, has a decided tendency to paralyze all the muscles.

So far as the nervous system is concerned, it is generally conceded that none of the active principles, have any pronounced primary effects, yet, on the other hand, acting through the nervous mechanism, or directly upon the heart itself, the contained active principles do produce profound changes in the action of the heart and circulation.

Acting directly upon the heart, or through its nervous mechanism, the 3 active principles, which have a similar action, cause a more intense and shorter systolic contraction with a prolonged diastolic period. Synchronous with this effect upon the heart there is a marked contraction of the arterioles and a very pronounced rise in the blood-pressure. Following immediately upon these effects there is at first a marked decrease in the number of cardiac pulsations to the minute, which by some are said to be due to the direct depressing effect upon the spinal accessory fibers distributed to the heart. A better explanation for the reduced speed of the heart is to attribute it to the increased resistance to the blood stream in the arteries. This, coupled with the depressing effect of the digitonin upon the muscle fibers, easily explains the decreasing number of pulsations to the minute. If the digitalis is continued the pulsations become more frequent and feeble, which is readily explained by the toxic effect of all the active principles of digitalis upon all the involuntary muscles. The continued high tension in the arterial system tends also to deprive the cardiac muscles of their requisite nutrition. Thus, we find that at first the heart is called upon to do more work, by the action of a substance that is all the time poisoning the muscle fibers, and at the same time its nutrition is being progressively cut off by the increasing high tension in the arterial system.

A little later the toxic effects of the active principles of the digitalis begin to be felt in the muscle fibres of the arterioles; the tension relaxes, the heart becomes more feeble and irregular, and death ensues in diastole. While a very large dose of digitalis may cause a complete cessation of the heart's action in profound systole, the usual mode of death is as above described.

The mechanical effects of the changes in the cardiac rhythm are, that with the slower action and prolonged diastole, the cardiac cavities are more nearly filled; this tends to relieve any venous engorgement, both in the pulmonary circuit and throughout the whole venous system. The increased ventricular contraction tends to overflow the arteries and arterioles.

This forced contraction of the left ventricle tends to close quickly and more completely the left auriculo-ventricular orifice; thus preventing the escape of blood back into the auricle, and forcing the full complement into the aorta.

While the general arterial system is in a state of high tension that of the *splenic* arcade remains normal or is slightly lowered, unless an enormous dose has been administered, then the latter, as well as the former, becomes contracted. This, however, is a very rare occurrence.

This, then, briefly stated, is the sum of the effects that can be produced upon the heart and circulation by the internal administration of digitalis and its varying preparations. If its use is continued for any length of time, provided the preparation has any virtue left in it, death must speedily ensue, from what may be called internal or intrinsic starvation, the high tension of the bloodvessels preventing the requisite amount of nutritive pabulum from reaching the various tissues.

With the liquid preparations these statements have to be somewhat modified. Especially is this true with the infusion, for the simple reason that 2 of the active principles, digitoxin and digitalin, are slightly, if at all, soluble in water, hence the infusion contains only digitalein and digitonin. The one directly antagonizes the action of the other, yet both are, in a measure, toxic to the involuntary muscle fiber. In this respect the infusion becomes of comparatively little value and less damaging in its effect upon the system than the powder.

With the tincture still another condition obtains. The digitoxin and digitalin are freely soluble in alcohol, while the digitalein is but slightly so, and the digitonin is soluble both in alcohol and water. Thus we find that each preparation of digitalis differs from the other and cannot be directly compared with it. The fluid extract more closely resembles the powder, being transmutable to either by the action of the alcohol and water. This, however, is, in a measure, a very uncertain preparation, for there is no practical method of determining how much of the soluble elements in the water and in the alcohol may be dissolved or precipitated by the presence of the soluble and insoluble menstrum.

With this knowledge of the chemical composition of digitalis and its contained active principles; and the variation in the composition of its preparations, its therapeutic possibilities can easily be worked out.

While digitalis is often spoken of as a cardiac tonic,

there is little or nothing known in relation to its action upon the system that will justify such an assumption.

Digitalis can be made to slow the action of the heart, but to do this the cardiac muscle is stimulated to do more work, at the same time the intrinsic muscle fibers are being steadily poisoned, and the nutritive supply steadily diminished by the increasing high tension. Hence, the recommendation that digitalis must be interrupted every few days to avoid sudden and fatal syncope.

At this point it may be well to consider the so-called and much talked about accumulative action of digitalis. Careful scrutiny of the standard works upon materia medica and therapeutics throws but little definite light upon its method of action. One of the latest explanations, which, however, does not explain, was that of Joseph W. England, who attributed it to the unduly slow absorption of the drug. Still the *modus operandi* of this emulative phenomena has certainly been far from being satisfactorily elucidated.

Little or no evidence is produced to prove that the drug has been stored up in the system in the form of 1 or more of its active principles, and then suddenly eliminated in large quantities; following which, all the bad effects are suddenly dispelled as quickly as they were produced.

On the contrary, the weight of evidence, as already noted, establishes the fact that the active principles of the drug are rapidly decomposed within the system into carbon dioxid, and water, with the production of heat; and that they are never found in their original form in the excretions of the body.

Therefore, the assumption of a quiet accumulation of a large quantity of the drug within the system, which is finally let loose upon the heart, is hardly tenable and a more logical explanation must be sought, and one that accords more closely with known physiological laws.

By some, it is assumed that a high tension of the renal arteries is established, which produces a condition synonymous with suppression of the urine. Then, to this sudden, or so-called "uremic poisoning," thus induced, the symptoms commonly classed as those of the "cumulative action of digitalis" are ascribed.

Here again, while symptoms simulating digitalis poisoning can be produced thus, experimentally, in healthy subjects when the drug is pushed rapidly to its full limit—this method of action does not appear to hold true in ordinary clinical experience. For it rarely happens that the renal functions are suspended to this extent in ordinary cases of digitalis poisoning, even in those instances in which death finally results.

The cumulative action of digitalis appears to be more directly exerted upon the heart, the kidneys often acting freely even in the presence of the depressed action of the heart, and death comes on quickly, often without any warning, by a sudden arrest of the heart's action. How then can this so-called cumulative effect of the digitalis be rationally explained is the important question to decide? By keeping closely to the well known actions of digitalis and combining these actions with the physiological laws that govern the nutritive processes of the body, a perfectly rational solution of these so-called cumulative symptoms is developed.

Digitalis, as we have already observed, increases primarily the motor force of the heart, the muscular contraction is more intense, the expenditure of cardiac energy is increased, and the isomeric or kalabolic transformation of the muscular elements augmented.

This, in itself, would deteriorate the muscular strength; but digitalis taken as a whole is further classed as a direct muscle poison, and this is doubly so of the contained digitonin.

Digitalis, therefore, at first apparently increases the working power of the heart muscle, and all the cardiac symptoms are, for the time being, ameliorated. At the same time the digitalis also increases the arterial tension, and by this change in the vascular pressure, greatly increases the resistance offered in front of the heart, which is now acting as a mechanical pump. This fact alone increases the work to be accomplished by the cardiac muscle, and, as a necessary sequence, the rapidity of the heart muscle is slowed down, to increase its working capacity. Up to this point the heart has suffered no material damage from the action of the drug and its contained constituents; and its working capacity has been enhanced. But physiology teaches that the high arterial tension increases the speed of the blood-current in the arterial and capillary system, and most positively cuts down the time for nutritive interchange between the blood and the protoplasmic tissue in the intravascular protoplasmic spaces.

Applying this same undisputed law in connection with the digitalis upon the heart muscle, the result is that the drug by its action upon the arterial system is slowly but persistently cutting down the nutritive supply to the cardiac muscle fibers; this being considered, in addition to the increased work imposed upon the heart muscle, and the fact that digitalis *per se* is a decided muscle poison, the 3 factors causing the symptoms of digitalis poisoning are clearly apparent; and furnish the first logical explanation for the so-called cumulative action of digitalis.

The working capacity of the heart is augmented, the cardiac muscle is poisoned, and at the same time the relative quantity of nutrition distributed to the organ is positively diminished. But one thing can follow, degeneration of the muscular fibers constituting the ventricular and auricular walls, particularly the former. At first the heart's action is slowed to meet the increasing demands, but soon like every other degenerated heart, it becomes rapid and feeble in action, then irregular, or stops in diastole at some slight exertion, like sitting up in bed, or rising to pass urine. If the drug is administered in homeopathic doses no perceptible deterioration of the heart will be apparent, but where a thoroughly reliable preparation of digitalis is used and the drug is exhibited continuously up to the full physiological limit, the heart is invariably damaged. This explains the oft repeated remark that digitalis proves unsatisfactory in permanently alleviating cardiac affections.

Viewed from the purely mechanical standpoint, digitalis and its various preparations might be used in the temporary management of lesions of the mitral valve. In both insufficiency and in stenosis of the left auriculo-ventricular orifice digitalis improves the condition

temporarily; in the former instance by more quickly and effectually closing the incompetent orifice. It also intensifies the systolic contraction and more nearly empties the contents of the ventricular cavity into the aorta. This accomplished, the mechanical action of the heart is improved.

In a similar manner, in mitral stenosis, the prolonged diastole, with an intensified contraction of the auricle, enables the latter to more completely fill the ventricle. This, coupled with the more intense systolic contraction, drives a larger volume of blood into the aorta. Thus in both lesions of the mitral orifice the pulmonary congestion is overcome and the dyspnea consequent upon the pulmonary engorgement is removed. If this were the only and the complete action of digitalis it would be an exceedingly valuable remedy. While this improvement in the mechanical action of the heart is being effected, the action of the digitalis is to increase the intrinsic work of the cardiac muscle. It further augments the work imposed upon the heart by heightening the arterial tension and thus increases the resistance in front of the heart; or in other words the intrinsic work of the organ is augmented. Of course this argument in reference to the vessels does not apply at first, when there is abnormally low arterial tension together with general venous engorgement.

Up to the point of overcoming the decreased arterial tension and the removal of the venous engorgement, the physiological function of the circulation, as well as the mechanical action of the heart, is greatly improved. Once the normal tension has been reached and passed, the action of the digitalis is detrimental to all the physiological functions of the body, because it increases the work of the cardiac muscles, poisons the muscle fibers, and progressively decreases the nutritive supply distributed to the organ.

In aortic lesions, either incompetence or stenosis, there seems to be no good reason for using digitalis at any stage. Certain it is that in aortic regurgitation, the increased systolic stroke cannot fully compensate for the prolonged diastolic period and longer time during which regurgitation can take place, added to this is the increasing arterial tension, with its greater resistance in front of the heart and the progressive cutting down of the nutritive supply to the heart muscles, both of which, or either alone, would be sufficient to counterindicate the use of digitalis in aortic insufficiency. In aortic stenosis the augmented cardiac systole might, for a time, force a larger volume of blood into the aorta, thus temporarily improving the condition, but the increased work of the cardiac muscle, together with the poisoning effects of the digitalis upon the muscle fibers, and the progressively diminishing nutrition, will soon be followed by a deterioration of the cardiac muscle and an aggravation instead of an amelioration of the symptoms.

In fatty degeneration, or any enfeebled condition of the heart muscles, digitalis is contraindicated.

In hypertrophy of the heart digitalis might theoretically be useful in cutting down the nutritive supply, thus lessening the tendency to further hypertrophy, even if the hypertrophic condition could not be completely removed. Even in this instance digitalis is too dan-

gerous a remedy to use for such purposes, for clinical experience has shown that the continued use of digitalis, even for a comparatively short space of time, will cause so much degeneration of the muscle fibers, that acute dilation has been observed to follow its use, death being averted only by the withdrawal of the digitalis, and the administration of more lively remedies.

Thus it is apparent, that digitalis is of service only for a few days at the longest. It should only be given to influence the heart and circulation when the arteries are very much relaxed, and the pulmonary or systemic veins overfilled with blood. In such instances as these it will tighten up the vessels and by augmenting the power of the systole will force a larger volume of blood into the arterial system.

In this manner the surplus of blood can be pumped, as it were, from the venous system, into the arterial. This accomplished, the digitalis should at once be stopped and more reliable remedies used to maintain the heart and circulation, remedies that will accomplish the desired result without damaging the cardiac muscle or interrupting the physiological nutritive functions of the animal economy. To use digitalis outside of these narrow confines when there are so many other, safer, and more reliable remedies is, to say the least, extremely poor therapeutics.

Some argue that by giving a sufficient amount of nitroglycerin in conjunction with the digitalis, the damaging effects of the digitalis can be obviated. In a measure, this is true, but it does not altogether diminish the increased work forced upon the heart muscle, neither does it antidote the general toxic effects of digitalis upon the general muscular system. While this is a wiser therapeutic measure than the use of digitalis alone, it is not the best for the patient; and nothing short of the best should be the aim of the truly scientific and practical therapist.

Up to this point we have been dealing simply with the action of the digitalis upon the heart and circulation. Its action as a diuretic next deserves attention. Before this can be studied intelligently, however, we must first attain a clear conception of the normal functions of the kidneys, then it is easy to understand how the excretory functions of the renal glands can be influenced by the introduction of medicinal agents into the system. The functional activities of the renal glands are best divided into two grand series; the first comprising the changes effected through the action of the glomeruli; the second, the changes brought about through the agency of the epithelial cells lining the uriniferous tubules. Athwart the walls of the bloodvessels constituting the Malpighian tufts is filtered the water, with the inorganic salts held in solution.

Through the agency of the epithelial cells lining the uriniferous tubules, the fully utilized proteid constituents are drawn into the protoplasmic substances with active oxygen, and are there, by a process of oxidation-reduction, converted into urea, uric acid, creatin, carbon dioxide and water, and discharged into the lumina of the renal tubules, with the exception of the CO₂, which flows back into the blood stream, thus forming the normal products of proteid oxidation found in the urine.

Also, in the various abnormal conditions of the system, by a less perfect oxidation of the proteid constituents in these renal cells, the various byproducts of the proteid oxidation are eliminated by the action of the epithelial cells. Most common among the abnormal excretory products are albumin, glucose, indican, oxalic acid, lactic acid, hippuric acid, and the various leucomaines, ptomaines and toxins. The albumin cannot, strictly speaking, be classed as an oxidation-reduction product like the others enumerated; still it results from imperfect oxidation of the proteid constituents in the renal cells. Its elimination, however, can be credited to the epithelial cells of the uriniferous tubules, which, when not able to oxidize the proteid into some one of the simpler reduction products, either normal or abnormal, have the power to transform isomerically the proteid constituents, drawn into their substance from the blood, and excrete it into the lumina of the renal tubules as some one of the many forms of derived albumin (which is often toxic in nature) that are found in the urine.

The functions of the glomerule is comparatively simple, being entirely, although indirectly, under the control of the vasomotor system of nerves. Experiments have shown that a division of the spinal cord below the medulla oblongata greatly diminishes the flow of urine. The explanation of this phenomena is, that large vascular areas are cut off from their communication with the medullary vasomotor center, and this, together with the general shock to the spinal cord, destroys the innervating impulses distributed to the muscular walls of the blood-vessels throughout the body. Their lumens expand, and a great fall in the general blood-pressure is the final result.

With this general relaxation, comprising also the renal artery, it might be expected that a large volume of blood would pass to the kidney and that an augmented flow of urine would follow; but the great fall in the general blood-pressure overbalances the effect produced upon the renal circulation; hence the actual hydraulic pressure in the glomeruli is decreased, and the flow of urine is, in consequence, less than normal.

Stimulating the spinal cord below the medulla, affects the cord in an opposite manner from division, but produces the same diminution in the quantity of urine excreted.

This is explained by the renal artery becoming so much contracted by the increased innervation distributed to its muscular wall, that the blood is largely shut out from entrance into the kidney, similarly as in ligation of the renal artery. This sudden reduction of the renal circulation overbalances the good effects which might have come from the general rise in blood-pressure. Therefore, it is clear that directly opposite actions upon the cord will not produce opposite results upon either the renal circulation or its excretory function, but may produce a similar effect upon both the secretion and function.

These physiological effects clearly explain how, under opposite circumstances, drugs possessing entirely different properties may produce clinical phenomena almost identically parallel.

Section of the renal nerves produces a marked relaxation of the renal artery. This greatly augments the

volume of blood distributed to the kidneys, thus increasing greatly the blood pressure in the capillary vessels which constitute the Malpighian tufts. This augments the flow of urine because the general blood pressure remains nearly normal.

Section of the spinal cord after division of the renal nerves arrests the polyuria by suddenly dilating the arteries and increasing the general vascular capacity outside of the kidney, thus reducing general blood pressure and in this way withdrawing the high volumeric pressure from the glomeruli. Stimulation of the spinal cord after division of the renal nerves still further increases the flow of urine by contracting the general arterial capacity outside the kidney, thus raising the volumeric blood pressure in the glomeruli to a still higher degree.

The same kind of results are obtained by division of the splanchnic nerves, but the action of the kidneys is less positively marked because the whole splanchnic arcade responds simultaneously to the impulses causing a rise or fall in the blood-pressure.

From these facts it is clear that the quantity of water discharged from the kidney is dependent upon the relation of the hydraulic pressure within the glomeruli, on the one hand, and the tension in the arterial system throughout the body, on the other hand.

The function of the epithelial cells lining the uriniferous tubules *per se*, is a much more complex process.

The epithelial cells of the kidneys have, for their special function, the property of taking up from the blood into their protoplasmic substance the fully utilized proteids that have served their isomeric purpose to the animal economy. At the same time that the proteid is taken into the cells a certain quantity of active oxygen is drawn in with the proteid element. Once within the protoplasmic substance of the cell, the active oxygen attacks the proteid molecules and, if the kidneys are acting normally, produces by this process of oxidation reduction, urea, uric acid, creatinin carbon dioxide, and water. When there is a surplus of albumin in the blood, either utilized or otherwise, over and above the complement of oxygen for its complete reduction, instead of the perfect products of oxidation in their normal proportions, an excess of the lower products will be formed at expense of the higher, or still lower products will be formed, those which are absolutely abnormal to the system and its excretions, such as lactic acid, oxalic acid, glucose, and a host of others such as leucomaines, ptomaines, toxins, etc. Some of which have been isolated and identified, while many more are still without clear identification.

When the functions of the system are still more profoundly disturbed by the introduction of microbic or toxic substances, or other causes such as a still greater reduction in the complement of oxygen, a certain proportion of the fully utilized proteid or the excess of non-utilized proteids, when drawn into the protoplasm of the renal cells, cannot be oxidized and reduced even to the lower products of imperfect oxidation. Under these circumstances, either from the lack of oxygen or from the deteriorated condition of the protoplasm of the renal cells, and their inability to excite oxidation reduction, the cells become swollen and tend to undergo retrograde

changes as the result of this excess of unoxidized proteid matter in their substance. Now, as if to relieve themselves of this excess of proteid material, the contained proteids within the cells are isomerically transformed and eliminated directly from the cells into the lumina of the uriniferous tubules under one of the many isomeric forms of the proteid molecule found in the urine. In this manner is produced the condition commonly classed as albuminuria, and said to be due to an escape of so-called "serum-albumin" from the blood through the walls of the bloodvessels.

The exact condition, however, is the elimination of the various isomeric forms of proteid material from the cells themselves. Thus, albumin in the urine becomes a direct excrementitious product from the cells and not the transudation of "serum-albumin," so-called through a non-diffusible membrane. Another ground upon which the so-called "serum-albumin" theory of albumin (albuminuria) in the urine is untenable is, that no "serum-albumin" exists in the blood as a single substance. That which was once supposed to be a simple and single substance and named "serum-albumin," is now absolutely known to be composed of at least 3 isomeric forms of the proteid molecule. While 3 forms have been absolutely identified, there is much evidence that proves that there are more isomeric forms of the proteid molecule to be found in the substance that once was known as simple "serum-albumin."

Assuming that "serum-albumin" is a single and simple proteid, the albumin, as found in the urine, does not conform to the tests employed for identifying the so-called "serum-albumin," which is further and positive chemical proof that the albumin found in the urine is not in the same isomeric form that is commonly found in the blood-stream and known by the name of "serum-albumin."

Still further, there is chemical proof that the albumin which finds its way as an isomeric excrementitious product from the epithelial cells of the kidney into the urine is composed of many isomeric forms of proteids. This is strongly evidenced by the varying behavior of the proteid constituents of the urine when brought into contact with heat and chemical reagents. Those in the urine are found to differ widely when compared with those found in the blood stream. The same is true in different cases, when the albumin of the urine is carefully studied; all this proves that we are not dealing with a single proteid in the blood and one of the same character in the urine, but in both instances there are many isomeric forms.

[TO BE CONCLUDED.]

Gout Versus Tuberculosis.—Dr. Henry Harper, an English physician, through study of tuberculosis has been led to an interesting theory and experiment which may be of great value. He first noted that despite favorable conditions many of his cases were from the country. He also noted that herbivorous animals were more liable to the disease than carnivorous. Again, he noted that gouty or rheumatic families were rarely affected with tuberculosis, and that there are cases on record in which the disease had been arrested as cured by a severe attack of gout. This led to the theory that the superabundance of urea, which is the supposed cause of gout, acts as an antitoxin to the tubercle bacilli. This is in accord with the treatment of tuberculosis in sanatoriums where meat is given to patients in abundance.

CONGENITAL DEFORMITY OF WRIST; OSTEOTOMY OF RADIUS.

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The subject of the accompanying skiagraphic representations was a girl of 14, whose carpus was thrown, by the arched condition of the radius, so far out of the nor-



Fig. 1.—Congenital dislocation of wrist. Carpus unconnected with ulna from arching of radii.

mal line anteriorly that it entirely failed to articulate with the ulna, and was joined very faultily with the radius. The resulting disability was so great that she

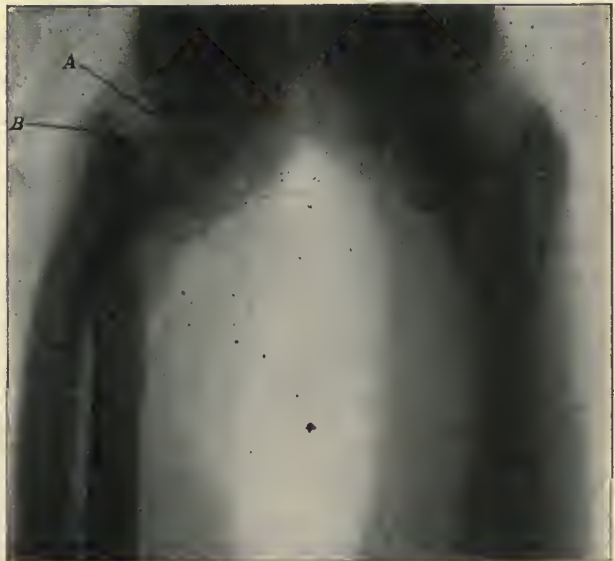


Fig. 2.—Congenital dislocation of wrist. Carpus unconnected with ulna from arching of radii.

was unable to perform the simplest exertions with any comfort. The weakness and difficulty in using her hands, which had existed from birth, was becoming greater every year. The mother had the same deformity

in both wrists, but to a less degree; enough, however, to decidedly weaken her arms; otherwise there were no deformities in either mother or daughter. As will be seen in the skiagraphs (Figs. 1 and 2) the styloid process of the ulna on each side lies entirely free from the carpus, and the distortion of the second row of carpal bones in their relation to the first row is very marked.

The arch in the radius caused its articulating surface to look almost at right angles to its normal position, while the semilunar and scaphoid lay with their sides against the joint surface instead of upon their normal faces.

An osteotomy of the radius $1\frac{1}{2}$ inches above the wristjoint, with forcible straightening and fixation for 5 weeks in a corrected position with plaster-of-paris,



Fig. 3.—Congenital dislocation of wrist from arched radii. Result after osteotomy of both radii.

gave a greatly improved result, both as to appearance and strength. A skiagraph taken 4 months after operation showed the result, as per Fig. 3. The carpus is still out of its proper relation with the ulna, but the obliteration of the curve in the radius has brought the hand into much better line with the arm, and has thereby greatly lessened the deformity, and has also added largely to the muscular power and strength of the member.

Although the girl has not the full normal strength of hands, she is able to accomplish all ordinary movements of the wrist.

This form of congenital deformity is exceedingly rare. Hoffman¹ states that he was unable to find any report of a case uncomplicated with clubhand. Congenital dislocations of any of the articulations of the upper extremity are much more infrequent than are those of hip or knee.

THE LOGIC OF HYDROCHLORIC ACID THERAPY, RESTORATION OF LOST GASTRIC HCL SECRETION BY MEDICAL AND SURGICAL METHODS.

BY

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Soon after Prout first discovered, in 1828, that the normal acid of the gastric juice was hydrochloric acid, this chemical substance gradually became the panacea for all digestive disorders. From this extreme view we have in recent years drifted to the opposite extreme, according to which HCl as a therapeutic remedy is entirely dispensable. This acid should never be given except when the analysis of test-meals shows the absence of free HCl. Furthermore, it is not sufficient to test with the phloroglucin-vanillin, resorcin, Congo paper or dimethylamidobenzol, but the amount of the HCl deficit, i.e., the amount of decinormal HCl solution that must be added until the reaction of the chyme shows free HCl, must be determined, in order that one may know how much beneath the normal the secretion may be. The HCl deficit should be determined when the reactions for free HCl prove negative. In one case the deficit may be very slight, in another very considerable. Slight deficits generally yield readily to treatment by diet and lavage, often without administration of HCl; large deficits may be a sign of atrophy and never yield to HCl therapy, no matter how much is given.

The purposes for which HCl is given in the absence or diminution of the normal secretion are: (1) To supplement gastric proteolysis; (2) to act as an antiseptic; (3) to act as a tonic and stomachic.

To these effects that we have in mind in supplying HCl, may be added its influence as a stimulant to gastric peristalsis, and the fact that it brings the insoluble calcium and magnesium salts of the ingesta into solution; in fact, all of the objects and functions that are recognized as physiologic to the HCl may be at least partially accomplished by supplying it in sufficient quantity. But the question arises: Can it be supplied in sufficient quantity? Positive reaction on Congo paper and phloroglucin-vanillin after test-meals indicates, it is true, that HCl is secreted in excess of what is required to combine with the food. In healthy digestion it is always found that this excess amounts on the average to 30 cc. of a decinormal solution of NaOH after an Ewald test-meal (in Baltimore); and it seems to be what is necessary or

¹Trans. Amer. Orth. Asso., Vol. XIII, 1900, p. 96.

advantageous, not for digestive purposes (for even with a large excess of HCl it is not the rule for all the proteid matter to be digested in the stomach), but for destroying the exuberance of microorganisms swallowed with the food and for bringing about a proper reaction for the best digestive secretion of the pancreas. The cases frequently noted in patients without any gastric secretion whatever who succeed in maintaining their nitrogen equilibrium (and we have seen many such), and the experiment on the dog (Kaiser and Czerny), and the weight of which was kept up, although the largest portion of the stomach was removed, and Brigham's and Schlatter's total extirpations of the stomach, constitute but a weak argument against the therapy of HCl. For although such patients and animals manage to get along fairly well for a time, it is only under the most careful and scientific supervision that their health is maintained. Permanent and perfect health with total absence of gastric secretion is rarely observed, except in those who are able to rest much and have their food prepared with great care.

These facts must not be overlooked in considering the work of von Noorden,¹ which demonstrated that absolute and permanent deficiency of gastric juice may be accompanied by perfect health. This health is perfect under the conditions mentioned, but when such patients are taxed by work or the diet is not the usual one, in my experience suffering invariably becomes manifest. If achylia gastrica could really exist without any subjective or objective disturbances, how is it that so many of these patients consult the stomach specialists and are reported by them in literature? When we must work for our living and cannot have the benefit of the dietetic kitchen at all times, we must have an active gastric juice to at least partially disinfect and dissolve our food, and a person who secretes no gastric juice is or soon becomes a patient.

In a recent article on achylia gastrica, by F. Martius and O. Lubarsch², the authors arrive at the conclusion that neither simple achylia nor that dependent upon atrophy of the mucosa (anadenia) can bring about severe anemic or cachectic conditions, unless motor insufficiency, atrophy of the intestinal mucosa, or general diseases (tuberculosis, lues, infections, etc.), are added. Even if this is true, generally speaking, it does not disprove the statement that absence of HCl in the gastric secretion compels the individual to lead the life of a patient, for dyspepsia and dystrypsia may exist and become severe without the anatomic changes spoken of by Martius and Lubarsch. But, over and beyond this, Flint, Fenwick³, Quincke⁴, Nothnagel⁵, Osler⁶, Kinnicut⁷, also Rosenheim and G. Meyer⁸, have described cases of pernicious anemia in which atrophy of the gastric mucosa was, at the autopsy, found to be the only organic disease existing. It is conceivable that the intestine can not persistently digest an amount of proteid sufficient to maintain the nitrogen-equilibrium during work; that it depends upon a certain part of this proteolysis to be performed by the stomach; that the acid gastric chyme is necessary for the stimulation of the duodenal secretions. Pawlow⁹ has proved experimentally that the gastric HCl is an important stimulant to the secretion of pan-

creatic juice. It is probable that digestion in the duodenum is not perfect without the acid proteids, which, as we know, cause increased diastasic action of the pancreatic juice.¹⁰ So that we are justified in concluding on experimental and clinical grounds that in the absence of secretion of HCl in the stomach the entire duodenal digestion is abnormal.

Therefore, we take the ground that the supplementing of HCl is rational, even if we cannot supply the deficit, because the amount necessary thereto could not expediently be administered. If we cannot always add sufficient HCl to make the chyme distinctly acid, we can at least add enough to exert a disinfecting influence and free it from a part, the surplus, of its germs, and perhaps produce some of the preliminary stages to peptone. For the acid albumins (syntonin) and propeptones are absorbable, and those not absorbed,¹¹ we believe, are of some further utility in duodenal digestion. This conclusion is based upon quantitative analyses of human duodenal contents, drawn by my method¹² of duodenal intubation from cases of achylia gastrica, and from normal individuals. In some cases, however, we are enabled to add enough to give the reaction of free HCl to the chyme.

According to Honigmann and von Noorden,¹³ 1 part by weight of pure HCl is able to saturate 18 parts by weight of egg-albumen; 100 drops of dilute hydrochloric acid, containing 0.8 grams of absolute HCl, will suffice to digest 15 gm., or 825 grains, or 13.75 drams, of pure egg-albumen. Riegel cites this statement evidently to show how inefficacious 100 drops of a 12.5% solution of HCl is as a digestive. (The dilute hydrochloric acid of the U. S. Pharmacopeia is a 10% solution.)

The conclusions of Honigmann and von Noorden, however, are, in my opinion, not calculated to inspire therapeutic skepticism; an amount of proteids equal to 13.75 drams of dried egg-albumen is a considerable quantity to be relieved of, and it cannot fail to ease gastric digestion to give the acid, even if it can do no more work than this. But then it is practicable to give more than 100 drops of dilute HCl if necessary. Furthermore, the albumin molecule need not be saturated in order to become absorbable, as we shall see. Not nearly so much HCl is required for the formation of acid albumin as for that of hemialbumose or peptone. Riegel himself succeeded in causing a resumption of secretion of HCl in a patient who had not shown any for months, after he had taken 1.5 gm. of hydrochloric acid daily for 14 days. He believes, however, that diet and lavage may have had much to do with the recovery. Reichmann and Mintz¹⁴ report several cases in which free HCl could be again demonstrated after it had been missing for a prolonged time; the resumption of HCl secretion was attributed by them to a prolonged dosage with the same acid. This condition may depend on a number of very different factors. Sometimes there is no evidence of pathologic change in the mucosa, and naturally these may readily recover (neuroses), even without HCl treatment.

In December, 1898, I had under treatment a well-known Baltimore physician afflicted with an immense atonic dilation of the stomach. The greater curvature extended into the pelvis. Every morning, before break-

fast, stagnating food masses could be washed out of the stomach. I analyzed his stomach-contents after several of the double test-meals recommended in my book¹⁵, but could never detect free nor combined HCl. The ferments, pepsin and chymosin, were still active in their precursory stages; i. e., pepsinogen and chymosin-zymogen. He also suffered from a floating right kidney which could be moved about in his abdomen *ad libitum*. His was perhaps at one time a case of enteroptosis, and in a period far back in his history, his stomach presented most likely a "ptosis" or prolapsus, and from this the gastrectasia developed gradually. He did not present the floating tenth rib, to which Stiller has called attention. This clinician asserted that he found the tenth rib mobile like the eleventh and twelfth, and not attached by cartilage to the costal arch, but perfectly free or only very slightly attached by ligamentous fibers to the costal arch. Stiller¹⁶ claims to have been able to detect this floating tenth rib in a large majority of cases of emaciated nervous dyspeptics afflicted simultaneously with floating kidney and dilated stomach.

After 6 months of medical treatment by carefully selected diet, electricity, daily lavage, rest, and internal administration of dilute HCl and strychnin, no lasting improvement was effected. I then advised my patient to undergo the operation of gastroplication. This operation and that of nephrorrhaphy was successfully performed by my colleague, Professor Randolph Winslow, in June, 1899. The patient, 64 years of age, made a splendid recovery. Five months after this operation, I made 2 careful examinations, and to my surprise and that of the patient, free HCl was detected after the test-meals, the amount in 10 cc. of gastric filtrate being equal to 10 cc. one-tenth normal NaOH.

This return of HCl secretion in the patient was an evidence that the glandular layer had not been destroyed by disease, but that the peptic cells had simply been exhausted by the constant presence of food in the immensely dilated stomach, which could at no time empty itself entirely. The presence of food acted as a constant stimulus to secretion, and the oxyntic or acid cells, as well as the central or ferment cells in the peptic ducts, became exhausted. But with restoration of the normal motor functions, as the food was regularly expelled into the duodenum, they became rested, and resumed their normal secretion.

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[TO BE CONCLUDED.]

Inexact Topography—A daily paper in speaking of a recent medicolegal case spoke of the lesion as located in the "Aisle of Ryle."

METATARSAL FRACTURE.

BY

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It is generally accepted that the superficial location of the metatarsal bones makes recognition of their fractures easy. Still, while this may be true of the first and fifth metatarsi on account of their accessibility, the dense tendinous and ligamentous tissues overlying the second, third and fourth metatarsi are apt to veil the fracture-signs within their tract. The difficulty of differentiation is much greater, when, as is the rule, the fracture is associated with injuries of the soft tissues, which cause edema and swelling.

If the fracture is located near the tarsometatarsal joint, crepitus can but rarely be elicited. Pain and tenderness cannot be relied upon as characteristic fracture-



Fig. 1.

signs, since they would be present in simple contusion of the foot, and in equal intensity.

How often metatarsal fracture has been overlooked can be best estimated by the fact, that in the pre-Röntgenian era most cases of fracture of the second or third metatarsus used to be taken for a pathologic change in the soft tissues—in the German army known as "foot-edema." It was reserved for the Röntgen rays to disclose that this much dreaded condition was a fracture pure and simple, and that it was produced by overburdening the marching soldier.

Many cases of so-called neuralgia, metatarsalgia, neuritis, etc., belong to the same category. The small bony enlargements of the foot, its broadening, and sometimes the callosities following metatarsal fracture, were observed in former years; but they were misinterpreted in the majority of cases, since they were due to the badly united fracture only. Union in a displaced position, especially in lateral displacement, must necessarily lead to compression of the digital nerves. It is evident that treatment

of such cases of "peripheral neuritis" can consist only in reducing the fragments to their proper position by osteotomy.

Pain induced by walking points to dorsal or plantar displacement, while metatarsalgia, coming on in a paroxysmal manner, is generally due to lateral displacement. Metatarsalgia is somewhat analogous to coccyodynia, which, as I have had the opportunity to prove (see Appendix to my "Textbook on Fractures," page 288), was produced by fracture in most cases, the fragments also having united in a deformed position.

If only one or two metatarsal bones are broken, but little tendency to displacement is present, which explains why the symptoms of this fracture are, as a rule, not at all pronounced. The other metatarsal bones serving, to a certain extent, as lateral splints, it is natural that the final results in these cases are nearly always good, no matter what special kind of treatment was employed. In the event of displacement, however, the result would be somewhat different.

The textbooks treat metatarsal fracture as a step-child, most of them saying that it would neither require detailed description nor any special mode of treatment. A few say that if there would be any displacement it would be toward the dorsum of the foot. Only Hoffa alludes to the possibility of plantar displacement also. But nowhere is reference made to the lateral displacement, which I regard as of no infrequent occurrence, and also as an important complication, since it is always followed by considerable functional disturbance. The fact that the lateral displacement was never recognized before explains fully why efforts of reduction have neither been made nor advised; consequently, the fragments, left to themselves, whether in a general immobilizing dressing or not, unite in a deformed position, and bony enlargements, as well as functional disturbances, have been the result. The edematous feet of persons who have to work hard, or to march, or to stand on their feet during the whole day, furnish a striking illustration of the consequences of badly united metatarsal fractures, as they are disclosed nowadays by the Röntgen rays.

It is obvious that the more accurate and various diagnoses they enable us to make must also inspire different plans of treatment.

1. If there is no displacement present in fracture of any of the second, third or fourth metatarsal bones, a simple and short plaster-of-paris dressing fulfills all requirements. During the first week the patient is best kept in bed. During the following two weeks he should carefully try to walk in an ambulatory dressing, made by applying a solid plaster-of-paris dressing, after the skin is well oiled. The dressing reaches from the toes up to the lower third of the leg. The support is furnished by the malleoli. The sole of the dressing is fortified by inlaying with strips of tin, zinc or wood.

2. If the first or fifth metatarsus is broken, and no displacement is noticeable, a small strip of mossboard, slightly moistened, is placed alongside of the outer or inner margin of the foot, before the plaster-of-paris dressing is applied. The ambulatory dressing should not be chosen for this type before two weeks.

3. If there is displacement of the second, third or fourth metatarsal bone, either in the dorsal or the plantar direction, pressure will easily reduce the fragments. They are then kept in place by coaptation-splints, preferably also consisting of mossboard and protected by a plaster-of-paris dressing. The after-treatment is conducted on the same principles as that of the former type.

But if the displacement is sideways, reduction is somewhat more difficult. It is accomplished best by grasping the fragments as firmly as possible near their epiphyseal ends and alternately turning and shifting them until reposition is perfect. Sometimes a consider-



Fig. 2

able degree of counterpressure is necessary. To hold the fragments in place is a still more complicated task; for, as shown by the Röntgen rays, the displacement will recur even if a plaster-of-paris dressing is applied at once. If the lateral displacement is such that the metatarsal fragment (as is evident, for instance, from Fig. 1) is pressed against its neighbor, consolidation may take place between the two metatarsi; and this would naturally be followed by functional impairment, as well as by disturbances of a sensory nature.

Previous experiments have showed me that metacarpal fragments are invariably held in place by elastic

pressure.¹ The same principles obviously apply to metatarsal fracture.

For fracture of a displaced metatarsal bone, two rubber drainage-tubes of moderate size are chosen, and lightly pressed into the adjoining interosseous spaces at the dorsum, so that they fill them up to a certain extent. (Fig. 2.) If two metatarsi are fractured, three drainage-tubes are necessary, and so on. The tubes are kept in situ by adhesive plaster strips; thus the recurrence of the displacement is absolutely prohibited. The dorsum is surrounded then by a moss-splint, a material which, after being dipped in cold water, adapts itself to the contours of the foot like a cast. The whole is protected by a plaster-of-paris dressing, which reaches from the toes up to the lower third of the leg. The patient remains in bed for about 10 days. Then an ambulatory dressing is applied after the principles elucidated above.

When skiagraphed through the plaster-of-paris dressing, the formerly displaced fragments must be found in exact apposition. If not, the dressing must be reapplied in the corrected position. There is no doubt that in pursuing these therapeutic principles, which are based upon a correct anatomic diagnosis, metatarsalgia and its companions will become a very rare affection.

Fig. 1 represents the case of a man of 31 years, who sustained a fracture of the lower epiphyseal ends of the third and fourth, and a fissure of the second metatarsus. While smoothing the asphalt pavement on the street, holding an iron bar of 40 pounds in his hands, he was knocked down by a street-engine coming from behind, so that he fell forward. While the second metatarsus shows only a slight sideward bending, the dentated fragment of the third metatarsus is markedly displaced outwardly. The lower fragment of the fourth metatarsus is not only displaced, but its external portion is also tightly pressed against the fifth metatarsophalangeal joint. Fig. 2 shows the rubber tubes in apposition. The patient was able to walk in one week in an ambulatory dressing, and made an uneventful recovery.

SOME REMARKS ON INGUINAL COLOSTOMY.

BY

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Several years ago I received a marked copy of a newspaper printed in a neighboring state in which it said, in substance, that Mr. — had just died in great misery as the result of an unnecessary operation performed upon him in the hospital with which I am connected. I recollected the case well. The man had an inoperable carcinoma of the rectum. I had made an inguinal colostomy as a palliation, and he lived about 4 months after leaving my care. The article seemed to me to be wholly malicious, but after some reflection I am not sure that it was entirely unjust. The operation certainly did not cause his suffering, but was the relief obtained sufficient to warrant the pain of an operation, with its expense and the separation from his family during several weeks? It is an open question.

Ten years ago, excision of the rectum was in great disfavor, the immediate mortality was high, the percentage of permanent cures near the vanishing point. Colostomy gave relief in cases in which obstruction was a prominent symptom, and was deservedly popular. The ease of performance and the small mortality of the operation itself, led to its indiscriminate employment, merely because the patient had a cancer of the rectum. It has been claimed that by deflecting the fecal movements and giving the rectum absolute rest, partial atrophy of the unused portion of the bowel is one result, and that the diminished blood-supply and avoidance of irritation checked the growth of the malignant process or greatly retarded its progress, and experience has shown that to a certain extent this is true. It should not be forgotten, however, that carcinoma of the upper rectum is often, if not usually, a slow process, and much of the supposed prolongation of life is the natural evolution of the disease. High carcinoma of the rectum, in my experience, is not infrequently found in the comparatively young. I had one patient but 14 years of age and several under 30. Vast improvement in the results of excision of the rectum followed the impetus given this operation by Kraske, to whom much credit is due, although there is a great tendency to radical departures from the technic he popularized. The results, both immediate and remote, of radical operations in this locality are relatively good, and compare favorably with those for carcinoma of the breast or uterus.

This at once removes a large number of cases from the list in which colostomy has been the resource. In advanced cases without obstruction the operation is not indicated, and surgery is discredited by its performance, but in selected cases colostomy is of great benefit to the victims of hopeless disease.

In making a permanent artificial anus, the suggestion of Wyeth that all of the movable sigmoid should be pushed upward, making the opening as near the rectum as possible, is of great importance. The sigmoid flexure of the colon is the natural reservoir of fecal accumulation, and by placing it to the proximal side the ability to retain the feces is much better than after the method of Allingham and Cripps, in which, to prevent prolapse of the mucous membrane of the upper colon, it is advised that as much of the bowel as will readily pass to the distal side of the artificial anus should be so placed. The formation of a spur is best accomplished by suturing the proximal and distal limbs of the colon to each other and the advice of Kelsey, that the margins of the incision be well fastened to the colon, to prevent wound-separation under sudden strain, is sound. Kelsey had 2 cases in which the small bowel escaped alongside of the colon during a fit of sneezing or coughing, 24 to 48 hours after operation.

The most annoying feature of the average artificial anus is the difficulty of controlling the escape of feces and gas at inopportune times. Bailey suggested and carried out a plan for colostomy on the principle of the gastrostomy of Ssbanajew-Frank. This operation is especially recommended by Tuttle. An intermuscular separation of the usual colostomy incision is made, through which the loop of sigmoid is drawn out and a

¹New York Medical Journal, August 4, 1900.

spur formed. The knuckle of bowel is firmly anchored in the deeper wound, with sufficient projection of the apex to enable the anus to be formed at a separate skin incision 2 inches below, in the direction of the internal ring. The superficial incision at the point of egress of the bowel from the abdominal cavity is now closed. The loop of colon lying between the skin and muscular wall of the abdomen is easily compressed against the firm aponeurosis of the external oblique muscle by an elastic truss with a water pad. The appendices epiploicae, which may be exposed on the open surface of the bowel, should be ligated at their base and cut away, as they slough and separate slowly, adding considerable unnecessary odor. The exposed bowel should be covered with some protective dressing, such as rubber tissue, to prevent the granulations which firmly unite the gauze to the colon and cause great difficulty in getting it loose. Witzel makes colostomy after the same general plan as Bailey's, except that the colon is divided and the distal end inverted and permanently closed, the proximal end being carried over the iliac crest. It sometimes happens that the mesentery of the sigmoid is too short to allow of its being sufficiently drawn forth for the formation of the colostomy as described. Under such circumstances, the operation of Maydl will usually be fairly satisfactory. Grieg Smith endeavored to obtain better muscular control by separation of the muscular layers in their natural lines and not suturing the parietal peritoneum to the skin, as has been so commonly practised, allowing the knuckles of colon to become attached directly to the muscle fibers. I have found this advice excellent. To those interested in the subject of artificial anus, the scholarly article of Robert F. Weir¹ will be of great value.

Colostomy as a preliminary step to excision of the rectum has been largely practised, but as the newer operations almost invariably permit of a restoration of the continuity of the bowel, the danger of wound infection from fecal contamination is greatly reduced and as it requires an independent operation for its performance, as well as closure, it is probable that the combined risks are greater than a well planned complete primary excision. If a preliminary colostomy is made, it should be located as high on the bowel wall as possible, giving the greatest amount of sigmoid below the artificial anus for future manipulation during the excision. As a preliminary step to an extirpation of rectal carcinoma, I have made a colostomy 4 times. My first case was lost as a result of tension on the sigmoid causing gangrene. The artificial anus firmly anchored the colon, and after the resection of the rectum there was not enough sigmoid to reach to the proper site of attachment without undue strain.

While the field of colostomy has greatly narrowed in malignant disease, for nonmalignant affections of the rectum it has an increasing usefulness. Tuberculous and other forms of ulceration of the rectum which are essentially chronic or incurable in their nature, as well as some nonmalignant strictures are best treated by temporary or permanent artificial anus. In deciding upon colostomy, it should be ascertained if possible, beforehand, that the diseased condition does not extend above the point at

which the artificial anus is to be situated. Some 6 years ago I had a case of multiple polypi of the rectum. There were profuse and foul smelling discharges of mucous, pus and blood. The man was in miserable condition. It was thought, after such examination as could be made, that the disease was confined to the rectum. A left inguinal colostomy was performed with a result of greatly aggravating his already deplorable condition. Before the operation he was able to control his discharges but nothing would prevent their escape from the artificial anus and he became a burden to himself and everyone with whom he was brought in contact, and later the opening was closed by another surgeon. I have since encountered 4 of these cases of multiple rectal polypi, and have been able to satisfy myself that the disease extended throughout the entire colon, as in my above related unfortunate experience. In doubtful cases since that, I have exposed the sigmoid in the inguinal region before doing a colostomy to make sure that such an opening would be above the seat of disease. In this way the lumen of the bowel can be explored in the same manner as the rectum, and in 2 instances I found the disease had extended to a point above the proposed site of the colostomy thus rendering the intended operation useless. A few sutures close safely the exploratory incision in the bowel itself.

From my own experience I would urge that this be more frequently done, and the point of exploration need not necessarily correspond with the intended artificial anus, and if desired the delay in the opening of the colon to secure safe adhesions may be postponed a few days without regard to the sutured intestinal opening. I will merely call attention to right sided colostomy for the relief of chronic diseases of the entire colon. Temporary right artificial anus has been performed by Barbat and Sullivan for the cure of amebic dysentery. Keith recommended and carried out this procedure for the cure of chronic membranous colitis. White and Golding-Bird, Lawrie, and others also report cures of this troublesome form of colitis in a similar manner. Right-sided colostomy does not offer the mechanical conditions requisite for a satisfactory anus; the discharges are more liquid and the inability to lift the ascending colon out of the wound precludes the possibility of an adequate spur or perfect control. However, as the pathologic conditions calling for right-sided colostomy are in themselves so serious a disability, the relief from pain and the prospects of cure may compensate for the annoyance. For temporary purposes the colon should be opened longitudinally and the retraction will usually be sufficient to enable one to close the opening by an incision about the margin of the artificial anus, and after trimming away the skin, a few provisional sutures will prevent leakage during the further steps of the operation, which is completed by opening into the free peritoneal cavity, loosening up the sigmoid and with a second row of sutures turning in the first row.

On a recent visit to Krause's clinic at the Altona General Hospital, Germany, he exhibited several cases in which he had passed a specially devised clamp, one jaw into each limb of the open lumen of the bowel, and by slowly closing the instrument the opposing surfaces

¹ *Medical Record*, April 21, 1900.

were compressed, and by necrosis, a communication between was established. The instrument was made of aluminum to prevent weight-pressure of the handles on the wound, and was left in position a week. The external opening closed spontaneously after the anastomosis was established. The instrument is so constructed as to exert its pressure at a point beginning 2 inches below the external opening and the communication established is $2\frac{1}{2}$ inches long by $\frac{3}{4}$ inch wide. In elderly or debilitated subjects this contrivance, to avoid the necessity of a secondary operation, might be of value. I brought 1 of the instruments home with me, but have hesitated to use it. Krause's results were good, but the essential principle is the same as the old and rightly abandoned operation of Dupuytren.

In conclusion it may be said:

1. Colostomy is not now a rival of excision of the rectum for malignant disease, and should only be employed in hopeless cases presenting obstructive phenomena.
2. For a permanent colostomy, the combination of Wyeth and Bailey's methods gives a satisfactory result.
3. Colostomy preliminary to excision of the rectum should be located high on the colon to give sufficient length of sigmoid to permit restoration of the continuity of the bowel.
4. For ulceration and other conditions in which the upper limit of the disease is not definitely known, the interior of the bowel should be explored through the inguinal incision in order to determine the proper site of the opening.
5. Right-sided colostomy has an increasing field of usefulness, as in amebic dysentery, chronic colitis, etc.

THE PREVALENCE OF STREPTOCOCCI IN COW'S MILK.

BY

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Last spring I was requested to make a bacteriologic examination of some milk which had presumably been the cause of sickness in an infant fed upon this milk, which was derived from one of our best dairies. The examination revealed the presence of enormous numbers of streptococci. This result led to the employment of milk obtained from other first class dairies and the examination of each yielded the same results, viz., the presence of large numbers of streptococci. These samples of milk, as they reached the laboratory, were in the form of separate feedings which had been kept warm for some hours, in short, each sample submitted was prepared in the same manner as the several feedings required during a night. It is probable, therefore, that the treatment of the milk was responsible for the large numbers of streptococci found, but was not accountable for their presence.

The following questions presented: To what extent are streptococci found in the milk of healthy cows?

Are they more prevalent in herds kept under bad sanitary conditions than in those kept under the most approved conditions? What is the significance of the presence of streptococci in cow's milk?

Very little light could be gained from the literature of the subject. Archibald R. Ward¹ had shown that "certain species of bacteria normally persist in particular quarters of the udder for considerable periods of time." This statement is based upon the results of the bacteriologic examination of the udders of 19 cows immediately after death. Dr. G. Leslie Eastes² found streptococci in 75.2% of the samples of milk examined. Dr. Max Beck³ made an examination of 56 samples of Berlin market milk. A definite portion of each sample of milk was injected into the peritoneal cavity of a guineapig, and in this manner it was found that 62.3% of the samples contained streptococci. These streptococci produced purulent peritonitis, causing the death of the animal in 3 or 4 days. All the experiments of Beck, with pure cultures of these streptococci, indicate that they were probably identical with the ordinary *Streptococcus pyogenes*.

During the past summer a number of samples of milk, collected from individual cows, were examined for the presence of streptococci, and they were found to be present in the milk of some cows and absent from that of others. They were found somewhat more frequently in the milk of cows kept under unfavorable conditions than in that of cows kept under the best hygienic conditions, though the differences were not very marked, probably on account of the season of the year at which the examination was made. The examinations were made by centrifuging 10 cc. of the milk and then examining stained films prepared from the sediment.

Of 40 samples of market milk examined in this manner 90% were found to contain micrococci, while in 50% of the samples streptococci were definitely found. It is also most probable that most of the other samples containing micrococci contained streptococci, but no definite chains of cocci were found in these.

Of 16 samples of mixed milk collected from one of our best dairies only 12.5% contained micrococci, while only 6.25% contained streptococci. Of 28 samples collected from another of our best dairies only 17.8% contained micrococci, and no streptococci were found. In another first class dairy, of 7 samples of mixed milk examined, 85.71% contained micrococci, and 28.57% contained streptococci. In still another first class dairy, of 8 samples examined, 62.5% contained micrococci, while none contained streptococci.

Cultures of streptococci were isolated from the milk of several individual cows and inoculated into the skin of the ears of rabbits, but, aside from slight edematous inflammation at the point of inoculation, no results were obtained. Eight samples of milk derived from individual cows belonging to first class dairies were injected into the peritoneal cavities of guineapigs but only 3 of the animals died and *Staphylococcus pyogenes aureus* was isolated from the peritoneal cavity and organs of these animals; no streptococci were found. While streptococci had been found in limited numbers in these samples of milk by cultural methods none had been

found by examination of the sediment of the centrifugized milk.

Nothing definite can, as yet, be stated with regard to the significance of the presence of streptococci in the milk of healthy cows. Beck believes that they are closely related with the streptococci which Escherich found in infantile enteritis, and states that Romme also believes that they are the cause of severe forms of colitis in children. Judging from the results of Beck's experiments, it is most probable that these organisms are not infrequently the cause of serious gastrointestinal disorders in infants. The effects noted in the infant whose illness led up to the present investigation, indicate that this source of infection should always be taken into consideration where the cause of the sickness is not at once apparent.

In the light of the results obtained from this examination, and those of Ward, Eastes and Beck, the labors of the Pediatric Society of Philadelphia, in the direction of securing a satisfactory milk supply for infant feeding, are most praiseworthy. The most important phase of their labors consequently is not so much the securing of milk of low bacterial content, but the systematic examination of the herds and dairies from which the milk is derived. While no inflammatory conditions of the udders were noted in the cows whose milk was examined, it is probable that repeated examination of herds by competent veterinarians will tend to the detection of any such conditions should they exist in any herd. The extreme cleanliness which is necessary in order to produce milk containing less than 10,000 bacteria per cubic centimeter will also tend to the exclusion of extraneous bacteria from milk. In this respect herdsmen should be cautioned regarding the danger to the milk from the hands of milkers having even slight lesions. The entrance of such bacteria into a milk poor in bacteria would be followed by enormous multiplication under favorable conditions of temperature.

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CASE OF CONGENITAL FORM OF HERNIA OF THE APPENDIX VERMIFORMIS IN CONJUNCTION WITH A CYST OF THE CANAL.

BY

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Brux, [Hon. F.R.C.S., Ed., M.R.C.S., Eng., Fellow Med. Chir. Soc., London, Visiting Surgeon to St. Mary's Hospital.

W. A. F., a mariner, aged 16, and a native of Liverpool, England, was admitted to St. Mary's Hospital, January 16, 1901, complaining of pain and swelling in the right iliac region.

His previous history was good, but in 1891 he had enteric fever. Two months prior to his admission to St. Mary's he experienced pain in right iliac area. This was aggravated by going aloft on his ship and by straining at stool. His bowels were regular, but on 3 different occasions he vomited. About this time a swelling appeared at the external abdominal ring which lasted for 3 weeks, disappearing when a cold compress was applied.

The patient was a well developed and well nourished young man, about 5 feet 7 inches in height, the abdomen was normal in outline, save a slight fullness in the right inguinal canal.

There was a tenderness over the whole right iliac fossa, which was most marked on pressure at a point midway between the anterior superior iliac spine and the umbilicus, the bowels were irregular. He was kept under observation for 14 days. The pain in area above noted varied from day to day, at times being severe, at others absent. The part was, however, always sensitive to touch. Vomiting occurred on several occasions.

The treatment pursued was palliative, consisting of hot fomentations to the painful region, and mild aperients, as castor oil, the diet was restricted to peptonized milk; but as there was no improvement, I determined to open the abdomen.

The patient being prepared, and the usual aseptic precautions having been taken, the operation was performed on January 26, 1901. The line of incision extended along the outer border of the rectus, about 3 inches in length, so that its center corresponded to a point midway between the anterior superior iliac spine and the umbilicus. On opening the cavity of the peritoneum the following conditions presented: The internal abdominal ring was patulous, and lying just inside it was the appendix, which measured $3\frac{1}{2}$ inches, and had a long mesentery at its upper third, the remainder being free. The entire organ was somewhat hypertrophied and evidently contained some semifluid material.

On passing the forefinger into the internal abdominal ring, it caught on a fine cord descending along the inguinal canal. This, on being withdrawn, was seen to consist of a filament of white fibrous tissue about $3\frac{1}{2}$ inches in length, ending in a cyst about the size of 2 lima beans. The cyst wall was of very delicate structure, containing a clear straw-colored fluid. The finger could now be passed down the canal to the testicle, which was below and behind. The upper, lower and anterior surfaces of the organ could be well made out, proving the condition to be congenital. The pedicle of the cyst was found to spring from the distal portion of the cecum and was, no doubt, a cystic degeneration of one of the appendices epiploicæ. This was removed with the appendix in the usual manner.

It now remained to close the internal ring, which was accomplished the more readily by reason of the extreme looseness and redundancy of the peritoneum, the peritoneal lining of the canal could be drawn out of the canal like an invaginated finger of a glove at its base. This portion was sutured across with catgut and the whole lower segment brought up into the inferior angle of the wound and there firmly sutured; thus the upper end of the canal was obliterated. The orifice was covered by a smooth continuous portion of the peritoneum, leaving no hole or depression for future trouble. The abdomen was closed with one row of interrupted silk worm gut sutures.

The patient made an uninterrupted recovery; the wound not being dressed until the eighth day, when it was found to have healed by first intention; the sutures were removed on the tenth day, the cicatrix was solid, presenting a straight linear scar. The patient sat up on the lounge on the fourteenth day. He said, "the pain and discomfort have left." He is now on light diet. The bowels have acted regularly since the second day of the operation. The temperature has been normal and the pulse has averaged between 60 and 64.

I have never, up to the present time, seen or heard of a case quite like the above. Probably there have been such but I have failed to run across their reports.

The Fabrication of Antiplague Serum in the laboratory established recently at Manguinhos, was placed under the control of the Federal Government on May 24, 1900. Since then it has been under the charge of the general board of health, by which its name was changed to "Institute Serotherapico Federal."

The Bacteriologic Laboratory at Rio Janeiro for the examination of suspected cases of diphtheria and distribution of the respective serum, is connected with the vaccination institute. During the year 1900 there were distributed 806 bottles of serum, received from the Pasteur Institute; there being 559 bottles of antidiphtheric serum, 185 of antistreptococcal serum and 62 of antitetanic serum.

PRACTICAL THERAPEUTICS

Under the charge of
A. A. STEVENS,
Assisted by
L. F. APPELMAN.

Phosphorus in Rachitis.—Monti (*Wiener klin. Woch.*, January 17, 1901) states that phosphorus does not cause the slightest improvement in cases of rachitis. He believes that a specific action has not been demonstrated experimentally or clinically. [Jacobi holds a favorable opinion of phosphorus not only in rachitis, but also in purpura, scurvy and in similar processes. He has obtained the best results from its use in craniotabes. He recommends from 6 to 15 minims 3 times daily of the official elixir of phosphorus.]

Ichthyoforn and its Use in Practical Therapeutics.—Polacco (*Treatment*, February, 1901), records the following results of the use of this drug, which is a combination of formaldehyd with ichthyol: Ichthyoforn is both energetic and innocuous when used as an intestinal antiseptic. It has no untoward effects upon the heart or upon the kidneys. In that most intractable form of diarrhea due to intestinal tuberculosis its action is very successful, and it may be used with good effect in the diarrhea of typhoid fever, and also in dysentery. The drug appears to combine the analgesic and astringent action of ichthyol with the exceedingly energetic influence of formic aldehyd. The average dose to adults is 15 to 30 grains in 24 hours, although in some cases much larger quantities have been taken.

Treatment of Acute Nephritis.—Perrier (*Merck's Archives*, March, 1901) aids elimination and relieves vascular engorgement of the kidneys by placing the patient in bed between blankets, in order to promote the free action of the skin and induce sweating. Profuse diaphoresis is produced by giving hot drinks freely. The bowels should be moved freely every day by the use of saline cathartics in hot, concentrated solution. The diet should be light and at first confined to bland, nutritious liquids. In severe cases the use of the hot-air bath may be necessary. When the urine is scanty or if suppression exists, hot linseed-meal poultices, containing a tablespoonful of mustard, applied to the loins and changed at intervals of 4 hours are generally successful, leeches or cupping over the loins never having been necessary in the author's experience. In the nephritis of scarlatina, when uremia is threatened or has occurred, the hot pack is most valuable with administration of pilocarpine to promote sweating if the heart is strong and the pulse full. In the uremia of acute nephritis, when all other means fail, resort should be had to the subcutaneous injection of normal salt-solution, of which 1 quart should be given and repeated every 6 to 12 hours until relief is obtained. High enemas of the same solution may be substituted but are not nearly so effective. Croton oil in $\frac{1}{2}$ -drop doses every hour until the bowels have moved freely aids in elimination, or elaterium may be given for the same purpose. The free use of natural lithia waters should be continued for some months after convalescence is established. The diet should be gradually extended; farinaceous foods may be given freely but no meat should be allowed until albumin has disappeared from the urine.

Suprarenal Capsule in Diseases of the Lower Air-Passages; a Preliminary Report.—Floersheim (*Medical Record*, November 17, 1900), concludes: The suprarenal powder is indicated in acute and chronic bronchitis, bronchiectasis, asthma, congestion and edema of the lungs, hemoptysis, and in some cases of pulmonary tuberculosis, especially in those associated with hemoptysis. The suprarenal powder should be administered in the form of 3-grain capsules on account of their convenience. The powder should be chewed without water, and then swallowed in a few moments. The action becomes apparent in from 2 to 15 minutes. In some cases the action of the suprarenal powder was permanent, while in the majority of cases the action was temporary, continuing from 10 minutes to 6 hours.

Gastric Hemorrhage and Surgical Treatment.—A. Mayo Robson (*Scottish Medical Journal*, March, 1901) draws the following conclusions for the treatment of gastric ulcer: (1) All cases of acute uncomplicated gastric ulcer should be submitted to thorough medical treatment in the shape of long-continued rest and attention to diet, the patient not being allowed to get up or to resume solid food until at least a fortnight after all disappearance of pain; (2) when the ulceration persists and proves intractable to medical treatment, or when relapses occur, gastroenterostomy should be performed, so as to secure physiologic rest and relieve the hyperacidity of the gastric juice nearly always found in such cases; (3) perforation demands immediate surgical treatment; (4) the complications of disabling adhesions around the stomach and pylorus, pyloric contraction and hour-glass contraction due to chronic ulcers leading to pain, dilation, loss of flesh, and general impairment of health, and now often treated as chronic indigestion, should be treated surgically; (5) in recurring, or so-called chronic hematemesis from chronic ulcer, surgical treatment is decidedly called for; (6) in acute hematemesis, further accuracy in diagnosis as to the size of the bleeding vessels is urgently needed; and the cooperation of the physician and surgeon is advisable in all cases of hematemesis, so that if relief be not obtained by medical and general treatment, surgical means may be adopted if the bleeding is believed to occur from a large vessel; but seeing that capillary hemorrhage is capable of relief by medical means alone, medical should always precede surgical treatment.

Intravenous Injections of Cinnamic Acid in Tuberculosis.—Hödlmoser (*Zeitschrift für Heilkunde*, 1900, No. xi) reports 18 cases of tuberculosis treated with intravenous injections of cinnamic acid. The injections were given daily for from 1 to 6 months. Sixteen of the cases had pulmonary tuberculosis; 1 had tuberculous peritonitis, and 1, tuberculosis of the lungs and joints. Of the whole number 22% improved. How far improvement is to be attributed to the cinnamic acid is still an open question. Under this treatment Fraenkel reported 90% improved, and Weismayr, 74% improved. Hödlmoser believes with Ewald that the treatment is worthy of further study.

The Treatment of Whooping-cough.—Goodson (*Treatment*, February, 1901) says that the method of treatment he has found most satisfactory is the following: Begin at once with the continuous inhalation of creasote. Clear the lungs of bronchitis as much as possible before using any special internal antispasmodic remedies. In bronchopneumonia, however, belladonna appears at once to do good. In all cases, when the chest is fairly clear and the circulation good, antipyrin may be given in suitable doses. Expectorants should be combined with the antipyrin. Good air, warm clothing, light and wholesome food are necessary in all cases. He has followed these rules for the last 6 years, and am quite satisfied with the results. The average length of time required for cure in a variety of cases last year was 19.8 days, but these figures in no way represent the benefit derived from the creasote treatment. In every case the diminution in the number of paroxysms was so immediate that the patients willingly put up with the inconvenience of the smell of the drug for the sake of its manifest advantage. This in itself is a sufficient testimonial to the remedy to warrant its more extensive employment.

The Treatment of Burns in Infancy and Childhood.—C. W. Allen (*Pediatrics*, March 15, 1901) states that he knows of no better local remedy for burns of the first and second degree than picric acid. Applied in a 1% watery solution it has the effect of giving almost immediate relief from pain, and healing takes place rapidly under its use. After the burned area has been coated once or twice with the solution a thin layer of absorbent cotton may be applied dry, over this a layer of impervious tissue, then as much cotton as is required, and over this a loose bandage. At subsequent dressings all may be removed excepting the dressing next to the skin which may be made wet with the picric acid solution and the dressings be applied as before. The pain of erythematous areas may be greatly relieved

by local baths containing potassium nitrate or sodium bicarbonate in saturated solution. In deeper and extensive burns a permanent bath offers one of the best means of securing comfort and warding off a fatal issue. A narrow tub may be improvised for this purpose. The permanent bath for the entire body, as employed for burns with excellent results in the Vienna Hospital, can be initiated in the severe burns of infancy. Exuberant granulations may be treated by brushing over the surface a strong solution of silver nitrate or passing over the granulations with the solid stick of silver nitrate. As a soothing remedy the author has found carron oil (lime-water and olive oil) useful. He incorporates with it boric acid (5%), thymol (1 to 1,000), carbolic acid (1 to 500), or orthoform (1%). He emphasizes the importance in redressing of allowing the last layer of gauze or cotton to remain on the wound, and applying the solution, oil or ointment over and through it.

Formalin in Pulmonary Tuberculosis.—Hoffner (*Therapeutische Monatshefte*, February, 1901) reports 10 cases of tuberculosis in which he used formalin inhalations with unfavorable results. On the other hand Beerwald (*ibid.*) believes that the inhalations lessen the cough and secretion, sharpen the appetite and promote sleep.

Infantile Scurvy.—J. P. C. Griffith (*Phila. Med. Journal*, February 2, 1901) reports 16 cases of infantile scurvy, and calls attention to the fact that the disease is often mistaken for rheumatism, as pain in legs or arms is often the first symptom. He states that hematuria may be the sole symptom, and that redness and swelling of the gums may be absent, especially if no teeth have appeared. With or without an alteration of the diet a cure usually follows the administration of fresh fruit juice (orange juice). Since in many cases a change of diet is not necessary to effect a cure, he warns us against too quickly altering the food which for certain reasons has been deemed best, simply on the ground that scurvy has developed, a curable scurvy being much to be preferred to a possibly fatal diarrhea or gastritis, the result of a diet which may precipitate these. When raw milk can be used safely it is to be preferred.

The Treatment of the Later Phases of Heart Disease.—Heffron (*Boston Medical and Surgical Journal*, January 31, 1901) states that when compensation has failed it is important to lessen the work of heart by keeping the patient at rest, and by diminishing the volume of blood to be propelled. For the latter purpose he recommends hydragog cathartics in the following order: Elixerium, calomel and salines. The distressing nervousness which increases the irritability of the heart is best controlled by ice-bags locally, and by codein or morphin internally. Heroin he believes is a modern fraud. In cases in which the restlessness was not extreme he has found cannabis indica very efficacious. The diet, of course, must be controlled. When there is dropsy, mechanical means are often necessary before drugs will act. The author advocates the use of the hot-air cabinet and the administration of digitalis, squill or potassium acetate to increase the flow of urine. He believes the oxygen-inhalations are of great value in completing the metamorphosis of waste matter. While strophanthus, spartein, adonis vernalis and eactus are useful, digitalis is the most reliable heart stimulant. In sudden heart failure, quickly acting stimulants—nitroglycerin, ammonia, alcohol and strychnin should be used.

The Action of Iron in Anemia.—Müller (*Deutsche Med. Woch.*, December 20, 1900) concludes from a series of experiments upon young pups that inorganic iron salts act by stimulating the activity of the blood-making organs. In support of this conclusion he found that iron caused a marked increase in the number of nucleated red blood-cells, and an increase in the number of mitoses. He believes that nothing is gained by using complicated preparations of organic iron. On the other hand caustic preparations, like the tincture of chlorid, should be avoided because their action on the gastric mucous membrane interferes materially with absorption. He states a preference for the oxytartrate of iron and for Blaud's pills.

Treatment of Gonorrhoea.—Balch (*Boston Medical and Surgical Journal*, February 7, 1901) states that it is best to treat cases of acute gonorrhoea twice daily for the first week or 10 days, and subsequently to allow the patient to use an injection 2 or 3 times a day for 2 or 3 weeks longer. As abortive remedies he prefers silver nitrate, potassium permanganate and protargol. He uses silver nitrate in a solution of 1 grain to the ounce, or, if the inflammation is not very active, in a solution of 2 grains to the ounce; protargol in $\frac{1}{2}$ % solution, weaker if there is much scalding; and potassium permanganate in a solution of 1 to 4000 in large quantities rather than a less amount of a stronger solution. It is often necessary to give mild astringent injections with any of the above solutions to remove the gluing together of the lips of the meatus in the morning. If the patient is first seen after the disease is well developed, injections, if used at all, should be very mild. It is best to rely on medicines, such as the citrate or acetate of potassium, which make the patient thirsty. The same result is secured by drinking large quantities of water. Compound salol capsules are efficacious, and should be taken after meals and before going to bed. In obstinate cases it is occasionally surprising to see how promptly the discharge subsides when all treatment is suspended.

Sodium Salicylate in Diabetes Mellitus.—Williamson (*British Medical Journal*, March 30, 1901) states that recently he has prescribed sodium salicylate in a number of consecutive cases of diabetes and glycosuria, and in 20 of these he has been able to keep records of the sugar excretion. He does not regard the drug as a specific for diabetes. It does not usually produce any marked diminution of the sugar excretion in the severe forms of the disease; also it has little influence in some of the mild cases. But in certain mild cases of diabetes or persistent glycosuria it has a decided action in very markedly diminishing the sugar excretion. The drug is not suitable for all cases. It must be watched, and fairly large doses are necessary to secure decided results. The author prefers the natural sodium salicylate to the artificial preparation. Ten grains should be given 3 and then 4 times a day, and this amount steadily increased to 15 grains 4 or 5 times a day. Even in severe forms of diabetes, while the sugar excretion is not diminished, patients sometimes gain in weight and improve in general condition under the salicylic treatment.

Treatment of Senile Pruritus.—Jaenecke (*Treatment*, March, 1901) observed that the regions affected in these cases were dry, glazed and ill-nourished, and that a quantity of degenerated epithelial cells could be separated by brushing. He recommends regular friction with a soft brush continued for from 10 to 20 minutes 3 times daily, then twice a day, and finally once every second day, which should be kept up. This removes the degenerated cells and increases the nutrition of the part. At first there may be no observable change either in the irritation or nutrition of the skin; but in a short time the patient experiences marked relief, and in many instances is entirely freed from suffering. No water should be applied to the affected area, as it counteracts the effect of the brushing, and produces only temporary alleviation itself. Patients frequently brush with so much vigor that the skin is abraded, and the itching may be at first increased in intensity. Lanolin inunctions are useful in the intervals.

The Treatment of Typhoid Fever.—Stengel (*Therapeutie Gazette*, November, 1900) recommends camphor as a cardiac stimulant in certain cases of typhoid fever when the maximum of stimulation is required to combat the depression resulting from diarrhea, tympany or other causes. Camphorated oil, consisting of 1 grain of camphor dissolved in 15 minims of sterilized olive oil may be injected under the skin without pain, and with rarely any unpleasant consequences, such as indurations or abscesses. The oil is quickly absorbed and the stimulation is prompt and continuous, at the same time quieting the nervous system. Injections of 1 or 2 grains may be given every 2 hours, although as a rule 4 hours should elapse before the dose is repeated.

The Therapeutic Use of the X-Rays.—H. P. Towle (*Boston Medical and Surgical Journal*, April 11, 1901), reviewing the literature of the therapeutic use of the x-rays, draws the following conclusions: That the real nature of the x-rays is not yet determined definitely, nor whether the therapeutic action following their use is due to the action of the rays themselves, or of something of electrical origin accompanying them; that the treatment is not without danger, unless the greatest care is used; that the effects of the x-rays remain for a long time, and recovery is very slow; that whatever may be the exact origin of the effects produced, a definite reaction is caused in the skin by the use of the x-rays; that the changes induced in the skin are similar histologically to those seen in ordinary inflammation; that the x-rays are not proved to have any bactericidal power; that their therapeutic effect is probably due to the inflammation existing; that hair can be removed by their use, and that lupus and several other diseases can be healed over; that in a few reported cases we may fairly assume that a permanent cure has been effected, but that in a majority of the reported cases too little time has elapsed to rule out the possibility of return of the disease; that the effect of exposure to the x-rays is so extraordinarily slow in disappearing that months should elapse before an absolute cure is assumed; that while the permanency of the cure effected may perhaps be doubtful as yet, it is certainly desirable to experiment further.

Superheated Dry Air in the Treatment of Sciatica, Arthritis Deformans and Scleroderma.—Neumann (*Lancet*, March 30, 1901) states that in upwards of 2,000 applications of superheated dry air at the Landesbad, Baden-Baden, there has not been a single case of scalding. He has not found the immediate remission in the symptoms of arthritis and sciatica, claimed by English writers, but has found that in many cases curative action continues after treatment. In the course of the year he has applied the treatment in 70 cases of lumbago and sciatica, 35 of arthritis deformans, a number of cases of chronic rheumatism, badly mended fractures, severe sprains, painful cicatrices, inflamed flatfoot, 3 cases of scleroderma and 1 of myxedema. No result was obtained in 3 cases of sciatica, in 1 of sciatica and lumbago with special involvement of the ileo-inguinal nerve, and in 1 of ankylosis of the kneejoint. Unequal results were obtained in 2 cases of arthritis deformans, the hands being improved while the knees remained unaffected. Unimproved also were 2 cases of old fracture of the neck of the femur, 1 of inflamed flatfoot, and 1 of scleroderma. All the remaining cases were either substantially improved or completely cured. In a case of scleroderma, almost universal and well-advanced, the results were remarkable.

Surgical Treatment of Ascites Due to Cirrhosis of the Liver.—Packard (*American Journal of the Medical Sciences*, March, 1901) reports 2 cases of cirrhosis of the liver in which an operation was performed with the view of establishing a collateral circulation through peritoneal adhesions. In neither instance was the operation successful. Of 14 uncomplicated cases collected from the literature, 7.1% died immediately, 7.1% died ultimately, and 7.1% were unimproved, 14.3% were improved, and 64.3% recovered. The author's conclusions are as follows: *A priori* cases of cirrhosis of the liver stand injury badly, and therefore are poor subjects for operation. The resistance of their tissues is presumably much less than in health. Without operation these patients as a class are doomed to a life of perpetual invalidism, requiring constant treatment and repeated tappings to make life bearable. It is our opinion that when the diagnosis of portal cirrhosis can be made, and when persistent well-directed medical treatment is productive of insignificant results, the operation should be strongly recommended. On the other hand it would seem that the operation is scarcely indicated in cases of ascites associated with other kinds of cirrhosis (Hanot's syphilitic, mixed, etc.), or with chronic peritonitis.

Treatment of Pneumonia.—T. R. Brown (*Maryland Medical Journal*, January, 1901) states that results of the anti-toxin treatment of pneumonia have been problematical, but that they give encouragement. As to the advances along the

line of symptomatic treatment the author believes that the best results are obtained by careful nursing, diet, hygiene, and by the systematic use of hydrotherapeutic measures during the entire course of the disease, cold sponging and cold packs being more practical than the full tub. Saline infusions are to be employed when the heart-sounds are faint and the pulse is weak. Inhalations of oxygen or medicated oxygen vapors are valuable in extreme cases. Morphin for pain, alcohol and strychnin for stimulation, are the most reliable drugs. The author also calls attention to the importance of disinfecting the sputum.

Treatment of Lupus with Permanganate.—Butte (*Merck's Archives*, March, 1901) recommends the following method of treatment as very efficacious: The entire locality affected with lupus is carefully washed either with ichthyol soap or with the following antiseptic emulsion:

R	
Corrosive sublimate	5 grains
Tincture of benzoin	75 minims
Tincture of soap	1½ ounces
Distilled water	7 ounces.

After applying this, follow with a compress saturated with a warm 2% solution of potassium permanganate, to be kept on for 12 or 15 minutes. This treatment is repeated every day. In about 10 days the tubercles are covered with a blackish coating and are flatter; to the touch they no longer give the sense of elevation, but are atrophied and what is left of them is of a soft consistence. After the first 10 days, the treatment is to be applied only every other day, but must be continued for a period of 2 or 3 months. At the end of this time no more tubercles are to be seen, and the skin presents a smooth appearance; though it is red and cicatricial in character, the process seems to be arrested. Should any new tubercles reappear, a few applications of permanganate causes them to disappear. Of 16 cases treated, only 1 required a full year's treatment. In the rest the above-described results were obtained in from 2 to 3 months.

Poisoning by Chronic Acid Locally Applied.—Shaw (*Merck's Archives*, March, 1901), reports a case of a young woman, who had a mass of vegetations covering the vulva, extending upward toward the pubes and downward to the anus. A solution of chromic acid, 100 grains to the ounce, was applied to cauterize the mass; about a half ounce being used in the process. After coming from under the influence of the anesthetic, the patient complained of great pain in the vulva; about 6 hours later the author was called, and found her with a rapid pulse, nausea and great thirst. This condition was ascribed to the ether, but when called to see the patient early the next morning she was very restless, and frequently called for water, which was immediately vomited: her face was pale, extremities cold, skin covered with profuse perspiration and she expressed fear of approaching death. Consciousness was preserved. Recognizing chronic-acid poisoning, the dressings were removed, and the vagina douched, for fear some of the acid solution might have entered in spite of care, but the mucous membranes showed no evidence of this. At the same time very active stimulating treatment was resorted to internally. The patient remained in this extreme condition for about 36 hours, after which she gradually returned to her normal state and after 2 weeks was able to leave her room.

Fecal Accumulations.—Brunton (*Lectures on the Action of Medicines*) recommends when the impaction is rather high up in the bowel a copious enema of thin starch mucilage, to which has been added about an ounce of castor oil. The thin starch seems to emulsify the oil better than soap and water, and it is easier to give. Another excellent purgative enema, he states, is official in the British Pharmacopoeia; its composition is as follows:

R	
Magnesium sulfate	1 ounce.
Olive oil	1 ounce.
Mucilage of starch	15 ounces.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

March 30, 1901. [No. 2100.]

1. Some Clinical Aspects of Chronic Bright's Disease. ALFRED G. BARRS.
2. On Generalized Infection in Gonorrhoea. ARTHUR H. WARD.
3. A Case of Congenital Hepatic Cirrhosis with Obliterative Cholangitis (Congenital Obliteration of the Bile-ducts). H. D. ROLLESTON and LOUIS B. HAYNE.
4. On the Treatment of Glycosuria and Diabetes Mellitus with Sodium Salicylate. R. T. WILLIAMSON.
5. An Easy Operation for Congenital Ptosis. FREELAND FERGUS.
6. Note on the Peculiar Nystagmus of Spasmus Nutans in Infants. JOHN THOMSON.
7. A Case of Tetanus Neonatorum Successfully Treated with Antitetanus Serum. JOHN McCAW.
8. A Note on the Kneejerk in Chorea. W. GORDON.
9. Notes of a Case of Congenital Hypertrophy with Stenosis of the Pylorus. ANES BLACKADDER.
10. Seasickness. C. BUTLER SAVORY.
11. A Vasomotor Neurosis in Varying Regions of the Same Patient. WILLIAM SYKES.
12. Case of Acute Lobar Pneumonia: Empyema: and Operation During Late Pregnancy. H. M. COOPER.
13. Influenza or Mumps. BERNHARD SMITH.
14. Survival of a Premature Child Weighing 2 Pounds. ROBERT JARDINE.
15. Case of Prolonged Melancholic Stupor: Treatment by Thyroid Extract: Partial Recovery. W. L. CHESTER.

1.—Barrs, in an address on some clinical aspects of chronic Bright's disease, states that the distinctions that pathologists draw between the different forms of chronic Bright's disease are of little clinical value. He believes that acute nephritis ends in recovery or death, and but rarely does it eventuate in chronic nephritis. The nature of chronic nephritis suggests a slow infection; lead may be a cause in some cases, but alcoholism has little to do with the disease. It is believed that renal disease is more properly the cause than the result of gout. As regards the diagnosis, it is stated that when chronic Bright's disease gives rise to symptoms it gives rise to albuminuria; otherwise we cannot recognize it clinically. The idea of chronic Bright's disease without albuminuria is based largely, if not entirely, upon necropsy experience. To diagnose Bright's disease, it is maintained that albuminuria must be present persistently, more or less, but the quantity of albumin and the amount of urea excreted are of no consequence. Urine of low specific gravity without albumin is believed to be an unreliable indication of nephritis, and urine without albumin need not be searched for casts. The association of cardiovascular changes with nephritis is said to be of infrequent occurrence, arteriosclerosis altogether independent of Bright's disease, being a far more common cause of cardiac hypertrophy and also of cerebral hemorrhage, than is nephritis. If the patient's bowels are acting freely, Barrs permits him such mixed diet, including meat, as he has appetite for and can digest. Patients who are confined to bed and suffering from uremic vomiting or diarrhea cannot, of course, have any appetite and the difficulty is to contrive food of any kind for them. In the treatment, beyond the systematic use of purgatives, no drugs are necessary except for the treating of special symptoms as they arise. [A.O.J.K.]

2.—Ward, discussing generalized infection in gonorrhoea, states his position as follows: The gonococcus in its process of growth in the human body produces an irritating toxin. This toxin is the direct cause of all the symptoms of the disease. In all cases it is absorbed into the system, where its presence causes systemic degenerations of varying degrees of severity. Gonorrhoea is thus a general toxic affection; but the microbes that form the toxin are generally localized on or around a mucous tract. The microbial invasion may extend to the organs communicating with the infected tract, or it may penetrate into the tissues, either by direct extension, as in the invasion of the

peritoneum through the uterus and the fallopian tubes, or by a process of growth through the mucous membrane affected. Thence the infection may invade the cellular tissues, the lymphatics and glands, and the vascular system. This invasion is rendered possible by the action of the absorbed toxin upon the leukocytes, which is of a paralyzing nature, and prevents the encapsulation of the microbes by these cells. Having reached the circulation the gonococci may invade the heart and endocardium, or may be carried to the peripheral capillaries. In these they become stranded and grow, producing more toxin, which sets up local inflammation. The microbes invade the joints, and are found in the synovial sacs, and also in the pleura and pericardium. They are probably present in the analogous inflammations of the tendons and periosteum. The invasion of the organism is favored by all too energetic measures directed to the local infection, since they depress the local powers of resistance, and by abrading or lacerating the mucus surface, may directly open the door to invasion. General treatment must vary according to the general conditions, and will differ when these are referred to toxemia alone, or to toxemia complicated by metastases. Local treatment is always required, and should always be free from instrumental, mechanic, or chemic violence. [A.O.J.K.]

3.—Rolleston and Hayne report a case of congenital hepatic cirrhosis with obliterative cholangitis (congenital obliteration of the bile-ducts) in a male child, aged 6 months. The child had been jaundiced since birth, but the jaundice was not extreme. The liver and spleen were much enlarged, but there was no ascites. At the necropsy the liver weighed nearly twice its normal weight and it was the seat of mixed monolobular and multilobular cirrhosis. The common bile-duct was obliterated. Sections of the common bile-duct near its obliteration showed very considerable fibrous thickening of its walls with complete alteration of its normal epithelial lining. Discussing the hypotheses held to account for the condition, it is concluded that the disease is primarily started by poisons derived from the mother and conveyed to the liver of the fetus, and that a mixed cirrhosis and cholangitis is thus set up. The cholangitis accounts for the jaundice, and by descending to the larger extrahepatic bile-ducts induces an obliterative cholangitis. In some cases, especially those fatal in early life, the latter change has not been effected, and cirrhosis alone is found. Possibly in some instances this change never occurs, and in this way some of the cases of cirrhosis in very early life are accounted for. Again, in exceptional cases, the obliterative cholangitis might possibly be delayed and come on much later. It is possible that there are several conditions at present included under the title congenital obliteration of the bile-ducts, and that some are due to constriction of the duct by localized peritonitis, and deserve the title more than those cases which are intimately associated with cirrhosis. [A.O.J.K.]

4.—See Therapeutic department.

5.—Fergus describes a new operation for congenital ptosis which consists in making a horizontal incision along the whole extent of the eyebrow separating the skin from the underlying structure for about 2 inches above this incision and to almost the edge of the eyelid below. A vertical band of the occipitofrontalis tendon, about $\frac{1}{2}$ of an inch broad and 2 inches long, is then dissected free, so that its only attachment is to the occipitofrontalis. This band is then drawn down into the upper eyelid and secured by catgut sutures as near the edge of the lid as possible. The incision is then closed. [J.W.M.]

6.—Thomson, in a note of the peculiar nystagmus of spasmus nutans in infants, points out that in spasmus nutans the horizontal nystagmus is convergent as contrasted with the conjugate character of the ordinary horizontal nystagmus, and that in the rotatory nystagmus of head-shaking the eye movements are more of the nature of circumduction than pure rotation. In addition, the nystagmus of spasmus nutans is often unilateral, instead of being very rarely so; and it is often vertical or rotatory, instead of being nearly always horizontal. The direction of the movements, also, is occasionally different in the 2 eyes—that is, vertical or rotatory in one eye, and horizontal (at the same time) in the other. Lastly it is invariably recovered from in a certain number of months. [A.O.J.K.]

7.—McCaw reports a case of *tetanus neonatorum* successfully treated with antitetanus serum, administered subcutaneously. The diagnosis was confirmed by bacteriologic investigations. [W.K.]

8.—Gordon speaking of the *kneejerk* in chorea, states that with the patient recumbent, if one raises the knee allowing the heel to rest on the couch making sure that all the muscles of the limbs are relaxed for the time being, and if one then tests the *kneejerk* in the usual way, the foot is found to raise more or less smartly; but instead of falling back immediately, it remains suspended for a variable time—hung as it were—and then slowly sinks back to its initial position. This peculiarity of the *kneejerk* is thought to shed some light on the nature of chorea and to be of diagnostic value. [A.O.J.K.]

9.—Blackadder reports a case of congenital hypertrophy with stenosis of the pylorus, occurring in an infant, aged 8 weeks. The diagnosis is said to be simple when a tumor can be felt. Constant vomiting, especially when it assumes the character peculiar to the vomiting of dilated stomach, and when associated with obstinate constipation from birth, is said to be very suggestive of pyloric hypertrophy. [A.O.J.K.]

10.—Savory, from his observations on seasickness, concludes that it is due to irritation of the 2 terminal branches of the auditory nerve going to the cochlea and semicircular canals. [A.O.J.K.]

11.—Sykes reports a case of vasomotor neurosis in varying regions of the same patient, a woman, aged 32 years. She was of hysteric habit and had had ailments accompanied by excessive fluid secretion from different regions—diarrhea, perspiration, and bronchial mucorrhoea with asthma—all of which were referred to vasomotor dilation. The case is believed to support the view that asthma is a vasomotor neurosis. [A.O.J.K.]

12.—Cooper reports a case of lobar pneumonia with empyema during the last month of pregnancy, in which a portion of the seventh rib was removed in order to evacuate the pus. This was followed by the birth of a living child and the complete recovery of the patient. [W.K.]

13.—Smith has a brief note on the occurrence of influenza or mumps in several members of the same household. [A.O.J.K.]

14.—Jardine reports the birth of a living child only 13 inches long and weighing 2 pounds, the gestation having lasted not more than 6½ months. It was kept in an incubator at a temperature of 95°, and at the end of a fortnight had lost ¼ pound in weight; it then remained the same for 2 weeks; but at the time of writing again weighed 2 pounds and was quite lively, kicking vigorously when washed. This case is an exception to the rule that infants weighing less than 3 pounds rarely survive. [W.K.]

15.—Chester reports a case of prolonged melancholic stupor (more than 2½ years), occurring in an adult man, and treated with thyroid extract (almost 600 5-grain tablets), with partial recovery. [A.O.J.K.]

The Lancet.

March 30, 1901. [No. 4048.]

1. Topographical Anatomy of the Abdominal Viscera in Man. CHRISTOPHER ADDISON.
2. Some Recent Developments in the Administration of Anesthetics. FREDERIC W. HEWITT.
3. Cases of Injury to the Epiphyseal Line. ROBERT BUCKNALL.
4. Treatment of Collapse of the Ala Nasi. W. J. WALSHAM.
5. Treatment of Scleritica, Arthritis Deformans, and Scleroderma by Superheated Dry Air (the Tallerman System). FR. NEUMANN.
6. Notes on a Case of Temporosphenoïdal Abscess Following Middle-ear Suppuration: Operation: Recovery. PERCY JAKINS.
7. "Selenium Compounds as Factors in the Recent Beer-poisoning Epidemic." F. W. TUNNICLIFFE and OTTO ROSENHEIM.
8. The Management of the Home Military Hospitals. W. PUGIN THORNTON.
9. A Case of Malformation. W. R. II. STEWART.
10. A Case of Landry's Paralysis. ANDREW ROSE.
11. "A Case of Pemphigus Neonatorum in an Infant Three Days Old." VICTOR J. HOBGSON.

12. A Successful Case of Excision of the Cecum, Vermiform Appendix, and Portion of the Ileum for Carcinoma. GEORGE HEATON.

1.—Addison, in his second Hunterian Lecture on the topographic anatomy of the abdominal viscera, discusses lateral displacements of the pylorus; movements of the stomach; the influence of the stomach upon the shape and position of the parts behind it; the duodenum with reference to variation in its position and its shape; the small intestine; the peritoneum with reference to prolapse of the mesentery and other structures; and the lower end of the ileum. The lecture, which is of much value, does not lend itself to abstracting. [A.O.J.K.]

2.—Hewitt discusses recent advancements in the administration of anesthetics and describes the use of an inhaler for the administration of nitrous oxid and ether in succession which is a modification of the Clover inhaler. It has a larger base permitting a freer exchange of gas. He also describes a modification of the Junker's inhaler for the consecutive administration of nitrous oxid, ether and chloroform, and a chloroform prop which serves as a mouth-gag to which is attached a metal tube which transmits chloroform from a Junker inhaler. It is used in operations on the mouth and nose. [J.W.M.]

3.—Bucknall details 6 cases of epiphyseal separation. This may occur without any displacement, when its recognition is particularly important. When displacement occurs it must be determined by careful measurements on the uninjured side. The treatment consists in the application of a molded fixation dressing, or, if necessary, wiring, followed on the tenth day by passive motion to prevent the formation of adhesions following the effusion into the synovial cavity of the proximal joint. [J.W.M.]

4.—Walsham describes an operation for the relief of collapse of the ala nasi, which consists in dissecting up from the inner wall of the vestibule a thick strip of mucous membrane denuded of epithelium about ¼ of an inch wide and leaving it attached above. The surface of the pit at the angle of the bending of the lower lateral cartilage is then denuded of epithelium. The strip of tissue is rolled up as a bandage and applied to the denuded pit, where it is retained by a suture passing into the other nostril and back. Union occurs and this mass of tissue serves to prevent the ala from falling in contact with the septum during inspiration. [J.W.M.]

5.—See the department of Practical Therapeutics.

6.—Jakins describes a successful operation for temporosphenoïdal abscess following suppurative middle ear disease in a young man of distinct tuberculous tendency. For 2 years he had a discharge from his ear which was not improved by the removal of a polypus 5 months before he came under observation when he suffered from pain all over the side of the head, with excessive tenderness over the mastoid, giddiness, nausea, drowsiness, and emaciation, with temperature 99.4°, pulse 64. The antrum was opened and cureted, granulation-tissue and cholesteatoma being removed. The bone over the temporal region was trephined but in the absence of bulging of the dura it was not opened. For 3 days he did well, when he complained of severe occipital pain, became drowsy, comatose and developed hemiplegia. On operation the dura, which was bulging through the trephine opening, was incised, a trocar and canula inserted into the brain substance and 2 ounces of pus evacuated. Drainage was established, the wound packed, and the patient gradually progressed to complete recovery. Two points, are emphasized: (1) The presence of a polypus or granulation-tissue is indicative of antrum or attic trouble or both; (2) suppuration from the middle ear which does not yield promptly to treatment should be subjected to surgical interference. [J.W.M.]

7.—Tunncliffe and Rosenheim, reverting to the subject of selenium compounds as factors in the recent beer-poisoning epidemic, reaffirm their previous observations that selenium compounds have played a definite role in the recent beer-poisoning epidemic, their part being, however, subsidiary to that of arsenic. They discuss certain of the chemic tests for the detection of arsenic and selenium, with reference to the recent article of Willcox (AMERICAN MEDICINE, page 41). [A.O.J.K.]

8.—Thornton, in an article on the management of home

military hospitals, details the general conduct of the military hospitals in England and points out instances of defects that he believes could be remedied. [A.O.J.K.]

9.—Stewart reports a remarkable case of malformation in a child. It had a double harelip with a double cleft palate, bilateral corneal ulceration and supernumerary auricles. The right ear was represented by an enlarged lobule and a portion of the tragus. No meatus could be found. By removal of a portion of the maxillary bone both clefts were successfully closed. The child died afterward. No autopsy. [J.W.M.]

10.—Rose reports a case of Landry's paralysis in a youth, aged 18 years. The patient was suddenly affected with a sensation of coldness, pain in the back and right side, and immediate loss of power in his legs. When examined 3 hours after the onset of symptoms, paralysis of motion and sensation in the legs was complete, the reflexes were abolished, and no response to the electric current could be obtained. A strong faradic current elicited only a sluggish response from the muscles of the arm. The mind was quite clear. At the end of 12 hours more the patient was much worse, the heart was failing, the respiration was frequent and labored, and there was little or no response to the electric current from the muscles of the arm. He died within 24 hours of the onset and was conscious to the end. At the necropsy the brain and spinal cord appeared quite healthy. The case is noteworthy on account of the sudden onset without premonitory symptoms, the very rapid course, and the absence of sensation over the paralyzed area. The course of the disease suggests the operation of some infective toxin. [A.O.J.K.]

11.—Hodgson reports a case of pemphigus neonatorum in an infant 3 days old. The bullas appeared first over the eyes (on the third day); later others developed on the abdomen near the umbilicus, the fold of the groin, the outer part of the thigh, and the nape and sides of the neck. At the end of 3 weeks the child had entirely recovered. The opinion is expressed that the condition was not due to syphilis. [A.O.J.K.]

12.—Heaton reports a case of intestinal resection for carcinoma of the cecum. The mass was delivered from the abdomen and about 3 inches each of the ileum and ascending colon excised with it. Lateral anastomosis was done by the use of Murphy's button. Complete recovery followed. [J.W.M.]

Journal of the American Medical Association.

April 13, 1901. [Vol. XXXVI, No. 15.]

1. Reflections Upon the Present Status of Clinical Medicine. ALOYSIUS O. J. KELLY.
2. The Present Status of Spinal Surgery. SAMUEL LLOYD.
3. Joint Tuberculosis. DEFOREST WILLARD.
4. Permanent Catheterization. J. RILUS EASTMAN.
5. Suggestions for the Reconstruction of Syphilitic Noses. JOHN B. ROBERTS.
6. The Medical Treatment of Peptic Ulcer. FREDERICK C. SHATTUCK.
7. Lavage of the Stomach as a Therapeutic Agent in the Treatment of Habitual Constipation. C. D. SPIVAK.
8. What Drug Standardization Means for the Physician. A. R. L. DOHME.
9. A Visit to "Jesus Hilfe," or the Leprous Hospital at Jerusalem. JACOB E. SCHADLE.
10. Conjugal Tuberculosis. A Study of Case to Case Infection. H. M. BANNISTER.
11. Keloid Following Traumatism. W. M. COLE.
12. Immunity Against Zymotic Disease. WILLIAM J. CLASS.
13. Yellow Fever and Its Transmission. CHARLES FINLAY.
14. Some Technical Supplements in Complicated Enucleations. M. F. WEYMANN.

1.—The address deals with the relations of science to clinical medicine. The practice of medicine without being well grounded on the sciences leads to charlatanism. A knowledge of physics and mechanics is necessary to appreciate the causes and the repair of fractures, deformities, hernias, etc.; of physiology and chemistry in understanding the problems of internal medicine. To be a good diagnostician and rational therapist one must know pathology, not only the macroscopic and microscopic appearance of morbid tissues and organs, but

the natural history of disease. Only so can the physician discriminate between disease processes and detect the insidious onset of certain chronic diseases. In etiology, research has given satisfactory evidence of the bacterial origin of anthrax, tuberculosis, relapsing fever, leprosy, actinomycosis, glanders, gonorrhoea, typhoid and Malta fever, diphtheria, cholera, lupus, tetanus, influenza, plague, erysipelas, dysentery, pneumonia, cerebrospinal meningitis, various septic infections, meat poisons, etc., while to the lower forms of animal life have been traced filariasis, malaria and some varieties of dysentery, recent investigation showing other varieties to be of vegetable origin. The most noteworthy of recent discoveries are those of the role of the mosquito in propagating malaria and probably yellow fever. With the knowledge of the cause of diseases has come a better understanding of the problems of resistance. To the method of physical exploration in aiding diagnosis, introduced at the beginning of the century, has been added of late years laboratory methods. No one alive to his responsibilities can neglect these aids and a knowledge of them can be mastered by any one having the inclination. Much light has been thrown on disease problems by the discovery of the elaboration of toxins and their selective action, and the establishment of the doctrine of internal secretions. Modern sanitary science is founded upon these advances in pathologic knowledge. It has promoted the welfare of the community, prolonged life and prevented many epidemics. To it is due the crusade against tuberculosis. To the scientific spirit is due the fact that the physiologic action of each drug has been carefully worked out, and when our treatment must be symptomatic it is at least intelligent. The crowning glory lies, however, in serum-therapy, so markedly successful in diphtheria and relapsing fever and promising so much in other fields. [H.M.]

2.—Laminectomy for Pott's disease is applicable to less than 50% of all cases, but is destined to more therapeutic importance than heretofore. In Lloyd's list of cases (15) there was no death from operation, it occurring later from advance of the tuberculosis. Two operations were ultimately successful. Success would be greater if patients could be seen earlier, especially when the lesion is restricted to the posterior part of the spine. The operation is also indicated when mechanical treatment fails, and extension of the disease threatens, and also when degeneration of the cord begins. Cases of posterior spinal involvement with paraplegia should be operated on as the lesion is easily reached. The cervical region is the least satisfactory, the dorsal the next, and the lumbar and sacral regions the best for operation as regards mortality. If care was taken to protect the vertebral artery and origin of the phrenic nerves results in the cervical region would compare much more favorably with those of the dorsal region. One hundred and fifty-four cases are tabulated. The article will be continued. [H.M.]

3.—A large proportion of cases of joint tuberculosis are not recognized until actual destruction has taken place. At the beginning cure is perfectly feasible. Constitutional symptoms, swelling, redness and pain are absent. Muscular rigidity is pathognomonic. For diagnosis the patient should be stripped and comparison of positions and motions made. The majority of cases are treated for rheumatism which never occurs in a single joint in children. Proper treatment includes rest, relief from weight bearing, fresh air, good food. The particular splint employed is of no consequence. [H.M.]

4.—Permanent catheterization fell into disrepute before the advent of asepsis. Eastman's cases show that the danger of mechanical urethritis and cystitis is perhaps overestimated. Tolerance is more marked when a large instrument is used and it is more easily retained. The possibility of friction is restricted and spasm is relieved much as in dilation of an irritable sphincter ani. The lumen increases in size from absorption of tissue. Salol and eystogen are administered during retention, and in some cases antiseptic injections are used. [H.M.]

5.—Syphilitic deformities are (1) those in which alar columella, or other parts of the external nose have ulcerated away; (2) those in which the supports of the cartilaginous nose have been destroyed, causing depression below the nasal bones; (3) those in which (2) has been followed by cleatricular invagination of the alar or end of the nose. Perforation of the hard

palate, loss of part of the alveolar process, cicatrix from ulceration of the soft palate and loss of nasal tissue may complicate. Cases of the first class are improved by **plastic operations**. Alas are constructed from cheek flaps, columella from the upper lip. Trimming and modelling follow after healing is complete. In the second class a transverse incision is made in the sunken area, the lobule is carried downward until the openings of the nostril are brought from the vertical into the normal horizontal plane, and the space between the lobule and nasal bones is filled with flaps from cheeks and forehead large enough to allow for retraction in healing, and rigid enough to maintain a straight line along the dorsum. Six or 12 months may be required to complete the reconstruction, in order to allow between each step for cicatricial contraction. An opening in the hard palate must be closed by an obturator. A lever may be attached, with spring joint and narrow pad, to act as ridge-pole to the nasal roof. When much new tissue is needed, a large flap from abdomen or thigh may be attached to the hand and afterwards transferred to the face. Scars become scarcely perceptible in time. After active syphilitic processes have ceased, wounds heal as quickly as in healthy persons. [H.M.]

6.—Shattuck advises for **peptic ulcer**, rectal feeding for 2 weeks. If discomfort persists or hunger is importunate, morphin—gr. $\frac{1}{2}$ to $\frac{1}{4}$ —is given twice daily. After a daily cleansing enema, from 6 ounces to a pint of milk with egg may be given every 6 hours. Statistics show very favorable results when rectal feeding is persisted in for more than 10 days. [H.M.]

7.—**Lavage of the stomach** relieves habitual constipation. This is attributed to excitation of peristalsis. The best results follow the use of cold water, or cold and hot alternately 1 hour before breakfast for 3 weeks, and at greater intervals later. [H.M.]

8.—Opium, cinchona and nux vomica are the only things which have an established standard of alkaloidal strength in the United States pharmacopeia. In the case of some powerful drugs the pharmacist depends upon his eyes, nose and judgment as to the strength of the article he is buying, and is often deceived. In other cases manufacturers have assayed and standardized their own products, but what is needed is a **national standard** in order that **physicians** may depend upon getting uniform results. When this is demanded by physicians it will be established by the Revision Committee in the following edition of the Pharmacopeia, except in cases in which the chemistry of drugs is not sufficiently known. All that is needed is the encouragement and cooperation of the medical fraternity. [H.M.]

9.—Following a description of the **hospital** and its management is a review of the clinical features of the nodular and nervous forms of **leprosy**, with a history of typical cases illustrated by photographs. [H.M.]

10.—Banniske reports 32 cases known by himself and 34 by Bridge, of Los Angeles, of **tuberculosis in husband or wife**. Out of the total there are only 5 cases of possible communication from one to the other, these all being from the wife to the husband, supporting the theory of lesser predisposition in females. The family histories obtained indicate much greater personal risk so far as danger of acquiring the disease is concerned from a tuberculous parent than from a husband or wife so affected. [H.M.]

11.—The pathology and treatment of **keloid** are described and 4 cases following **burns** are reported. [H.M.]

12.—After a brief description of the chief theories of **immunity** including phagocytosis, alexins, antitoxin, that associated with race and heredity and that conferred by previous attack, age, prolonged residence and temperament, Class presents his theory as to how this immunity, aside from all description of its chemie nature, may be acquired. The majority of persons acquire it through the agency of the specific germs themselves. These enter the body in quantities too small or of insufficient virulence to produce a typical attack of the disease but in sufficient numbers and virulence to form an antitoxin which protects against further invasion. This theory explains the escape of the vast majority from smallpox before the days of vaccination when all were exposed, and also the susceptibility of new arrivals in the tropics to yellow fever and the epidemics of

measles in certain South Sea islands, in which not a single inhabitant escapes the before unknown disease. The finding of Sanarelli's and the Kiebs-Löffler bacillus and **Diplococcus scarlatina** in healthy individuals, or those who have died from some other cause, further supports the theory. It does not explain the immunity of the young. Infection in childhood usually occurs through the nasopharynx, and in very young infants the crypts and lymphoid tissue of the tonsils are developed very slightly, and the bacteria are deprived of a suitable breeding place. [H.M.]

13.—Finlay believes the **enlex mosquito** is the agent of **yellow fever transmission** in Havana but it is possible that in other centers other species may assume the role. The discovery that a mosquito may be contaminated by a single bite opens the way to great improvement in Finlay's former method of preventive inoculation. Fomites do not carry infection except as a possible hiding place for the live mosquito. Precautions should be taken against the importation of eggs lest the brood hatched increase the difficulty in controlling the spread of the disease from a case accidentally introduced. A case cited shows that contamination of the mosquito may occur as late as the fifth day of the disease, and that as early as 2 days after contamination the bite will cause a mild attack in the nonimmune. [H.M.]

14.—Stout sutures passed near the lid margins may be used as retractors in cases in which ordinary ones are useless. When the eyeball is ruptured suturing and distending with salt solution or paraffin makes **enucleation** easier. [H.M.]

Boston Medical and Surgical Journal.

April 11, 1901. [Vol. CXLIV, No. 15.]

1. A Review of the Literature of the Therapeutic Use of the X-Rays. HARVEY P. TOWLE.
2. Pathology of the Newborn as Illustrated in the Practice of the Writer. FREDERIC W. TAYLOR.
3. Oblique Subtrochanteric Osteotomy for the Lengthening of the Femur, and Correction of the Deformity of Flexion Resulting from Hipjoint Disease. E. G. ABBOTT.
4. A Case of Chin Left Posterior. H. T. SWAIN.

1.—See Therapeutic department.

2.—In 654 deliveries Taylor found 64 of the children presenting **pathologic conditions**—almost 10%. None was less than 7 months' development, and 23 were stillborn, 9 of them being forceps deliveries. Many causes for death are assigned in the various cases, but not all were explainable. Twenty-two died shortly after birth; asthenia is the cause of death assigned for 8, which is the largest group. One had an occlusion of the esophagus. Delayed respiration occurred in 10 cases, and it took 1½ hours to fully restore 1 child; vigorous slapping successively over all parts of the body seemed to be the most effectual remedy in this case. Mild ophthalmia occurred in 3; melena in 2; cleft palate, nevus, fracture of the clavicle, depression of the skull, facial paralysis, each affected 1. The paper aims to stimulate more careful recording in this field. [J.W.H.]

3.—Abbott reports a case of **oblique subtrochanteric osteotomy for lengthening the femur and correcting the flexion deformity resulting from hipjoint disease**. The operation is as follows: The femur is divided obliquely at an angle of 30° about 4 inches below the great trochanter. The section is partly made by the use of an osteotome and completed by fracture. A Buck's extension-apparatus is then applied to secure relaxation of the muscles. The length and position are thus regulated, and a splint is firmly applied to retain it in the corrected position for about 8 weeks, when all apparatus is removed and the patient is permitted to go about on crutches. In the case reported the result was excellent. The making of a radiograph before operation is advised, as the size of the femur is thus determined as well as the point at which the osteotome must be entered to sever the attachment of the iliopsoas muscle from the lesser trochanter. [J.W.M.]

4.—In this case of **face presentation** no abnormal point of infringement could be found, and yet all efforts to cause flexion and rotation were unavailing, even under full anesthesia. The head was finally pushed up above the inlet and podalic version accomplished, and delivery by the half breech method. [J.W.H.]

Medical Record.

April 13, 1901. [Vol. 59, No. 15.]

1. Remarks on Enteroptosis. MAX EINHORN.
2. Small Hospitals and their Administration. LOUIS N. LANEHART.
3. X-Ray Photography. EUGENE R. CORSON.
4. Some Facts of Responsibility in Spirit and Drug Takers. T. D. CROTHERS.
5. An Unusual Case of Partial Recovery from Embolism of the Arteria Centralis Retinae. EDGAR S. THOMSON.

1.—Einhorn uses the word **enteroptosis** to signify a general tendency to prolapse of the abdominal organs. In etiology the corset is important; belts may also cause dislocation of organs. Constitutional weakness explains some cases. These frequently show a floating tenth rib. A weakened abdominal wall from whatever cause is a primary factor. Given this condition, coughing or vomiting may produce prolapse. The frequency can be gauged only by clinicians well versed in examination for these anomalies. Einhorn examined 1,912 patients consecutively, and out of 1,080 males found 70 cases of ptoses of abdominal viscera, including 20 of enteroptosis. In 832 females there were 277 ptoses, including 240 of enteroptosis. Subjective symptoms may be absent, but are generally present and are frequently a faint feeling after rising; fatigue after slight exertion, especially walking, combined in women with backache; a feeling of weight in the lower abdomen and a dragging in the epigastrium; flatulence; constipation in most cases and frequent micturition in many. Complicating disorders of digestion do not yield easily to the usual remedies. Prolonged cases lead to anemia and in consequence to neurasthenia. The objective symptoms are thinness; flaccid abdominal walls too commodious for their contents; protrusion of the abdomen beginning at the navel with a caved-in epigastrium, found principally in females, and occasional diastases of the recti muscles. Gastroptosis is a significant sign, and can be demonstrated by gas inflation, gastrodigraphy and splashing sounds. The latter can be elicited by tapping above and below the navel. In this condition the sounds are absent immediately below the ribs. A strongly pulsating aorta, due to partial uncovering, is frequent. A ribbon-like transverse colon, suggesting enterostenosis, can be palpated above the navel. One or both kidneys may be movable; the liver wholly or partly descended. Prolapsus uteri is frequent. The diagnosis is easy if one has the condition in mind, and it is aided by the belt test, in which the physician, standing behind the patient, encircles the lower part of the abdomen, supporting and lifting it. If this gives relief, it points toward enteroptosis. A perfect cure is possible. The treatment is a well-fitting abdominal supporter, of which cuts are given, including that of the writer; ample nutrition, exceeding that necessary for maintaining the balance of the body, and including bread, butter and milk between meals; out-of-door exercise; electricity intragastrically in functional disturbances of the stomach; iron and arsenic for anemia, and bromids for nervousness. Massage is contraindicated in advanced anemia or considerable prolapse, as it causes irritation or even inflammation. [H.M.]

2.—Lanehart knows of no instance in which physicians and community have not been made better by the presence of rural hospitals. They are educational centers. Suggestions are made as to the best methods of organization and administration. [H.M.]

3.—Corson in discussing x-ray photography, states that the most important consideration is the securing of an apparatus which generates powerful rays, for it is both camera and sunlight. This being secured the rest of the process is comparatively easy. But unless the apparatus is powerful enough to penetrate the bone itself it is impossible to secure fine details and the picture will be unsatisfactory however great the care in developing. Contrary to common notion the best results will not be secured from the use of a long spark coil but from one of perhaps 8 or 10 inches, with a wire that will pass heavy currents. This secures a negative of great brilliancy and fine detail. The time of exposure and development are both shortened by the use of a wire of greater current. Absolute immobility of the part skiaographed may be secured by binding

it to the plate and the pulsation movement prevented by placing a heavy weight upon it. The best developer is hydrochinon. It gives a deeper, denser and more brilliant negative, while the detail is equal to the metal. There is a field of usefulness for x-rays that has not yet been marked, that is the study of normal osteology by means of these plates. Enlarged skiagraphs will prove most valuable in the lecture room or laboratory for giving the outline of the internal bony structure, and most important of all in their exact spacings and relationships. [J.W.M.]

4.—Inebriety is a disease in which there is brain and nerve paralysis, congestion and impaired activities varying in degree with the excess of alcohol habitually indulged in. The highest activities of the brain are the first impaired, hence loss of power to discriminate between right and wrong, and loss of volition. Apparently malicious and brutish acts indicate merely suppression of the higher coordinating centres. Habits formed before the use of alcohol give the appearance of normality to the ordinary routine of life, but when an emergency has thrown him out of the automatic range of action the real condition of the alcoholic is revealed. The present legal theory that inebriety is a development of the moral depravity innate in every life, and that the remedy should be punishment involving pain is unscientific, and in its application increases the very condition it aims to check. That there was no excessive use of spirits just before or during the commission of an illegal act has no bearing on the question of moral responsibility. [H.M.]

5.—The case was unusual in the extent of recovery. The day after the embolism occurred vision was reduced to fingers at 2 feet in the supero-temporal periphery, increasing in 17 days to 20-200. When first seen by Thomson 2½ years later, the entire upper field to within 10° of the macula was restored, vision being 20-40. A row of 6 large arteries sprang from the lower disc edge. The fact that vision was primarily reduced in the area they supplied shows conclusively that they were not branches of the circle of Zinn but of the central artery. The latter probably bifurcated in the nerve, and the embolus was dislodged in a day or two and driven on into the superior branch before atrophy had occurred in the lower part of the retina. [H.M.]

Medical News.

April 13, 1901. [Vol. LXXVIII, No. 15.]

1. The Immediate and Remote Results in 100 Conservative Operations on the Ovaries and Tubes; with Brief Reports of 4 Cases. W. L. BURRAGE.
2. Tropaeocain Hydrochlorate. A Substitute for Cocain Hydrochlorate in Spinal Anesthesia. WILLY MEYER.
3. A Study of Cases Presenting Symptoms of Asthenopia and Anomalies of the Ocular Muscles in which Ablation of the Middle Turbinal Was Effective Treatment. HEBER NELSON HOOPLE.
4. Acute Traumatic Malignancy. WILLIAM B. COLEY.
5. The Akouphone and Its Limitations. J. A. KENEFICK.
6. Perforating Gunshot Wound of the Chest with Fracture of Both Bones of the Left Leg and Lacerated Wound of the Right Thigh—Recovery. VICTOR COX PEDERSEN.

1.—Among the immediate results of conservative operations upon ovaries and tubes, noted by Burrage, are swelling and pain in the resected ovary, which was probably due to hemorrhage into the organ and pelvic inflammatory exudate following resection of a closed tube; death in 2 cases. Remote results were symptomatic cure in 73%, failure in the remaining 27% being probably due to previous neurasthenic condition; anatomic cure in 64%, some enlargement or prolapse being present in the others. Pregnancy ensued in 32%; but never when resection of both tubes was necessary. Only 64% of those previously sterile became pregnant. Subsequent operation was required in 9%, and in 7% of cases a remaining ovary was found enlarged but producing no symptoms. Portions of ovary remaining decrease symptoms of menopause. No relation exists between the amount of stroma and menstrual functions nor sexual desire and gratification. The longer time required for these operations necessitates dispatch. The patients unfavorable for such work are neurasthenics and those affected with long-standing gonorrhoea. [J.W.M.]

2.—Meyer, in discussing the value of **tropacocain hydrochlorate as a substitute for cocaine in spinal anesthesia**, asserts that it is not attended with the unpleasant effects of the latter, such as pallor, perspiration, nausea, vomiting, headache, dizziness and rise of temperature. He has found $\frac{1}{2}$ of a grain dissolved in 50 minims of distilled water sufficient to produce anesthesia lasting an hour. It is less toxic and less depressing than cocaine. Meyer uses it with great satisfaction in urinary surgery. [J.W.M.]

3.—Four cases are presented with refraction errors of varying degree and **imbalance of the lateral muscles** and a history of severe headaches and other **asthenopic symptoms**, in which permanent relief was directly traceable to ablation of the **middle turbinal** or removal of a spur pressing upon it. The irregularities of the muscles and consequent symptoms arise from disturbances of innervation by irritation of a particular area of nerve distribution in the nasal mucosa. [H.M.]

5.—Kenefick discusses the **akonphone and its limitations**. It consists of an electric storage battery of 6 volts which is carried in some convenient place about the body, a transmitter fitted with a series of funnel-shaped resonators for the concentration of sound waves, and a receiver constructed so that all sounds carried to it are intensified producing a sonorous and penetrating wave. Its greatest field of usefulness is in the case of deaf mutes who are by its use taught articulate speech. Its practical value is, however, yet limited owing to its imperfection. [J.W.M.]

6.—Pedersen reports a case of attempted suicide in which the patient inflicted upon himself a **perforating gunshot wound of the chest, a fracture of both bones of the left leg, and a lacerated wound of the right thigh**. His recovery is attributed to the fact that for 8 days he was kept in a semicomatose condition by the administration of morphin, while he was also actively stimulated. The point emphasized is the securing of rest following such an injury, the wounds being only temporarily dressed to avoid disturbing the patient during the shock. [J.W.M.]

Philadelphia Medical Journal.

April 6, 1901. [Vol. 7, No. 14.]

1. The Prophylaxis of Venereal Diseases. Medical Aspects of the Social Evil in New York. PRINCE A. MORROW.
2. On Certain Disorders of Sleep. CHARLES A. DANA.
3. General Metabolism in Diabetes Mellitus. DAVID L. EDSALL.
4. A Preliminary Communication of a Study of the Brains of Two Distinguished Physicians, Father and Son. EDWARD ANTHONY SPITZKA.
5. Santiago as a Yellow Fever Center. L. C. CARR.
6. A Correlation of Some Facts in the Propagation of Yellow Fever, with the Theory of its Conveyance by the *Culex Fasciatus*. H. R. CARTER.
7. Suprarenal Capsule—Its Use in Rhinologic Operations. CHARLES C. BOYCE.
8. A Clavicle Crutch. CARTER S. COLE.
9. A New Tenaclum. R. C. COFFEY.

1.—After commenting on the frequency of **venereal diseases** and their terrible ravages on guilty and innocent alike, Morrow takes up the question of their **prophylaxis**. He condemns the government control of prostitution because of its injustice to the female offender, its inquisitorial character, and because it tends to scatter vice by making it more clandestine and elusive and hence less susceptible of real control. He advocates what has been termed the **prophylaxis by treatment** which includes the hospitalization and free treatment of as many sources of contagion as possible, the abandonment of forced detention and the founding of more dispensaries. At the same time an energetic campaign of education should be inaugurated. "Patients should be enlightened not only as to their individual risks but the risks they convey to others and the necessity of prolonged treatment. The same plan that is employed in many foreign clinics should be adopted, viz., each syphilitic patient should be handed a printed slip, stating in plain language the nature of the disease, the modes of

contagion, the risks of personal contact from erosions or mucous patches, the possible contamination of household articles, towels, spoons, drinking utensils, etc., the risks of hereditary transmission, and also emphasize the necessity of thorough treatment. The gonorrhoeal patients should be instructed as to the details of the technic to be employed in local treatment, the possible gravity of the disease, the danger of contagion even when the discharge may have apparently ceased, the significance of shreds in the urine as an indication that the disease, though latent, is still uncured, etc. Physicians should never sanction marriage until all possible danger of infection is passed. The medical profession should be better equipped for this prophylactic work by a more thorough knowledge of venereology. This campaign of education should be extended to the high schools and colleges for young men. There is no reason why young men should not be forewarned of the pitfalls and dangers which beset their pathway—dangers into which they often ignorantly and unconsciously rush. They should also be taught that self-restraint, personal purity and respect for women are among the surest foundations of character. Finally, the public should be educated to a recognition of the fact that the prostitute is largely the product of her environment. The vast majority of fallen women become so—not from choice or from innate depravity—but because of the hard and unjust social laws which force many of them into this life. Society should deal with them as unfortunates rather than as criminals." [H.U.C.]

2.—Dana of New York holds that **insomnia** should be treated with drugs but temporarily, if at all; even maintains if only half or two-thirds of the regular sleep be secured, an individual can very well do with this amount if 10 or 12 hours of rest be spent in bed each night. Morning insomnia is frequently produced by worry, ill health, or arterial degeneration, and may often be benefited by administering small doses of trional or bromid; general tonic treatment; heart tonics; arterial sedatives, as potassium iodid, strophanthus or glonoin. A sudden awakening with a start or jump, known as motor shock, is usually indicative of nervous irritability or fatigue. Rest is usually all that is required for this condition, with perhaps small doses of bromid and potassium iodid for some time. The condition of the liver should also be investigated. Migrainous seizures in sleep, a condition in which a patient is suddenly awakened with nausea and an intense pain in the head, are closely allied to nocturnal epilepsy, and should be correspondingly treated. Insomnia in early life is often due to irritations below the diaphragm, and later from affections of either the lungs, heart, or bloodvessels. In the chronic disorders of sleep, hypnotics should if possible be avoided, the patient placed under favorable hygienic rules, securing plenty of fresh air, moderate exercise, with as little worry as possible. Heart and general tonics, arterial sedatives, and small doses of the bromids employed continuously for a long period if necessary, may be resorted to where medicine is positively indicated. [H.U.C.]

3.—Edsall, in a discussion of general metabolism in **diabetes mellitus**, concludes that it is an error to hold that the waste of fatty tissue in diabetics is due to an excessive protein metabolism, but this waste is due to the fact that large amounts of food are excreted practically unchanged, so that there remains for the repair of the body waste an insufficient quantity. To make up for this loss more carbohydrates and fats should be given. Experiments recently carried out would tend to either one of the two following theories as regards the disturbance in mechanism producing diabetes: (1) loss of normal power of destroying sugars, or; (2) lack of the normal power of producing glycogen, and of controlling thereby the amount of sugar supplied to the blood. [H.U.C.]

4.—The study of the **brains of eminent men** has been necessarily so limited as to create more than passing interest when such cases are reported. From the College of Physicians and Surgeons in New York comes a description and the measurements by E. A. Spitzka of the brains of two eminent physicians, father and son, Drs. Edouard and Edward C. Seguin. [H.U.C.]

5.—Major L. C. Carr, chief surgeon, Department of Eastern

Cuba, compiles statistics showing the **extremely filthy and unhealthful condition** of the two cities Santiago de Cuba and Santos, Brazil, during the years 1888-1897 inclusive, with a progressive death rate per thousand of 26.37 in 1888 to 99.93 in 1897. Tuberculosis and yellow fever were the cause of $\frac{1}{2}$ of the deaths during this period. For the years 1898, 1899, and 1900, the annual death rate has been respectively per thousand 133.71, 30.73 and 28.30, the number of deaths from yellow fever being as follows: 1898-20; 1899-53; 1900-0. Tuberculosis, 1898-415; 1899-173; 1900-85. If the theory that yellow fever is more prevalent under conditions of heat and moisture be accepted, the figures for 1900 should have shown an increase rather than a decrease in mortality, that year having been one of more than ordinary warmth and moisture, thus showing the effect which American methods have produced upon the mortality. The tables given would also tend to indicate a certain degree of fallacy in the theory above referred to, as there was present a much greater amount of heat and moisture at Santiago during the 6 months from May to October, 1900, than during the same length of time in 1899, while the mortality from yellow fever in 1900 was decidedly lower. The following will show what steps were taken to prevent an outbreak: (1) Work furnished for tramps, and arrest if refusal to work; (2) disinfection of foci with mercury bichlorid solution with salt, by the aid of force pumps, swabs and scrub brushes; (3) attempts made to prevent the throwing of filth into the streets; (4) cleaning out latrines; (5) pumping out and disinfecting man-holes every day. [I.I.C.]

6.—In an article on the **propagation of yellow fever** with special reference to the theory of its conveyance by *Culex fasciatus*, Carter correlates a number of facts well established and generally admitted by the profession: (1) Yellow fever is not transmitted directly from the sick to the well, but is propagated from the patient by his infecting his environment, from which it is contracted by others exposed thereto; (2) certain conditions of environment are necessary for it to become infected; (3) infection may apparently be retained a long time by an environment without a reinfection; (4) that the infection of yellow fever is conveyed by fabrics, clothing, and bedding especially; (5) according to New Orleans physicians certain precautions of cleanliness will prevent the infection of his environment by the patient. These precautions take no account of the mosquito, save in the general selection of an upper room for treatment; (6) the theory of conveyance by a mosquito is entirely consistent with the general belief that yellow fever occasionally hibernates in the States north of the Gulf, as well as with the belief that it does not do so in the extreme southern part of the United States, mosquitoes habitually hibernating in the first region and not in the second. The deduction that the disease is not propagated by material conveyed directly from the sick to the well, and that some material after leaving the body of the patient undergoes some change outside the body, and often this change produces yellow fever, may be based upon (1) a change in physical condition of the excretion containing the microorganism rendering it able to reach the proper atrium for the infection of others; (2) the injection of a host, by which host (or its offspring) the microorganism is transmitted; (3) a change in the microorganism itself (outside of the human body). [I.I.C.]

7.—Boyce outlines a method of preventing both primary and secondary **hemorrhage** from operative interference within the **nose**. Three different tampons of cotton are used and each is left in the nose for 10 minutes: (1) The tampon is soaked in a 5% solution of cocaine; (2) in addition to the cocaine the tampon is covered with dry **suprarenal capsule**; (3) a tampon like the first. The results are claimed to justify the expenditure of time necessary. [A.G.E.]

8.—The **clavicle crutch** recommended by Cole consists of hard rubber supports applied to the clavicle and an adjustable steel band which furnishes a false clavicle. [A.G.E.]

9.—Coffey illustrates and describes an **improved tenaculum**. It consists of a tube, near the end of which are fangs resembling a cat's claw. These fangs are protruded by a rod which carries them and works within the tube. Single, double, or quadruple fangs may be employed. The instrument is used for holding membranes in position for a continuous suture, as

a guide and tenaculum in repairing cervixes, in vaginal hysterectomies, etc. [A.G.E.]

April 13, 1901. [Vol. 7, No. 15.]

1. Ligation of the Carotid Artery as an Operation Preliminary to Resection of the Superior Maxilla. CARL SCHLATTER.
2. Thoughts on the Treatment of Diabetes Mellitus. JAMES TYSON.
3. The Medical Relations of the Prevailing Forms of Food Adulteration. HENRY LEFFMANN.
4. Ruptured Traumatic Aneurysm of the Femoral Artery Due to Gunshot Wound; with Report of a Case. WALLACE NEFF.
5. Multiple Tumor of the Sciatic Nerve. JOHN B. ROBERTS.
6. Venous Angioma of the Flexor Muscles of the Fingers. JOHN B. ROBERTS.
7. Diabetes Mellitus as a Cellular Fault. THOMAS C. ELY.

1.—Schlatter discusses at length **ligation of the carotid artery preliminary to resection of the superior maxilla**, and summarizes his observations as follows: (1) By the application of a preliminary ligature, the hemorrhage, as well as the danger from blood aspiration, are markedly diminished. (2) This ligation is highly recommendable in all anemic individuals, and in those whose vitality has been lowered from cachexia and hemorrhages, provided they do not suffer from diseases of the bloodvessels, particularly arteriosclerosis. Exposing the bifurcation of the carotid in advanced cases is in itself indicated for the purpose of extirpating the lymphatic glands, which in this region, are generally the first attacked by metastasis. (3) In by far the most cases, ligation of the external carotid alone will suffice; the latter should be a permanent ligation. Conducted antiseptically, the procedure is without danger. The ligature may be applied by enlarging above the incision which has been made for exposing the bifurcation. (4) In exceptional cases it becomes imperative to ligate the common carotid; this seems to be less dangerous if done temporarily than permanently. After resection the dental work is very important in securing the best results. An obturator divides the nasal and oral cavities, enables the patient to articulate distinctly, supports the eyeball and preserves the contour of the face. [J.W.M.]

2.—While admitting that the dietetic **treatment of diabetes mellitus** is of decided importance—more especially in the milder forms of the disease—since by this means the carbohydrates giving rise to at least a portion of the glucose are withheld from the body—economy, Tyson suggests that more attention be paid to remedies which stimulate oxidation and thus result in the appropriation by the body-tissues of the glucose which would otherwise be eliminated unused and unoxidized. Arsenic and iron in small and long continued doses, massage, exercise, frequent bathing, warm flannels, perchlorid of iron, chlorate of potash, potassium iodid, and the bromids, the derivatives of opium and of petroleum in nervous diabetes are mentioned as remedies. [I.I.C.]

4.—Neff discusses **ruptured traumatic aneurysm of the femoral artery** due to gunshot-wound and reports a case. The variety of aneurysm following an injury depends on the character and extent of such injury; and its gravity depends on the size and location of the artery, and the general condition of the patient. The diagnosis depends on the history of an injury, the presence of a tumor, pain and limit. An aspirating needle may be necessary to differentiate between an aneurysm and an abscess. Many methods of treatment employed with good results in other aneurysms are contraindicated here. Ligation is the proper treatment, and may be proximal, or both proximal and distal, with excision of the sac, which diminishes the possibility of gangrene. A case is reported in which complete recovery followed proximal ligation of a traumatic femoral aneurysm. Statistics of the War of the Rebellion show that of 20 cases of traumatic aneurysm, 16 of which were treated, only 5 recovered. [J.W.M.]

5.—Roberts reports a case of "**multiple tumors of the sciatic nerve**" in a man aged 39, who had suffered for 14 years with pain in the popliteal region, where, on examination, a small sensitive tumor was felt. It was increasing in size; there was weakness of the leg, with numbness, and sweating of the

foot. A 15-inch incision was made, exposing the sciatic nerve with its internal and external popliteal branches, all of which were found to be studded with tumors, varying from $\frac{1}{2}$ to $1\frac{1}{2}$ inches in diameter. They were removed by separating the nerve fibers and splitting the capsule of the tumors. Microscopic examination showed them to be fibrous. [J.W.M.]

6.—A case of painful venous angioma of the flexor surface of the forearm is reported, which, according to the patient's statement, followed injury. It involved the superficial and deep muscles, in which the venous channels were developed and surrounded by abundant fibrous tissue. As its removal would necessitate irreparable damage to the flexor muscles, it was not attempted. Incision into the mass was followed by profuse hemorrhage, which was controlled by ligation, pressure and elevation. [J.W.M.]

7.—Ely claims that there are 5 general reasons for considering diabetes mellitus to be a fault of cellular protoplasm: (1) A biologic reason. The glucose, after being produced by certain cells in the body, is not capable of further elaboration (oxidation) by the cells which it normally nourishes—in other words, a condition of faulty metabolism is present. (2) A hereditary reason. From $\frac{1}{4}$ to $\frac{1}{2}$ of all cases of diabetes are hereditary, showing that the state of faulty metabolism may be inherited. (3) A reason by exclusion. While the glucose producing cells and the nerve centers controlling glucose production may be perfectly normal in their functions, glycosuria still may be present—a state of affairs indicating (by a process of exclusion) that the fault lies with the protoplasm of the cells which should oxidize the glucose. (4) A reason of associate diseases. In diabetes, concomitant, intercurrent and associate diseases point to metabolic disturbances as the basic cause. Its frequent occurrence when metabolism is weakest—after and during febrile attacks and acute diseases, gout, rheumatism, obesity, uric acid diathesis, alcoholism, etc., are significant. (5) A therapeutic reason. The only drugs which benefit diabetes, arsenic and codein, may be called cellular drugs, having, as they do, a well recognized action upon general body cells. Arsenic, as an alternative, reconstructs, builds up weak cells. Opium conserves tissue, retards and prevents waste. Again, the fact that diabetes is most fatal in the young, may be explained by this cellular theory as the survival of the fittest in cell life. [H.H.C.]

The American Gynecological and Obstetrical Journal.

February, 1901. [Vol. XVIII, No. 2.]

1. Can Interstitial Keratitis be prevented in the Offspring of Syphilitics? PETER A. CALLAN.
2. Two Interesting Cases. CHARLES P. NOBLE.
3. A Case of Pseudo-Ileus, following Instrumental Delivery and Adherent Placenta. JOSEPH M. RECTOR.
4. The Relation of Appendicitis to Diseases of the Uterine Appendages. ALBERT L. BEAHAN.
5. Cholemia and Hemorrhage. D. TOD GILLIAM.
6. Seventeen Years of Congenital Nocturnal Incontinence of Urine cured by Operation. GEORGE H. NOBLE.
7. The Cure of Complete Prolapsus Uteri by Plastic Surgery. JOHN DUNCAN EMMET.

1.—Callan assumes that the majority of the cases of interstitial keratitis are due to inherited syphilis. He has found Hutchinson's teeth more frequently than any of the other diagnostic signs. The majority of his cases occurred between the eighth and twelfth years, and the next in order of frequency, between the seventeenth and twenty-first years. Offspring of syphilitics show the evidences of the inherited taint in only a slight percentage of the cases; that is, if we except children that die under 5 years. Only a slight percentage of such children develop interstitial keratitis. When the disease attacks one eye, all treatment seems powerless to prevent its development in the fellow eye. The outbreak of interstitial keratitis in certain cases may possibly be delayed, but not prevented. [F. C. H.]

2.—The two cases reported by Noble are: Multiple sinuses in the perineum resulting from infection and the failure to remove sutures, and pelvic abscess resulting from attempted abortion in an unimpregnated uterus. [F.C.H.]

3.—Rector details the history of a patient in whom it was necessary during her first labor to make a high forceps application. Two years later, during her second labor, it was necessary to apply axis-traction forceps. The placenta was adherent over its entirety, and was removed by enucleation. Three hours subsequent to the last labor she was found in a state of collapse, the condition simulating ileus. The abdomen continued to distend for 8 hours, when the bowels were freely moved. Within 24 hours she was convalescent and fully recovered. [F.C.H.]

4.—Beahan recapitulates the relation of appendicitis to diseases of the uterine appendages as follows: A febrile disturbance during menstruation, with a swollen, tender appendix, obstinate constipation and gas-formation in bowel; painful, retarded menses, pain in lower segment of abdomen, especially in right side; loss of flesh, pallor, or muddy complexion, peculiar nervous symptoms, as irritability and exhaustion occurring in a more exaggerated form than is peculiar to the individual, make the probability of disease of the appendix certain and its removal imperative. [F.C.H.]

5.—Gilliam thinks we should reconsider the teaching that cholemia tends to diminish the coagulability of the blood thus leading to intractable and oftentimes uncontrollable hemorrhage. It can be shown that the hemorrhage of cholemia is not so much due to a blood-change, *per se* as to a structural change in the mucosa of the gallbladder, usually associated with cholangitis. The treatment consists of swabbing the interior of the gallbladder with strong carbolic acid, and packing with iodoform gauze. There is no fear of systemic intoxication from absorption, because of the immediate and powerful escharotic effect, which not only blocks absorption, but produces a nonpoisonous organic combination. [F.C.H.]

6.—The rarity and intractability of congenital incontinence of urine, makes this case interesting. The patient, a girl of 17, has continued the habit of bedwetting all her life. No physical defect of the urinary apparatus could be found, the urine was normal, and the medical treatment has been unsuccessful. Cystoscopic examination revealed a normal mucous membrane. No malformations were discernible. An inflamed and thickened hymen having a very intimate connection with the meatus appeared to be the probable source of trouble, which is explained as follows: It was her habit to sleep on her face, a posture which doubtless contributed to an accumulation of bodily heat about the external genitals, resulting in stimulation of the sensitive and irritable hymen, which becoming more or less erectile, irritated the meatus; this in turn stimulated the circular muscles at the neck of the bladder and trigonum, resulting in involuntary micturition. The operation consisted in cutting through the hymen on either side of the meatus and dissecting the urethra free from its attachment for about half its length. Separation of the urethra from its attachments severed all nerve-connection with the meatus, cutting off all possible reflexes from the inflamed hymen. Sutures were introduced through the attached portion of the hymen, on either side, and fastening them to the pubic arch, making a sling or support for the urethra. This with a little moral treatment has resulted in a perfect cure. [F.C.H.]

7.—Emmett lays stress on the mechanism of prolapsus uteri, and the anatomy of the parts involved. He then describes the operations on the cervix, anterior and posterior vaginal walls. He prefers to keep his patients in bed 4 weeks prior to operation, with the foot of the bed elevated in order to reduce the size of the subinvolved uterus. [F.C.H.]

Annals of Surgery.

January, 1901. [Vol. XXXIII, No. 1.]

1. Ventral Hernia following Abdominal Section. B. BRINDLEY EADS.
2. On Traumatic Keloid of the Median Nerve, with observations upon the Absorption of Silk Sutures. OTTO G. T. KILIANT.
3. An Intestine Holder. Devised for Facilitating the End-to-End Suture of Intestine. EDWARD H. LEE.
4. Laryngectomy under Eucain Anesthesia, with Remarks on the Technic of the Operation. GWILYM G. DAVIS.

5. Double Ureter. Report of a Nephrectomy done upon a Young Child with this Condition Present. JOHN EDWARD SUMMERS, JR.

1.—Eads believes that 15% of all patients upon whom celiotomy has been performed if examined 5 years later will be found suffering from ventral hernia. In discussing the causes of hernia he lays great stress on injury to nerve-supply of muscles in incisions. A long incision does not necessarily predispose to hernia and it lessens the mortality by providing ample space for operation and by diminishing the time required for the operation and the duration of the anesthesia. Hence it is important to make the incisions long enough to provide every facility for thorough work. Muscle fibers and nerves should be separated rather than divided. In operating for such hernias he believes that it is important to close the wound by bringing as much muscle fiber together as possible. Fascia he considers quite useless in the repair of hernia. In closing abdominal incisions he advises the layer suture, closing the peritoneum with continuous fine catgut and the muscles with silkworm-gut. [M. B. T.]

2.—A woman, 21 years old, cut her median nerve by falling into glass. This was followed by loss of motion and sensation. Secondary nerve-suture with silk was undertaken 4 weeks after the accident with resection of a small neuroma on the distal and central ends of the nerve. There was no complete primary union. Six weeks later a good sized neurofibroma was found which interrupted completely the conduction of the nerve. The tumor was again extirpated; the ends were joined with catgut and primary union resulted. There was immediate restoration of sensation and soon after that of motion. Three months after this operation a small tumor had recurred, while the skin showed a keloid. The keloid disappeared under symptomatic treatment and the patient now has good use of the hand and fingers. Another interesting feature in the report of this case is that Kiliani reports that microscopic examination shows that absorption of single fibers of silk had set in in the neuroma which was excised after the first operation. He believes that it is possible that had some time elapsed before extirpation the sutures might have been entirely absorbed. [M. B. T.]

4. Davis reports excision of the larynx for carcinoma under local anesthesia with eucain B solution. The removal was found comparatively easy, the dissection being carried from below upward on 1 side, then across at the hyoid bone and down on the other side. A general anesthetic was considered contraindicated because of the danger of suffocative symptoms. Davis believes that preliminary tracheotomy is an advantage, though it is unnecessary to leave an esophageal tube projecting from the wound. The wound need not be tamponed but can be closed from the upper end of the trachea to the hyoid bone. [M. B. T.]

5.—Summers reports a successful nephrectomy for removal of a tuberculous kidney from a female child 2½ years old. A double ureter was found on the affected left side. The wound healed by first intention and the child has remained in good condition since the operation. [M. B. T.]

February, 1901. [Vol. xxxiii, No. 2.]

1. Gunshot-Wounds in the Philippine-American War. B. F. ROBINSON.
2. Sarcoma of the Uterus. VAN BUREN KNOTT.
3. Contribution to the Surgery of Multilocular Renal Cyst. CARL BECK.
4. Cleatrical Stricture of Pharynx cured by Plastic Operation. B. FARQUHAR CURTIS.
5. The Improved Technic in the Operative Surgery of Carcinoma of the Stomach. WILLIS G. MACDONALD.
6. Cases of Compound or Complicated Fracture Illustrating the Value of Operative Interference in the Treatment of these Injuries. HENRY R. WHARTON.
7. A Method of Performing Anastomosis of Hollow Viscera by a New Instrument. M. O'HARA.
8. I. An Improved Brace for Head Extension. II. A Hard Rubber Spring Brace for Lateral Curvature. JOSEPH M. SPELLISSY.

1.—From a study of gunshot-wounds, which have come under his care in the Philippine-American war, Robinson draws the following conclusions: Modern gunshot-wounds are generally aseptic. This is due chiefly to the character of the bullet,

early application of first-aid dressings and possibly in slight degree to the velocity of the projectile. Primary hemorrhage is rare, the bloodvessels being displaced rather than cut. The explosive effect is much less common than recent military literature would indicate. Gunshot-wounds of the chest are rarely infected; simple antiseptic treatment with aspiration of the pleura in cases of severe hemorrhage is all that is necessary. Gunshot-wounds of the kneejoint are usually aseptic, but if infected, demand immediate amputation to save life. Excision of the elbow is always justifiable in severe shattering or infection of that joint. Resection of other joints is rarely necessary, erosion or amputation being preferable. Injuries of nerves from gunshot-wounds can often be benefited by operative intervention or by resection. In modern military surgery, abdominal section for gunshot-wounds is not justifiable. The patient's best chance of recovery lies in conservative treatment without operation. [M. B. T.]

2.—A case of sarcoma of the uterus is reported, occurring in a woman of 43. Her symptoms had begun with menorrhagia 9 months previously. She had lost no flesh, there were no signs of cachexia; there was constipation and frequent urination. On opening the abdomen a large, irregular liver-colored tumor was found filling the lower abdomen and pelvis and crowding the intestines upward. There was no hemorrhage during the operation, but the shock following was pronounced. The patient made a good recovery. On abdominal examination, the growth was reported to be a spindle-celled sarcoma. [M. B. T.]

3.—Transperitoneal nephrectomy is reported for a multilocular renal cyst occurring in a woman of 55. Death resulted from uremia 11 days after the operation. [M. B. T.]

5.—From a study of the literature, Macdonald has found 43 cases in which pylorotomy was done for carcinoma of the stomach, in which the patients were living without recurrence 3 years after the operation. Some of these patients were alive 10 years after the primary operations. This group of cases is collected from 527 pylorotomies. The average operative mortality is about 30.4%, but individual operators have reduced it to as low as 8.7%. Macdonald emphasizes the importance of earlier surgical intervention and a wider extirpation of the disease. [M. B. T.]

6.—Wharton reports several compound or complicated fractures in which operative treatment was undertaken. Among these was a fracture of the lower end of the fibula and internal malleolus of the tibia with decided and persistent deformity. Tenotomy of the tendo-achillis was performed with a good result, and this procedure is recommended in such cases. In a case of comminuted fracture of the upper end of the humerus, excision of the shoulder was undertaken, with a useful arm resulting. Excision of the shoulderjoint was also performed for an extensive gunshot injury. [M. B. T.]

7.—O'Hara describes a simple instrument by means of which intestinal anastomosis of the hollow viscera can be readily performed. The instrument consists of 2 pairs of straight forceps, the jaws of which are slender and about 2½ inches long for ordinary work. Instead of being roughened as are ordinary hemostatic forceps they are grooved down the center of 1 blade and into this groove fits a ridge from the opposite blade. The forceps are held together by means of an adaptation of the serrefine. In performing resection followed by end-to-end anastomosis the serrefine clamp is removed and 1 forceps is placed transversely across the bowel at the point selected for the upper border of the resection and locked. The other forceps is placed in a similar manner at the lower part of the resection. The tips are in exact line with the mesenteric attachment. The forceps are placed upon the ends of the intervening portion of the intestine to prevent leakage. The bowel is then cut close to the forceps; the incision also removes a wedge-shaped piece of the mesentery but avoids wounding important vessels. The forceps are then brought together and held by means of the serrefine clamp. Sutures are introduced starting nearest the lock and carrying them down to the tips where care should be exercised to get accurate apposition at the mesenteric attachment. The sutures are then tied, the forceps are turned over and sutures placed on the other side in the same manner. The forceps are now unclamped; one pair is removed by unhooking

and drawing out in a straight line, the other is unlocked and passed above and below the line of suturing within the lumen of the gut to insure that both walls of the gut have not been included in any of the sutures. They are then withdrawn and the remaining opening closed by one stitch. If desired a second row of sutures may be placed to reinforce the first. The mesentery is closed in the usual manner. For a satisfactory understanding of this method of anastomosis the cuts of the original article are necessary. The method seems to be one of the simplest that has thus far been introduced. [M. B. T.]

Deutsche Zeitschrift für Nervenheilkunde.

[Bd. XIX., Hft. 1.]

1. Clinical and Pathologic Contributions to the Diagnosis and Treatment of Brain Tumors. MINGAZZINI.
2. The Disturbances of Growth Associated with Infantile Cerebral Palsy. KOENIG.
3. Hysterie Position of the Hip with Scoliosis. SALOMONSON.

1.—Mingazzini reports a series of cases of brain tumors and other conditions of the brain for the purpose of throwing light upon certain mooted questions in the diagnosis of cerebral new-growths. Case I was a man aged 20, who complained of intense, left-sided headache, occurring chiefly at night but later spreading to the right side and persisting during the day. Examination revealed very little of moment. There was a slight tendency to lateral swaying, the patellar reflexes were much diminished, and the upper tendon reflexes in the upper extremities were abolished. There was tenderness on the left side of the skull on percussion. The internal and external recti muscles were somewhat insufficient, and tinnitus existed in the left ear. The head-pains were spasmodic and extremely severe. Psychically nothing was noted except slowness in answering questions. Ophthalmoscopic examination, during which the patient had an attack of unconsciousness, showed marked choked disc. After this attack of intense headache occurred, with acceleration of breathing. The left side of the face was redder and hotter than the right, and the muscles supplied by the left facial nerve were contracted. After lumbar puncture had been performed the attacks became still more frequent. On the day following the puncture the patient died in collapse. At the autopsy the convolution of the left parietal lobe were found flattened, and the second and third occipital convolutions and the annectant parietooccipital gyri were replaced by a tense-walled, echinococcus cyst. In discussing this case the author points out the absence of all symptoms indicating homonymous hemianopsia. There was nothing in the history to suggest disease of the occipital lobe; on the contrary, the symptoms pointed to cerebellar growth. In favor of this also was the sudden death, which is not rare in cases of cerebellar tumor. The fact that the patient became much worse after lumbar puncture leads the author to caution against this procedure in tumor of the occipital lobe, cerebellum, and oblongata. Case II was a man of 32, who had been subject to epilepsy since his fourth year. He showed asymmetric development of the halves of the body, restricted movement of the right eye outward, disturbance of the facial muscles, atrophy of the right arm, pes varoquinus of the left foot, spasmodic gait with dragging of the left leg, active patellar reflexes, and normal tactile, thermal, and muscle senses. Psychically the patient was apathetic, and answered questions slowly and in monosyllables. The epileptic attacks were accompanied by complete unconsciousness and discharge of urine and feces. There appeared to be no aura, and there was no premonitory cry. The clinical diagnosis was polioencephalitis dating back to childhood. At the autopsy a solitary tubercle was found, occupying the right precornu and the right striatum. The clinical diagnosis was therefore wrong. In view of the tumor, the absence of vertigo, vomiting, and choked disc was interesting. Moreover, the attacks of epilepsy, lasting almost 30 years, would hardly turn the thought to tumor. It is true that some of the symptoms were against the view that the epilepsy was the result of polioencephalitis, as in that condition unconscious discharge of urine and feces, biting of the tongue, and frothing at the mouth, present in the patient, are absent. Case III concerns a woman of 38 who had been subject to epilepsy

for 3 or 4 years. There were marked signs of mental impairment and only the simplest questions could be answered. Memory was poor, and she seemed unconscious of her surroundings, but was good-natured and very religious. Sensation and the organs of special sense presented nothing abnormal of note. The epileptic attacks had the typical characteristics. The patient died of a diffuse bronchial catarrh. Autopsy showed sarcoma of the mesial and anterior part of the prefrontal lobes, chronic atrophy of the kidneys, arteriosclerosis, and bilateral bronchopneumonia. The tumor was unsuspected, and the clinical diagnosis had been diffuse arteriosclerosis with kidney disease. All of the symptoms could be explained on the latter basis. It should also be noted that there was no disturbance in the patient's character or disposition, such disturbances being ordinarily present in prefrontal tumors. Case IV was a woman of 30, who, during the 4 months previous to her entrance into the asylum, had shown signs of progressive weakness and had become totally blind. Intelligence was diminished. There was left-sided hemiparesis and flaccid hemiplegia, with participation of the upper part of the facial nerve and the external rectus; epileptic convulsions; disturbed, nasal speech; dysphagia; and gray atrophy of the optic nerves. Three conditions were considered possible: tumor of the brain, multiple sclerosis, and diffuse sclerosis. The autopsy showed pseudosclerosis of the brain. The brain cortex, microscopically, was transformed into a homogeneous, in part reticulated, tissue containing a variable number of granule-cells. The nerve-cells were in part absorbed, in part they remained as pale, degenerated bodies. Pseudosclerosis (Strümpell) appears between the ages of 9 and 30, in persons who are apparently normal. The principal symptoms are weakness, rarely passing into complete paralysis; increased muscle-tonus; and paretic, spastic gait. Apoplectiform and epileptiform attacks are common; and intention-tremor may also be present. The characteristic speech disturbances consist in a high degree of scanning and bulbar speech with monotonous voice, subject to sudden changes. Sensation is not markedly affected. The psychic symptoms are those of advanced imbecility, with occasional violent outbursts or hallucinations. In all cases there has been a striking development of acne and comedones. The course of the disease is slow— $\frac{1}{2}$ to 10 years. Macroscopic examination usually shows a decided increase in the consistence of the medullary substance of the brain. The differential diagnosis from diffuse sclerosis is difficult; also from multiple sclerosis. Case V was a woman of 46, of neurotic ancestry. From infancy she had been subject to attacks of headache with vomiting. Four years before this examination she began to have epileptic seizures, affecting primarily the right hand. Eventually a right-sided hemiparesis developed, but it subsequently disappeared. There was dysarthria, and impaired intelligence; irritability, and objectionable behavior. The optic nerve showed gray atrophy, secondary to choked disc. At the autopsy a sarcoma of the lateral portion of the left frontal lobe was found. The tumor had involved the lower left frontal convolution, together with the operculum. As the patient was right-handed, it is noteworthy that aphasia was absent. The author explains in detail why in right-handed persons lesions of Broca's center sometimes do not produce aphasia. He believes that the right-sided, as well as the left-sided, glossosfacial center, is capable of transmitting impulses from Broca's region. Case VI concerns a man of 51, who, during an alcoholic debauch, fell down a stairway and struck the right parietal region of the head. A few months later, left-sided Jacksonian epilepsy developed. An operation was performed, and proved fatal. At the autopsy a spindle-cell sarcoma of the right insula and striatum was found. The tumor had not been suspected; and in the belief that the epilepsy was due to the injury to the skull, the eye-examination had been overlooked. An interesting point was that the patient had complained of pain in the limbs of the left side. Pain in cerebral tumors has been noticed before, and has been attributed to interference with the sensory fibers in the thalamus. In the author's case these were compressed by the growth. The case is also interesting from a medicolegal aspect. Case VII concerns a woman of 38, whose first symptom was tingling in the right side of the lips. Afterwards this became associated with

fornication in some of the fingers of the right hand. Convulsive twitchings and paralysis developed in the right arm. There was deafness, but not choked disc. When the patient withdrew her eyes from her right hand, she could not make any purposive movements with that member. She was operated upon, and **amyxomatous papilloma**, springing from the pia, was found in the lower lower part of the left prerolandic gyrus. Numerous nervous symptoms followed its removal—among others, loss of the pressure sense, diminution of the tactile sense and stereognosis in the right hand. In Case VIII., a man of 40, there was an **endothelioma in the left paracentral convolution**, which was removed with good result. Cranial percussion was painful on the left side. There were no paresthesias. The kneejerks were increased, more on the right side than on the left. The epigastric reflex was weak, particularly on the left side. Ophthalmoscopic examination showed bilateral choked disc. Radiographic examination was negative. The pressure-sense in the right hand was entirely lost, while the stereognostic sense, pain and heat sense, and touch, were present. Regarding the value of **percussion of the skull**, it would seem that when there is much pain on percussion, the tumor is probably situated near the dura or the bone. The percussion-tone may vary from a cracked-pot sound to a most marked dulness, depending upon whether the tumor has produced thinning or thickening of the overlying skull. [D. R.]

2.—A study of 41 cases of different types of **infantile cerebral palsy**, with a view to determine the existence of **defective growth**, leads the author to the following conclusions: (1) For the disturbances in growth occurring in infantile cerebral palsy, the term **hypoplasia** is preferable to that of atrophy. (2) The hypoplasia may affect the circumference, as well as the length of the limbs. (3) The hypoplasias, according to their location, are divisible into 5 groups: (a) Cases in which there is a hemihypoplasia of the body. (b) Cases in which in addition to both extremities, more or less isolated parts of the corresponding half of the body (as the mamma or the scapula) are affected. (c) Cases with exclusive involvement of the 2 extremities. (d) Cases with involvement of 1 extremity, or parts of it. (e) Hypoplasia of the entire body. (4) Unilateral hypoplasias occur chiefly in the hemiplegias or the transitions between hypoplegia and diplegia. (5) Bilateral hypoplasia occurs not only in the diplegias, but also in the hemiplegic transitional forms. (6) Hypoplasia is more frequent in the early cases than in the later ones, but the hypoplasia is not necessarily dependent upon the period of development of the disease or upon its duration. Hypoplasia may be absent in congenital cases. There is no constant relation between the hypoplasia and the gravity of the clinical condition; although high degrees of hypoplasias are most common in the severe, spasmodic paralyzes. Hypoplasia may be the dominant and sometimes even the only focal symptom. (7) Whether the reaction of degeneration occurs in the hypoplastic muscles has not been definitely determined. (8) (a) Hypoplasia can occur with a microscopically intact spinal cord and a macroscopically intact brain. (b) It may be absent in disease of the entire postcentral convolution. (c) Hypoplasia may correspond to a reduced size of the opposite hemisphere, but the latter can exist without producing a hypoplasia of the entire opposite half of the body. (d) Up to the present, microscopic results have thrown no light upon the variability of the clinical picture of unilateral hypoplasia. (e) Total hypoplasia of the body can exist with a macroscopically intact brain. [D. R.]

3.—**Hysterical scoliosis** has been repeatedly described as a primary affection. In 2 cases observed by Salomonson, however, the scoliosis was **secondary to a hysterical contracture of the hip**. He believes that the peculiar position in which the hip is held in these cases is due to a **subluxation of the femur**. As in both patients recovery was sudden, and was attended by a sensation of something cracking in the hip, this view would seem a reasonable one. [D. R.]

Munchener Medicinische Wochenschrift.

March 5, 1901. [48 Jahrg. No. 10.]

1. The Influence of Salt Solution on the Morphology of Coagulation. SCHWALBE.
2. Drumsticklike Changes in the Fingers and Toes. DENNIG.

3. Complications in Variella. KRAUSE.
4. Hedonal. MÜLLER.
5. Diseases of the Esophagus due to Peptic Ulcer. ORTMANN.
6. A Simple Extension-sling. RIEDEL.
7. A Case of Unilocular Echinococcus of the Kidney. MEINEL.
8. The Technic of Vaccination. WEICHARDT.
9. The Influence of a Higher Temperature upon the Casein of Milk. BIENSTOCK.

1. The subject of the **coagulation of the blood** is still an unsolved problem, but much more is known concerning its morphologic than its chemie features. According to Schwalbe, a pupil of Arnold's, the red corpuscles show the most marked changes in the process of coagulation. The clotting process occurs in 2 types; either after that of the so-called **crystallization**, or after that of the so-called **stroma fibrin**, the former being the more frequent. The red corpuscles undergo peculiar form changes, with the constricting off of small particles that become blood—platelets and granules. Schwalbe inclines to the view that the **formation of these platelets and granules is the morphologic characteristic of clotting**. When it is prevented, by means of salt-solution, clotting does not occur. Salt-solutions have a peculiar effect upon the blood, which wanes according to their concentration. Sodium chlorid and sodium fluorid were especially tested in this respect. Isotonic solutions, i. e., those of the same concentration as the salts in the blood, produced no change; hyperisotonic solutions accelerated clotting, and in such solutions the red corpuscles showed most strikingly the development of blood-plates. Hypoisotonic solutions produced a solution of the blood-corpuscles. Hyperisotonic sodium chlorid solutions, i. e., solutions of 2% or 3% strength, differ markedly in their action from concentrated solutions (30% strength). In the former, as already stated, there is shrinking of the corpuscles, with active platelet formation and clotting; in the latter these are absent, and clotting does not occur. In solutions of **calcium chlorid**, which hastens clotting, the disintegration of the corpuscles into blood-plates is very intense. It is difficult to say what relation the platelet formation bears to clotting. It may be that in the disintegration of the red blood-corpuscles a ferment is set free. It is known that the red corpuscles do contain a ferment. It is not impossible that the leukocytes, as well as other cells, may have the power of liberating ferments. Ferment-formation is probably a widely disseminated cell-property. [D. R.]

2.—**Clubbing of the fingers and toes** occurs (1) in diseases characterized by purulent or putrefactive processes, as pulmonary tuberculosis with cavity-formation, bronchiectasis, empyema, cystopyelonephritis, and dysentery; (2) in infectious diseases and chronic intoxications, as pneumonia, pleurisy, syphilis, alcohol (?) and chronic jaundice; (3) in valvular lesions, especially the congenital; (4) in malignant tumors; (5) in diseases of the nervous system, as syringomyelia and neuritis (?). Dennig also adds to these an instance of clubbed fingers, due to **dilation of the stomach** and fermentation of the food, the result of pyloric obstruction from cicatricial contraction. Radiographic examination of the fingers in a number of cases showed practically no change, except in one case. The enlargement appears to affect only the soft tissues. In rare instances there is an ossifying periostitis. [D. R.]

3.—Krause reports a fatal case of **parenchymatous nephritis complicating chickenpox**. The renal tissue was free from bacteria, both on culture and on staining. [D. R.]

4.—**Hedonal** is a urethan derivative, which in doses of from 2 to 3 grams (30 to 45 grains) is a **harmless hypnotic** in mild grades of insomnia. Secondary effects are not uncommon, but are not serious. [D. R.]

Deutsche Medicinische Wochenschrift.

March 7, 1901. [27 Jahrg. No. 10.]

1. The Value of the Arloing-Courmont Serum-reaction in Tuberculosis. A. BECK and L. RAHINOWITZSCH.
2. A Remarkable and Unexplained Condition Found by Auscultation in an Infant. K. GREGOR.
3. Radical Operation in Infantile Hernia. H. MAASS.

4. An Apparatus for Diagnosis of Incipient Scoliosis (Thread Scoliosg-nost). K. TANTZ.
5. A New Method for Certain Detection of Diacetic Acid in the Urine. L. LIPLIAWSKY.
6. The Treatment of Gangrenous Hernias (Conclusion). W. PETERSEN
7. The Treatment of Pathologic Fixation of the Uterus. STEFFECK.

1.—As a result of 75 original experiments with the **Arloing-Courmont serum-reaction** on cattle, Beek and Rabinowitsch reach the conclusion that this test is not diagnostically conclusive of the presence of tuberculosis.

3.—After discussing the various indications and contra-indications to the **radical operation in congenital infantile hernia**, Maass describes his method of procedure and reports 2 of his cases. He concludes that the radical operation for congenital inguinal hernia is, although not entirely without danger, it is much less so than in the case of the adult. The same method of treatment is also applicable in the case of umbilical hernia, although not so certain in its results. [H.H.C.]

4.—In order to detect any slight asymmetry in **incipient scoliosis** Tantz has constructed an apparatus which is not only much simpler in construction than the larger scoliosimeters but much easier of application. The apparatus consists of a metal plate attached between the shoulder-blades by means of 2 straps. In the center of the plate is a hole into which a horizontal rod is screwed, from which 2 threads, a red and a green, hang downward. The red or proximal thread is drawn down between the nates, while the green or distal thread supports a weight, thus acting as a plumb-line. The angle formed by the 2 threads when viewed from a distance indicated the degree of scoliotic deviation. [H.H.C.]

5.—Liplawsky uses a **modification of Arnold's test** which he claims to be much more sensitive. Two solutions are used: (1) A 1% solution of paramidoacetophenon, and (2) a 1% solution of potassium nitrate. Six cc. of 1 and 3 cc. of 2 are added to an equal volume of urine containing 1 drop of ammonia, and the whole well shaken till brick-red color appears. Ten drops to 2 cc. of this mixture are then added to 15-20 cc. of concentrated HCl., 3 cc. of chloroform and 2-4 drops of ferric chlorid solution. After gently shaking this mixture (avoid emulsifying the chloroform) for $\frac{1}{2}$ -1 minute a beautiful and very characteristic violet tinge is the result. [H.H.C.]

6.—Petersen concludes his article on the **treatment of gangrenous hernias**, with statistics showing the greater frequency of operation in such cases at the present day, because, first, more cases of the sort are sent to the hospitals from a distance, and second, because the standard of indication has changed in recent years. With regard to the choice of operative procedure—resection or the creation of anus praternaturalis—Petersen reaches the following conclusions: (1) The Murphy button and local anesthesia, properly used, are 2 important aids in resection and render the operation far less dangerous than formerly; (2) the complete emptying of the gut possible by the use of local anesthesia and the subsequent resection high up into the healthy tissue are of the highest importance; (3) that owing to the great lessening of danger due to the facts just mentioned, resection is *the* method in case of undoubted gangrene of the bowel; (4) reposition is only allowable in cases where the bowel is capable of complete recovery; (5) anus praternaturalis is only a last resort, to be made only in those cases where collapse is imminent or where extensive perihernial abscesses are present. [H.H.C.]

7.—Steffeck considers that the frequent occurrence of **pathologic fixation of the uterus** is ample justification of a consideration of its causes and methods of treatment. Out of 2,400 private patients in Berlin, 140 or 5.8% had a retroflexed or retroverted fixed uterus; and in 3,160 polyclinic patients he found 227 cases of the same disease, or 7.1%. In small cities and states the percentage was decidedly lower. This fact is not accidental. Among the causes of this condition gonorrhoea holds the first place. Characteristic of this gonorrhoeal disease is the frequent return of the so-called abdominal inflammation. The second cause is puerperal infection, but this more generally affects only the perimetrium and often heals spontaneously and only very rarely requires surgical interference. The third and last group

of infectious diseases of the pelvic organs is the result of the intrauterine use of instruments, especially inopportune cauterization or injection. The noninfectious causes of the formation of pathologic adhesions are hemorrhage of tubes or of ovaries, and newgrowths of uterus or adnexa. The symptoms of all these are similar; pain, irregular hemorrhage and sterility; though many give rise to no symptoms. The prognosis is least favorable in cases of gonorrhoeal origin, and a rational treatment requires an exact diagnosis of existing conditions and their cause. Steffeck divides the fixation of the uterus into direct or indirect, according as the adhesions affect the uterus itself or the adnexa and parametrium; a distinction of great importance since a conservative treatment with ichthyol glycerine tampons, vaginal or abdominal pressure, baths, hot douches and rest in bed, will be far more efficient in cases of adherent fixation through inflammation of the adnexa, etc., than in adhesion of the uterus itself. But the basic principle in the treatment of all kinds of uterine fixation is this: An organ which through disease does not endanger life, must not be healed through extirpation but under a retention of the organ. From his experience of years in cases of gonorrhoeal infection, he advises rest in bed for 2 weeks with exclusive treatment with 10% ichthyol tampons renewed every 24 hours, ichthyol being by far the best remedy for gonorrhoea of the vagina. All uterine fixation arising from acute disease demands similar rest in bed with the use of ice and opium suppositories to relieve pain. Local treatment in acute inflammatory processes is a great failure and often directly injurious. In chronic fixation of the uterus accompanied by extreme sensitiveness of uterus and adnexa he advises long rest in bed and pressure per vaginam. For such purpose, rather than shot or quicksilver, he prefers a complete tamponade with pads abundantly saturated with glycerin which should remain 48 hours. At the same time there may be abdominal pressure by means of sacks of sand weighing 3 or 4 lbs., removed occasionally. It is difficult to determine just how this double pressure acts upon the swelling, but it is a fact that inflamed tubes and swollen ovaries, the size of a fist, through continuous pressure have been quickly diminished and remained so. Pyosalpinx is more apt to yield to this treatment than hydrosalpinx; and, whether or not it has been the experience of other gynecologists, in Steffeck's practice it has been true that the persistent hard tubal tumor which demanded operation usually contained, not pus, but a serous fluid. But in old chronic cases the foregoing methods of treatment will not lead to healing in an anatomic sense; freedom from pain and discomfort is all that one can expect to result therefrom. Operative methods for such conditions will be discussed in a future paper. [W.K.]

Journal of Hygiene.

January, 1901. [Vol. I. No. I.]

1. Studies in Relation to Malaria.
 - I. The Geographical Distribution of Anopheles in Relation to the Former Distribution of Ague in England. G. H. F. NUTTALL, L. COBBETT and T. STRANGWAYS-PIGG.
 - II. The Structure and Biology of Anopheles. G. H. F. NUTTALL and ARTHUR E. SHIPLEY.
2. Pathogenic Microbes in Milk. E. KLEIN.
3. Industrial Lead Poisoning. Y. M. LEGGE.
4. A Rapid Method of Determining Carbonic Acid in Air. JOHN HALDANE.
5. An experiment on the Effect of Inhalation of Ethylene. J. LORRAIN SMITH and HOSKINS A. PERCY.
6. Artificial Modifications of Toxins with Special Reference to Immunity. JAMES RITCHIE.
7. The Utility of Isolation Hospitals in Diminishing the Spread of Scarlet Fever.

1.—This new quarterly opens with an interesting and timely article in which Grassi's conclusions that the **geographic distribution of the genus Anopheles** would be found to coincide with that of malaria, has no general application, the authors having found Anopheles in many parts of England where there is no record of the previous existence of malaria and where there is certainly no malaria to-day. The article is accom-

panied by notes on the natural history of *Anopheles* and by 3 plates representing its structure and development, and by maps showing the former distribution of ague and the present distribution of *Anopheles* in England. They serve to illustrate regions in which malarial disease seems to have been always endemic and from which in suitable seasons it invaded more extensive areas, probably through the increase in the number of *Anopheles*. The authors conclude: (1) the disappearance of ague from Great Britain does not depend upon the extinction of mosquitoes capable of harboring the parasites of malaria. (2) Three species of *Anopheles* (*A. maculipennis*, *A. bifurcatus*, *A. nigripes*) are to be found in all districts which were formerly malarious, but also in places concerning which there is no record of the former prevalence of ague. (3) The *Anopheles* to-day are most numerous in low-lying land containing many ditches and ponds and corresponding to the districts where ague was formerly prevalent. (4) Since the disappearance of ague does not depend upon the extinction of *Anopheles* it is probably due to several causes operating together: (a) A reduction in the number of these insects in consequence of the drainage of the land. (b) Reduction of the population in infected districts as the result of emigration about the time when ague disappeared from England. This would naturally reduce the number of infected individuals and lessen the chance of the *Anopheles* becoming affected. (c) It is possible that the use of quinin has reduced the chances of infecting the *Anopheles* by arresting the development of the parasites in the blood of subjects affected with ague. Of these, the first mentioned cause seems to have been chiefly operative. The possibility exists of there being another intermediary host besides men capable of harboring the parasite and assuming that this were so, this host may have become extinct in the lowlands where it is known that the fauna and flora have changed. (5.) The coincidence of the geographical distribution of ague and *Anopheles* as claimed by Grassi for Italy, and as probably holding good for other parts of the world, is hereby disproved for England and consequently the generalizations are proved to be premature whereby he excludes other blood-sucking insects from being possible hosts of malarial parasites on the strength of this supposed geographical agreement. (6.) Since the geographical distribution of *Anopheles* in England is wider than the former distribution of ague the conclusion is that it is not a matter of the geographical distribution of *Anopheles* as much as of their numerical distribution. (7.) Having proved the existence of *Anopheles* in nonmalarial districts the occasional occurrence of ague in such places may be explained by the advent of a malarious subject and the subsequent infection of local insects. The authors suggest that *Anopheles* be sought for in nonmalarial as well as in malarial regions. [C.S.D.]

6.—From a comprehensive study of the modifications of toxins, Ritchie arrives at the general conclusions that tetanus toxin under the influence of hydrochloric acid loses with comparative readiness its virulently toxic properties. With less readiness it loses its power of producing immunity and retains it when all trace of toxicity has disappeared. The less poisonous substances produced in the modified toxin are probably of the nature of toxoids. Tetanus toxin is also susceptible to the action of alkalis, such as sodium hydrate and sodium carbonate, under which it again loses its toxicity. Ricin resists the action of hydrochloric acid. It is evident in it also that the capacity of producing immunity remains after the toxicity is destroyed. Abrin and diphtheria toxin are resistant to the action of hydrochloric acid, but relatively susceptible to that of sodium hydrate. Diphtheria toxin which has had its toxicity destroyed by sodium hydrate seems to retain immunizing properties. [C.S.D.]

Revue Neurologique.

February, 28, 1901, [Vol. 1X, No. 4.]

1. Two Cases of Polyneuritis in Gonorrhoeal Patients. RAYMOND and CESTAN.
2. Intramedullary Neuroma in 2 Cases of Syringomyelia with Succulent Hands. BISCHOFSWERDER.

1.—Raymond and Cestan report 2 cases of multiple neuritis, secondary to gonorrhoea. The first occurred in a man aged 30,

who had contracted gonorrhoea, which in its acute stages lasted about 6 weeks. The discharge then ceased. A week later symptoms of multiple neuritis developed, and the discharge returned. There was paralysis of the legs, paresis of the trunk, and marked weakness of the arms, together with numbness and tingling in the affected parts. A diplegia of the face existed. The eyes were not involved. There was marked cutaneous hyperesthesia, but objectively the sensibility was not disturbed. In addition there was some atrophy of the lower limbs and the tendon reflexes were abolished. Reaction of degeneration was only obtained in the muscles of the face. The second patient, a man of 44, who had for a brief period indulged in alcohol, developed pains and weakness in the limbs within a week after contracting gonorrhoea. There was ataxia, the kneejerk was abolished on the right side and scarcely obtainable on the left; the muscles were somewhat atrophic, and the nerves were tender in their course. The arms were intact. There was no disturbance of sensation. The authors believe that in the second patient the neuritis was not due to alcohol, although it may have predisposed the system to be more sensitive to the poison of gonorrhoea than it would otherwise have been. The exact relation which gonorrhoea bears to the development of multiple neuritis cannot at present be definitely stated, nor is it known whether the gonococcus itself or the gonococcus toxin is concerned in the production of the neuritis. [D.R.]

2.—Bischofswerder, in 2 cases, noted the association of intramedullary neuroma and syringomyelia. Both of the cases were characterized by the main succulent (succulent hand). The neuromas were found in the ventral and dorsal portions of the cord, as well as just under the pia, and were to a large extent composed of interlacing nerve-fibers, many of which were myelinated. The neuromas situated near the exits of the ventral roots did not possess bloodvessels, while only a few of those near the dorsal roots were devoid of them. Raymond has explained these neuromas as being on attempt at the regeneration of nerve-fibers, while Schlesinger attributes them to local irritation. The author believes that both views may be correct and may explain the vascularized and the nonvascularized types of neuromas. The former are perhaps due to a local irritation; the latter are the expression of atrophic activity of the nerve-centers. In view of the succulent hands, it was interesting that the neuromas were localized exclusively to the cervical swellings. In the first case, in which there was also disease of the brachial plexus of the right side, the neuromas were almost confined to the cervical region of that side. It would seem as if the condition of the peripheral nerves had something to do with the development of the neuromas, although it does not explain all of the tumors. Since 1895, 5 cases of succulent hands have been reported: 1 by Raymond, with syringomyelia of spasmodic form; 3 by Schlesinger, 2 with tabes and 1 with syringomyelia; and 1 by v. Kahlden, with Pott's disease and spinal-meningitis. The author suggests the possibility that syringomyelia with succulent hand is a peculiar form of the disease, and that neuromas of the cervical swelling, together with a diseased state of the brachial plexus, constitute a special pathologic syndrome of the disease. [D.R.]

THE PUBLIC SERVICE

Changes in the Medical Corps of the U. S. Navy, for the week ended April 13, 1901:

- WAGGENER, Medical Inspector J. R., detached from duty in charge of the naval hospital, Cavite, P. I., and ordered to the naval hospital, Mare Island, Cal., having been condemned by board of medical survey.
- SCHOFIELD, Medical Director W. K., detached from duty in attendance upon officers of the Navy and Marine Corps, April 27, and ordered home and to await order.
- FARWELL, Medical Director W. G., detached from the League Island Navy Yard, April 27, and ordered to duty as relief of Medical Director W. K. Schofield, April 27.
- BIDDLE, Surgeon C., ordered to the League Island Navy Yard, April 27, as relief of Medical Director W. G. Farwell.
- GRIFFITH, Surgeon S. H., detached from the bureau of medicine and surgery, Navy Department, April 25, and ordered to temporary duty in charge of the exhibit of the bureau of medicine and surgery of the Pan-American Exposition, Buffalo, N. Y.

BARTON, Lieutenant Commander J. K., detached from the naval hospital, Yokohama, Japan, and ordered to the Brooklyn.

WILLIAMS, Assistant Surgeon R. B., detached from the Pensacola Navy Yard and ordered to the Key West Naval Station, and thence to temporary duty at Dry Tortugas, Fla., with detachment of marines.

Changes in the Medical Corps of the U. S. Army for the week ended April 13, 1901:

EWING, Major CHARLES B., surgeon, now on duty at Santa Mesa Hospital, Manila, P. I., is detailed as a member of the board of medical officers appointed January 16, 1900, for the purpose of studying tropical diseases as they occur in the Philippine Islands.

FARR, First Lieutenant CHARLES W., assistant surgeon, recently appointed, will proceed from Elmira, N. Y., to Fort Reno, for duty, to relieve Captain Francis M. McCallum, assistant surgeon, who will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

LONGINO, Captain THOMAS C., assistant surgeon, will accompany troops G and H, 10th cavalry, to San Francisco.

HORNE, Acting Assistant Surgeon WILLIS S., will proceed to Fort McIntosh and report to accompany troops E and F, 10th cavalry, to San Francisco.

GARRETT, Acting Assistant Surgeon NEVILL M., will proceed to the detention camp, Angel Island, Col., for duty with companies K and L, 11th infantry.

MORHART, Acting Assistant Surgeon FREDERICK II., having arrived on the transport Logan, and now sick at the Army General Hospital, Presidio, will proceed to his home, Washington, D. C., when able to travel, for annulment of contract.

NEWGARDEN, Captain GEORGE J., assistant surgeon, upon the expiration of leave granted him February 27, will proceed to Fort Mason, for duty.

DE WITT, Lieutenant Colonel CALVIN, D. S. G., is relieved from further duty as chief surgeon, department of Dakota, and will report to the surgeon general of the Army for duty.

Orders of April 5 are so amended as to direct Captain FRANCIS M. McCALLUM, assistant surgeon, upon his relief from duty at Fort Reno, to proceed via Jefferson Barracks to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

Orders of April 1, relating to Captain FREDERICK C. JACKSON, assistant surgeon, are revoked.

JACKSON, Captain FREDERICK C., assistant surgeon, is granted leave for 1 month.

JACKSON, Captain FREDERICK C., assistant surgeon, will upon the expiration of the sick leave granted him April 11, proceed to Columbus Barracks, for temporary duty.

EBER, Captain ALBERT H., assistant surgeon, recently appointed, is granted leave for 1 month.

JOHNSTONE, Captain ERNEST K., assistant surgeon, recently appointed, now in San Francisco, will report for transportation to Manila, P. I., where he will report for assignment to duty.

LAWRASON, Captain GEORGE B., assistant surgeon, recently appointed, will proceed to San Francisco, Cal., for transportation to Manila, P. I., where he will report for assignment to duty.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended April 12, 1901:

SMALLPOX—UNITED STATES.

		Cases	Deaths
California:	Los Angeles.....Mar. 33-30.....	1	
	Oakland.....Mar. 16-23.....	1	
	San Francisco.....Mar. 23-30.....	7	
Dist. of Columbia:	Washington.....Mar. 20-Apr. 6.....	2	
	Jacksonville.....Mar. 30-Apr. 6.....	19	
Florida:	Chicago.....Mar. 30-Apr. 6.....	9	
Illinois:	Evansville.....Mar. 23-30.....	1	
	Terre Haute.....Mar. 18-25.....	1	
Iowa:	Clinton.....Mar. 30-Apr. 6.....	1	
	Ottumwa.....Mar. 16-23.....	1	
Kansas:	Wichita.....Mar. 30-Apr. 6.....	17	
Kentucky:	Lexington.....Mar. 30-Apr. 6.....	8	
	New Orleans.....Mar. 30-Apr. 6.....	8	2
Louisiana:	Shreveport.....Mar. 23-Apr. 6.....	4	
	Detroit.....Mar. 30-Apr. 6.....	3	
Michigan:	West Bay City.....Mar. 30-Apr. 6.....	2	
	Minneapolis.....Mar. 30-Apr. 6.....	20	
Minnesota:	Nebraska City.....Mar. 3-23.....	7	
	South Omaha.....Apr. 1-6.....	6	
New Hampshire:	Manchester.....Mar. 30-Apr. 6.....	6	
	Newark.....Mar. 30-Apr. 6.....	2	
New Jersey:	New York.....Mar. 30-Apr. 6.....	42	8
	Cincinnati.....Mar. 29-Apr. 6.....	3	
New York:	Cleveland.....Mar. 30-Apr. 6.....	35	2
	McKeesport.....Mar. 30-Apr. 6.....	1	
Ohio:	Philadelphia.....Mar. 30-Apr. 6.....	1	1
	Pittsburg.....Mar. 30-Apr. 6.....	3	
Pennsylvania:	Steeleton.....Mar. 30-Apr. 6.....	1	
	Riverpoint.....Mar. 10-Apr. 6.....	5	
Rhode Island:	Charleston.....Apr. 2.....A few cases.,		
South Carolina:	Memphis.....Mar. 30-Apr. 6.....	22	1
	Nashville.....Mar. 30-Apr. 6.....	14	
Tennessee:	Salt Lake City.....Mar. 30-Apr. 6.....	28	
	Roanoke.....Mar. 1-31.....	71	4
Utah:	Wheeling.....Apr. 1-8.....	2	
Virginia:	Green Bay.....Mar. 31-Apr. 7.....	2	
West Virginia:			
Wisconsin:			

SMALLPOX—FOREIGN AND INSULAR.

Argentina:	Beunos Aires.....Feb. 1-26.....	37	21
Austria:	Prague.....Mar. 8-23.....	7	
Belgium:	Antwerp.....Mar. 8-16.....	3	1
China:	Hongkong.....Feb. 23-Mar. 2.....	9	7
Egypt:	Calro.....Mar. 4-11.....	1	
France:	Paris.....Mar. 16-23.....	1	6
Great Britain:	St. Etienne.....Mar. 1-15.....	1	
	Eng., Bradford.....Mar. 8-23.....	3	
India:	Liverpool.....Mar. 16-23.....	2	
	Southampton.....Mar. 16-23.....	1	
Mexico:	Scotland, Glasgow.....Mar. 22-29.....		11
	Bombay.....Mar. 5-12.....	10	10
Netherlands:	Calcutta.....Mar. 2-9.....		85
	Karachi.....Mar. 3-10.....	12	4
Russia:	Madras.....Mar. 2-8.....		11
	Progresso.....Mar. 22-29.....	8	
Spain:	Rotterdam.....Mar. 23-30.....	2	
	Moscow.....Mar. 8-16.....	4	3
Switzerland:	Odessa.....Mar. 8-23.....	13	3
	Warsaw.....Mar. 8-16.....	9	
Philippines:	Malaga.....Mar. 1-15.....		2
	Geneva.....Mar. 2-9.....	1	
Porto Rico:	Manila.....Feb. 16-23.....		1
	Ponce.....From beginning of epidemic to Mar. 15,	132	

YELLOW FEVER.

Costa Rica:	Port Limon.....Apr. 6.....	1
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CHOLERA.

China:	Hongkong.....Feb. 23-Mar. 2.....	6
India:	Bombay.....Mar. 5-12.....	4
Straits Settlements:	Calcutta.....Mar. 2-9.....	26
	Singapore.....Feb. 2-23.....	1

PLAGUE—FOREIGN AND INSULAR.

China:	Hongkong.....Feb. 23-Mar. 2.....	7	6
India:	Bombay.....Mar. 5-12.....		1,196
	Calcutta.....Mar. 2-9.....		557
Philippine Islands:	Manila.....Feb. 16-23.....	7	6

AMERICAN MEDICINE

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The Centralization of Control of Charitable and Educational Institutions proceeds, and all good citizens must hope that it will go on in all the lagging States. The latest instance is that of Minnesota, where there has been an abolition of practically all the separate boards in charge of the charitable and correctional institutions, including the supervisory Boards of Charities and Corrections. For these boards was substituted a central board of three members, which will have financial control not only of all charitable, correctional, and educational institutions of the State, but administrative control of every institution except the university, the normal schools, the schools for the deaf and blind, and the Soldiers' Home.

Concealment of the Plague in California.—We have more than once condemned the crime of concealing the existence of highly infectious diseases in obedience to motives of social or commercial economy. In another column we reproduce the brave words of the *Occidental Medical Times* against the heinousness and stupidity of this sin. In a part of the editorial of the *Times*, not quoted by us, there is an astonishing charge made that the Secretary of the Treasury and Surgeon-General Wyman signed an agreement that the report of the Federal Plague Commission shall not be made public, that all reports of cases of plague shall be suppressed, and that all sources of information as to the plague shall be concealed from the public by the officers of the Marine-Hospital Service. We are authorized by Dr. Wyman to say that "the statement as to an agreement signed for the suppression of plague information is absolutely without foundation."

A Suggestion as to the American Medical Association.—We have, of course, the sincerest desire that the Association may grow more and more powerful, and to that end we would, in the most friendly spirit, offer a suggestion which we believe would have the effect desired. It is that, without losing the democratic or representative control of the business and decisions—the direction and fate of the organization—some plan may be devised whereby a small number of delegates should thresh out all propositions, and decide them according to their combined wisdom and judgment; the general meetings would thus be kept for purely scientific business. If the referendum is instituted, it should be without discussion, by the general body which must vote yea

and nay at once upon presentation of the question of supporting the committee's decisions. When in earlier days the Association was made up of a small number, the town-meeting plan of legislation was possible; now that it has grown so large and will continue to grow still larger a manner of expediting the transaction of business should be instituted. A mob cannot legislate, cannot deliberate dispassionately, and several thousand people even of the best, will be subject to the laws of the psychology of crowds. This representative body might be called the Senate. Each senator should be elected by his State organization and represent a stated large number of members and should devote his entire time, to the exclusion of section work, to the business of the Association.

Philanthropy for Consumptives.—One of the gravest aspects of the problem of caring for consumptive persons is that of the diminished wage-earning capacity of those who suffer from the disease during many years. Not only must a majority of tuberculous patients support themselves during the long struggle against progressive inroads of infection, but in many instances the care of others is also a burden on them. When the semiinvalid is forced to seek a different climate in the hope of cure, he finds himself, even when that hope is to a degree realized, brought into competition with more robust personalities that demand no favoritism in the struggle for a livelihood. Sometimes the consumptive secures work by accepting wages lower than the prevailing scale; thus he becomes at once a disturbing factor in the labor market. The establishment and maintenance of sanatorium settlements where consumptives may become self-supporting in whole or in part without coming into competition with other labor, may prove a partial solution of the difficulty. It may be commended to philanthropists as a charity measure that is practically free from the objection of "pauperizing" the recipients of the aid given.

Pseudopathy as a Warning.—Miracle mongering and medical superstition in the guise of Christian science, faith-cure, etc., should be "held in thought" by physicians as a signal that we may ourselves have gone astray. We should at least never forget the wisdom of the old rule of attending carefully to what your enemy is saying and doing. Certainly the law of rhythm in human affairs, of action and reaction, needed no Spencer to prove

its universality. Classing all the hordes of modern medical superstitions together under the title of pseudopathies, there is one type that glares at us with abundant conviction and unity from the eyes of the morbid pseudopaths—they are in revolt against materialism and fatalism. Is this, it behooves us to ask, to any great extent a reaction against the past deterministic and materialistic attitude of so many scientists and physicians? If so, we are to blame. Every scientist whose opinion is worth consideration has put himself on record against the silliness and unscience of materialism, and every normal human heart believes in freedom. An exaggerated reliance upon drugs, a pathologic pathology, a crass extremism of science-worship, a not infrequent professional bigotry—all these have undoubtedly served to drive too many weak minds into the violent and worse reactionary extreme of pseudopathy. If that extreme is inexcusable, so was ours. Fortunately we have recognized and are fast renouncing our error. But the results of our sins live on after we have repented. These sick minds have yet to be cured. Pseudopathy is real disease.

Political Colonization and Medical Science are constantly increasing their interrelationships. The great problems of statesmen and administrators have constantly to be solved, and are in every detail modified by the aid of data and facts supplied by medical men. What a lesson there is for the world in our universal annexation mania in regard to the interdependence of the highest and lowest, of the farthest removed savage and civilized. Intensely infectious diseases cannot be stamped out in any civilized country unless at the same time they have been stamped out in Central Africa or in Asia. Nothing so well as disease teaches the unity of the human race. Among medical discoveries none is of more importance to expansive governments than that of the disease-carrying powers of the mosquito. Up to now the extension of civilization in almost all new countries has been a terribly expensive or impossible process, owing to malaria, yellow fever, etc. The west coast of Africa today is speedily fatal to Europeans. It is now quite certain that mosquito-curtains and such protective devices, with attention to pure water and proper food, will make it possible to civilize many countries that are now barbaric desolations. The savage protects himself by smearing his skin with filth, or has developed a natural immunization against diseases; for the white man science will make the same safeguards possible by better and quicker methods. There is no money so well invested as the little which civilization spends upon medical science.

An Epidemic of Pharyngitis.—A peculiar form of acute pharyngitis seems to be epidemic in Philadelphia. It has attracted the attention of physicians in general practice, and more strongly that of laryngologists in charge of large hospital dispensaries. It comes on acutely either directly with throat symptoms or first with general manifestations—chilliness, pains, fever—the throat phenomena appearing only after twelve or twenty-four hours. The pharynx is intensely red, and the tonsils

are greatly, but often unequally, swollen. Numerous white points dot the tonsils, but are not confined to them. On careful examination small white patches, round or oval, surrounded by a red inflammatory areola, can be seen on the posterior wall of the pharynx, and frequently also on the halfarches. At times the tiny ulcers are disposed in vertical rows. In some cases the pharyngeal involvement predominates and the tonsillar swelling is but trivial. Pain in the back of the neck and in swallowing is present, together with the other features of a severe tonsillitis. There is, however, not much enlargement of the lymph-glands. The urine is diminished in quantity, is of a dark color, and has a high specific gravity. The severe symptoms persist for two or three days and then subside quickly. Usually the patient is left very prostrated. Both children and adults are attacked; often several members of a family are taken down simultaneously or within a few days of one another. There are no complications, as a rule, but in one case with which the writer is familiar an acute attack of Bright's disease seemed to have no other cause than the pharyngitis here described.

The Toxic Action of Methyl-alcohol in recent times has attracted much attention, and its influence upon the eye and its power to produce blindness have been the subject of many papers and some experimental work. In most of the cases thus far reported the methyl-alcohol has been consumed by men as a substitute for ordinary alcoholic drinks, and has produced with great suddenness amaurosis and optic nerve atrophy. Usually at the end of a spree the patient has wakened up completely blind; a blindness, moreover, which has been permanent except in one instance. In not a few cases death has followed the consumption of this liquid. Not only has methyl-alcohol been so used, but adulterated Jamaica ginger, essence of peppermint and other substances which undoubtedly depend for their activity, as Herbert Harlan has recently demonstrated, upon methyl-alcohol.

In a few instances workmen who are obliged to use wood-spirit have become blind by inhaling its fumes, as has been particularly noticed and reported by Patillo and Casey Wood of Chicago, and quite recently Dr. deSchweinitz has described before the Ophthalmic Section of the College of Physicians of Philadelphia a case of sudden blindness which was probably due to methyl-alcohol and which indicates that varnishers run grave risks when employing this exceedingly potent spirit. The patient for two months prior to his loss of vision was constantly employed in shellacking and was obliged to mix the shellac with methyl-alcohol or columbian spirits which contains about 90% of this liquid, and was therefore during this period of time much exposed to the fumes. Not only this, but he, as well as his fellow-workmen, were in the habit at the close of the day's labor of washing the stains of the shellac from their hands, forearms, and faces with the methyl-spirit. It would seem, therefore, that varnishers who use wood-alcohol should be warned of the grave risks which they run, which are similar to those which are encountered by workers in lead, in carbon bisulfid in the caoutchouc manufactories, and in dinitrobenzol in the roburite

works. The special precautions which the workmen are obliged to employ in these three trades are well known—care in washing the hands, frequent changing of occupation, and, during the period of handling, particularly carbon bisulfid and dinitrobenzol, the use of masks to prevent the noxious fumes from entering the pulmonary tract. In all probability the knowledge of the danger of methyl-alcohol is not nearly so widespread among workers and employers as is the knowledge of the danger of lead, dinitrobenzol and carbon bisulfid, but evidently no time should be lost in making them aware of the serious risks which careless use of this liquid entail.

Nursing School Diploma Mills are springing up with the concealed or avowed purpose of securing diplomas and inclusion in the regularly trained profession before laws shall be passed shutting out such quacks. The nurses of the country should zealously push forward the passage of laws requiring registration and graduation from some genuine training school as conditions of permission to practice. When diplomas (printed in the alluring circulars in double caps), badges, etc., for a certain amount of money may be obtained by correspondence from poor dupes who do not know how to read or write, it is already late for organizing against the shameless humbuggery.

Asthenic Bulbar Palsy.—This somewhat mysterious affection was first brought to the notice of neurologists by Erb, in 1878, although its occurrence had been previously observed by Wilks, and by Wernicke. Oppenheim was chiefly instrumental in establishing it as a clinical entity; and since his original contribution, in 1887, quite a large number of cases have been reported. In this country the condition has been observed by Collins, Wheaton, Berkeley, Sinkler, Burr, and McCarthy.

The chief characteristics of the disease are ptosis and paralysis of the external ocular muscles, and of those of the face, of mastication, and of the tongue, palate, and larynx. Speech and swallowing are greatly impaired, and mastication is difficult. Sometimes the muscles of the neck, trunk, and extremities are paretic. Under voluntary use of the muscles the paresis increases rapidly, and eventuates in complete loss of energy and almost total paralysis. The exhaustion may be so extreme that after a few moments' conversation the patient is unable to utter a word, and that the bolus of food, partially masticated, lodges in the mouth for want of strength to swallow it. The symptoms are subject to rapid changes, and may vary from hour to hour; and as a whole, the disease presents remissions lasting for several weeks or months. Sensory changes, pain, reactions of degeneration, and impairment of the sphincters, are absent. A peculiar electric reaction has been described by Jolly as characteristic of the disease. It is a rapid exhaustion of the muscles under the influence of the faradic current (myasthenic reaction), and is analogous to the fatigue or utter exhaustion that follows voluntary movement of the muscles.

While cures have been reported, the disease is usually fatal. Hitherto the dietum of Oppenheim that the dis-

ease had not an anatomic basis but was a pure neurosis, has been generally accepted, and was corroborated by the results of autopsies, which showed either no changes, or merely unimportant ones. For this reason most authorities ascribe the disease as a neurosis from auto-intoxication. Later, however, Déjerine and Thomas have reported an instance of the disease, typical clinically, in which they found, in addition to trivial cortical changes, a decided atrophy of the pyramidal tracts in the pons and medulla. This they considered as probably a primary degeneration, since it bore no definite relation to the alterations in the cortex. Aside from this, they also noted a high degree of fatty degeneration of the muscles of the larynx, with similar, but milder changes, in the tongue and pharynx. Whether the muscular degeneration was primary or secondary, they were unable to decide, in the absence of knowledge as to the conditions of the muscles of the larynx in cases that have died of hemiplegia or of pseudobulbar palsy. It seemed to them, however, as if the muscular degeneration was more recent than the changes in the pyramids.

These observations of Déjerine and Thomas are an interesting and important contribution to the subject of asthenic bulbar palsy. They suggest the possibility, as the authors properly remark, that the disease is not strictly a morbid entity, but merely a clinical syndrome that may be produced by a variety of conditions.

Pleuritic Urticaria.—Although the occurrence of urticaria during the course of serofibrinous pleuritis has been observed with tolerable frequency, but little general attention has been directed to the subject. The recent report of a case by Gomez (*Riforma Medica*, December 27, 1900), not only brings forward the subject again for consideration, but also suggests some interesting and important practical points. The case reported is that of a girl, aged 17 years, who developed a pleuritis attended with moderate effusion, probably the result of staphylococcal infection. The occurrence of an urticaria that could not be assigned to any dietetic indiscretion was speedily followed by absorption of the exudate. The important practical inference to be drawn from this as well as from other cases is that the urticaria, while it adds temporarily to the patient's discomfort, is of good prognostic import, in that it usually presages the speedy disappearance of the pleural effusion. This is all the more likely to be the case, if the urticaria occurs early in the course of the pleuritis. The point is well worth investigating, and if future observations should confirm our present suspicions, we will have secured a valuable addition to our prognostic knowledge and its accompanying therapeutic indications. The urticaria in these cases manifests itself especially on the trunk, the abdomen, and about the folds of the body, and in the present instance, as well as in the most of the reported cases, it has been attributed to the development of a toxemia, the consequence of absorption of pleural fluid.

The Sufferings of Animals in War.—We wonder if there is any sin deeper and more disgraceful than that of the Antivivisectionists who ignore the horror of the sufferings of horses, mules, and oxen, in war, while

tormenting scientific men with their lies and shriekings. Here are two quotations from English correspondents:

"But of all the pitiful, heart-rending sights I have ever seen none has compared to this view of hundreds upon hundreds of dead and dying horses on this 100 miles of war's promenade. The poor beasts had done no man any harm—in fact, each one had been a man's reliance—and to see them shattered by shell and then ripped open by vultures often before they were dead, was enough to snap the tenderest chords in one's breast. They had not deserved and could not understand their horrible ill-luck. For some reason, hundreds had dragged themselves to the main road, and then had died either in the track of the wagons or by its side. But the worst horror was to come when I approached close upon the last battlefield, only twenty-four hours after the fight at Dreifontein. On this field not nearly all the horses were yet dead. On the contrary, as I came up beside the prestrate body of a beautiful steed it would slowly and painfully lift its head, and turn upon me a pair of the most pleading woe-stricken eyes, full of a hunger to know what I could do for it. All I could do was to drive on, for I had no firearms, even for my own protection, deep in an enemy's country, where we had put no single armed man to guard the route of our supplies and reinforcements. My companion used to turn and look back at these dying horses, only to find that they were still straining their sad eyes after the cart. Then he would say, 'He is looking at us yet; oh, it makes me ill; look, he is staring at us like a guilty conscience. What can we do? I wish we did not see such things.'

"More pathetic than the sight of the dead horses was the sight of the living ones. There were horses that had been bit, horses that had been broken down with overwork and under-feeding, horses with hideous saddle-sores hidden by clustering mounds of flies, horses abandoned for every conceivable defect; some horses for whom death had loosened their riders' control, big English horses, unshod Boer penies, most of them with hip bones that projected so far as to suggest dislocation; they were wandering about helpless, forlorn, abandoned creatures, who looked at you dubiously, as though they feared you were bringing them more of glorious warfare; and then, seeing you pass, turned listlessly away, hanging down their heads."

The cure for such things lies in the organization, or the reorganization of Army Veterinary Departments, the extension of the protection of the terms of the Geneva Convention to those who care for wounded animals, etc. Those who have real kindness of heart instead of egotistic sentimentalism should try to stop pain, instead of screaming at those who are trying to stop it.

Nerve Fibers in the Pia Mater.—In a recent number of the *Revue Neurologique*, Dercum and Spiller report an interesting discovery made in a case of adiposis dolorosa. They found myelinated nerve fibers in the pia mater, over the posterior and, to a less extent, over the lateral columns of the cord. The fibers were most numerous in the sacral, lumbar, and lower thoracic regions; none was found in the cervical portion of the cord. They had an irregular course, and in a few places it was evident that they came from the posterior roots. After entering the pia, they ascended for a considerable distance, and then seemed to pass into the posterior columns. As there was no degeneration of the posterior columns or of the posterior roots, the presence of these fibers could not be explained on the basis of a compensatory growth—an hypothesis that has been suggested by Saxer and Fickler. Dercum and Spiller offer another and seemingly logical explanation for the presence of the nerves in their own case. On the strength of Ober-

steiner's and Galland's demonstration of the existence of nerve-fibers in the vessels of the cerebral pia, they conclude that the spinal pia must likewise be provided with nerve-filaments. Normally these, like the corresponding fibers in the pia of the brain, are without myelin, but it is possible that, coming as they do from the posterior roots, they may in rare cases retain their sheath and thus be demonstrable by means of the Weigert stain.

The discovery of nerve-fibers in the vessels of the cerebral pia—long foreshadowed by clinical experience—indicates that the circulation in the central nervous system like that in other viscera, is, in part at least, under the local control of the vasomotor system. It was formerly maintained that hyperemia and anemia of the brain occurred only in response to increased or decreased activity of the heart, or as a consequence of purely mechanical conditions favoring or restricting the flow of blood to the brain. Now, as nerve-fibers course in the vessels of the pia, and as these vessels have a muscular coat, it is an unavoidable conclusion that these nerves subserve the same function that falls to them in other parts of the body—namely, to regulate the caliber of the arteries and arterioles.

The knowledge that the brain possesses a vasomotor system of its own throws a flood of light on a number of clinical problems, and will, no doubt, also exert an important influence upon the treatment of cerebral disease.

The demonstration of the presence of nerve-fibers in the spinal pia under normal conditions is still lacking. It would seem that the gold-impregnation method, which gave such good results to Obersteiner, ought to prove equally efficient in the spinal cord.

Reduced Birth-rate.—A French statistician says that in spite of the increase of population in various countries, the rate of increase is steadily diminishing. Austria is really little better than France in this respect, while Germany, which shows the largest increase of European nations, has a declining birth-rate. The United States, with its increase of 14,000,000 in the last decade, has the largest decline of birth-rate and would surely show signs of retrogression but for the steady volume of emigration. It is the old story over again of lessening of increase in accordance with the degree of luxury in civilization.

Homes for Foundlings, according to the committee in New York, are not only easy to find, but there are not enough babies to supply the demand! Many applicants recently had to return to their childless homes when it became known that there were no more little ones to give away. The fact is encouraging, and one may hope that the time will soon come when there shall not be an orphan asylum or an uncared-for child in the civilized world. In Australia and New Zealand there is none such. The "cry of the children" has been a sad one in the world. We are not over-favorable to "grandmotherly government," but we heartily believe in motherly government—of children. Every child has a right to a home and love, and the State should see to it that it gets its rights. Let us have no such abominations as the baby-farming (save the word!) described by Zola in his

powerful novel, *Fécondité*. (Read also the terrible indictment of the monastic orders in the *Contemporary Review* of April, 1900). It is all the more inexcusable when thousands of child-hungry women and men wish to care for waifs. In New York City the number of children who have been legally adopted through the committee's efforts, and who are now in good homes, are as follows:

During the year ending March 31, 1899	3
During the year ending March 31, 1900	18
During the year ending March 31, 1901	32
Total	53

When the committee began its work the death rate among the foundlings in the Infants' Hospital was appalling. Of the 366 infants under six months old admitted in 1896 but twelve were alive on April 15, 1897, a death rate of 96.7%. Since then the death rate has been very materially reduced, as the following figures show:

During the year ending March 31, 1899	55.9%
During the year ending March 31, 1900	31.1%
During the year ending March 31, 1901	18.9%

The Proportion of Doctors Among Men of Genius.—In the recent Dictionary of National Biography which has been issued lately in England, and in which persons of preeminent intellectual ability which Great Britain has thus far produced are considered, there are mentioned some 30,000 persons. Havelock Ellis (*Popular Science Monthly*, February, 1901) has studied the records contained in this dictionary with a view to determining the elements of intellectual ability which have entered into the success of these eminent Britons. He finds that in a large proportion of these persons there is too little recorded upon which to base a judgment and for other reasons he eliminates from his estimates all but 859 men of a high degree of intellectual eminence. The number of doctors included in his list of names is surprisingly small, only 7 being mentioned: Caius, Linaere, Mead, Pott, Sydenham, Cheselden and Cullen. It would have been possible to enlarge the group somewhat by including a certain number of medical men who are not considered by their biographers to have attained a really durable reputation. He believes that just as really able business men are not satisfied with business success, so really able doctors are not satisfied with professional success, but seek a higher success, specially in science. A number of eminent men in science, letters and philosophy have been doctors, but it has not been in medical practice that their reputations have been made. In this class he mentions such names as Harvey, Hunter and Jenner. It is questionable whether it can be truly said that these men did not make their reputations either in medical practice or what is practically the same, in allied medical sciences; and without the experience which these men gained from their medical education and practice, it is questionable whether their intellects would have developed in such a way as to lead them to any pre-eminent success. Among other names which Ellis includes in his lists are those of Locke, Goldsmith, Keats, Livingstone and others who were educated as physicians and some of whom practised medicine but

who cannot be said to have been deeply influenced by their medical training and practice.

This small list of names of doctors shows how little is the reward in the way of fame and public appreciation of service which can be expected even by the most successful medical men. Undoubtedly many of the men included in Ellis' lists were deeply influenced by a medical training. Without this they would never have attained their love for truly scientific study, their thorough understanding of human nature in all phases and the deeper sympathy with people of all conditions which the doctor gains from association with the sick and afflicted of all classes; for truly, suffering makes all men kin, and under the trying circumstances of serious illness men show their true characters as under no other circumstances. While the proportion of men who have themselves a permanent place in the archives of history among the members of the medical profession is not great, there are other rewards which are as great and in many ways more satisfactory. Ellis says that the able doctor is not satisfied with his professional success, but seeks a higher success. Can there be any higher success than the doctor's professional success? The certain knowledge that one has been able to alleviate suffering, and to cure disease is surely worth as much as a place in the Dictionary of National Biography and there are many unknown heroes in the medical profession who have as certainly earned a place in the hearts of their fellows as Ian MacLaren's "Doctor of the Old School."

"Something Unusual to Offer You" in Advertising.—The original of the letter copied below lies before us. If his offer is not so unusual as the writer supposes, it must be remembered that the manufacturer thus solicited not only did not accept, but writes: *We wonder how many of the advertisers in the ——— have been tempted by this most liberal offer?* We shall look out for the future articles of the condescending physician, "able" and "educated," who shrewdly limits his sales to two articles per annum to a single firm.

Gentlemen:—We know that you receive more requests for advertising than is interesting, but we have something unusual to offer you, so we hope you will give this letter your consideration. If you will place a half page or a full page ad. in the ——— one year we will get Dr. ——— to write for the ——— an original article on your preparations. Dr. ——— is an educated man and a very able writer, and in addition to writing some for the medical press, writes for some of the popular magazines. The April ——— has an article on ——— by the Doctor. He does not make a business of writing articles on proprietary preparations, but he has written a few such articles in the past few years for us. He would not recommend any preparation unless he was sure of its value. If you should accept this offer we should expect you to supply the Doctor sufficient of your preparations to try them thoroughly.

We enclose one of the Doctor's articles which will show you some of his work.

In addition to this we will give you each month a notice in the department called ———.

We claim the ——— to be equal to any journal having the same circulation, but some of our advertisers who most accurately and carefully note returns, claim more. We enclose copy of a letter from the ———, ——— St., ———, showing their opinion. This opinion came to us entirely unsolicited.

We should like to start a page in an early number of the ——— for \$75.00 or a half page for \$40.00. Kindly favor us with

a reply whether you take space or not. As we can only get two articles from Dr. ——— this year, we wish to make this proposition to some one else if you should not accept it. We enclose return envelope for reply. We have sent you a March ——— for examination.

Yours truly,

“Youth at the Prow.”—Those who have undertaken any progressive and altruistic work in medicine are likely to be shocked soon by the indifference of the elder and the successful physicians. The leaders do not lead. They often do not follow and, indeed, are prone to pull backwards. There is perhaps a too strong tendency in America for the youngsters to scorn the advice of their fathers and to strike out for new fields and to be regardless of precedent. But in a growing country or a growing science, like ours, it must be admitted that the selfishness and lethargy of the old often give to the young a most exasperating warrant for seizing the helm as well as standing at the prow. It is wise to be governed by wisdom, but age is not always a synonym of wisdom nor of a fine professional spirit. It is a great pity that some physicians are so successful, for success is prone to breed recklessness as to professional abuses. We must look to the young for sympathy with medical reform and advance. Crudeness and impertinence should indeed be avoided, but to those just entering upon their medical life comes the cry, “Take your world, O Youth.”

EDITORIAL ECHOES

The Plague in California.—In the meantime, however, the disease has not been “shut up;” it has relentlessly pursued its deadly course without an effort on the part of any one to stem the tide. Six cases have been verified recently. All have been found dead in the miserable undertaking shops of Chinatown. One contracted the disease in Sacramento, another in Santa Barbara; the rest belong to San Francisco. We are fairly well convinced that the disease exists or has existed in Stockton, Fresno, and Bakersfield. A report, not verified by inoculation experiments or bacteriology, of two cases, from the last-named town, one dying in San Francisco, a man, ill for three days, with a large carbuncular mass involving the scrotum and inguino-femoral region, becoming rapidly comatose; the other, a case of supposed pneumonia, dying within a short period of illness, showing post mortem absolutely no pneumonic condition, but presenting enlarged glands in the femoral region, with hemorrhagic tissues surrounding bloody effusions in the peritoneal and pleural cavities, and those of the brain, presents a fairly typical picture of plague. The supposed cases of pneumonia in this town have been rapidly fatal, of a type puzzling the physicians, and presenting symptoms not in keeping with the history of pneumonia. In other words, the condition of affairs in California stands an awful menace to the health of its own people and those of the United States, especially when, through the falsehoods and instability of the Governor and people, absolutely nothing has been done for protection. It should be remembered by the officials of this State, great and small, that the commission has warned them personally of the solemn duty they owe their country in this crisis. They should recall the warning of Dr. Barker, when he stated that it was his belief that the disease existed from San Diego to Vancouver, B. C. They should recall the fact that, when they asked what should be done with Chinatown, they were told that it should be depopulated, that a

detention hospital should be established, and that in the end, to eradicate the disease, it in all probability must be destroyed. And yet our people hearken not! They still cry, “No plague,” stand idly by, while the disease continues its slow and threatening march, picking off a man here and there in dreadful warning. Woe betide this community if it ever invades the homes of the rich or of those who have outraged all honor and the truth in their false groveling to mammon and preferment!—*[Occidental Medical Times.]*

The Extermination of Rats.—“Some English statesman or other was described as a man who ‘looked like a rat that had seen a cat.’ The whole rat tribe may well be supposed to wear that air of mingled slyness and fear as soon as it hears of the formal proposal of the Japanese that the civilized world join forces for the purpose of exterminating rats. This is no affair for the Pied Piper of Hamelin. ‘Yankees of the Orient,’ as the Japanese have been called, it is no mere Yankee notion, this idea of theirs that the world should be rid of rats. It breathes, rather, the spirit of pure science. Rats are, next to mosquitos, the great germ-bearers and infection-carriers, and we should not wait till they get the world into the condition of a sinking ship, when, of course, they would leave it, if ye have writ your proverbs true, but should make haste to fling them overboard before they infect the whole crew with cholera and the plague. Ways and means are not yet described; and the skeptical will wonder how the job could be done in a country like India, where rats swarm and animal life is sacred. But if aimless and wanton hunting has exterminated more than one species of fauna during the past hundred years, a scientific campaign might avail even against rats. At any rate, life can never be quite the same to them again. They have seen the Japanese cat.”—*[The Evening Post, New York.]*

The Growth of the American Medical Association.—A decided reduction of the number of delegates, the proportion for each constituent body remaining the same, would, it seems to us, enhance the scientific work done in the sections and give time for a greater number of formal addresses, papers of general interest, and demonstrations. There need be no limit to the number of non-voting members so that the attendance at the meetings would go on increasing as it has done up to the present time. In short, we can see no objection to a decided curtailment of the representative element, and we believe that it would prove advantageous. Such a move, we are quite aware, would involve practically a reorganization of the association; if our ground is well taken, however, why should not a reorganization be effected?—*[N. Y. Med. Jour.]*

May a Hospital Steal Cases?—When our hospitals, whose staffs usually are made up of some of the leading physicians in the community, set the example of stealing cases from brother physicians under the guise of impersonal “rules of the institution,” it is time for medical societies to take a hand; and it is not to be wondered at that the younger men in the profession say the code operates chiefly to enable the older men to steal cases from those less well established, while preventing the contrary from being done. It is a terrible example to set the young men in the profession, and the institutions which are doing these things are doing more real damage to the *morale* of our profession than all other causes combined. The wrong is a deep one; and if we are to save ourselves from complete degradation to the methods of the charlatan, either those physicians who happen to be members of hospital staffs must see to it that these things do not occur, or else the medical societies

must take a hand and ostracise those members who tacitly permit case-stealing to be carried on by the institutions they guide and serve.—[*Cleveland Journal of Medicine.*]

Responsibility for Medical Attendance in a Divided Family, according to the *New York Medical Journal* has been settled by recent and old decisions, which makes the husband liable for the physician's services although the man and wife are not living together, and he is paying her a fixed amount monthly for her support. The father under similar circumstances is liable for the support of the children. "The physician's claim stands on an altogether different basis from a trade claim. Many instances in which the physician is summoned are such as involve matters of life and death, and common humanity in such cases demands that the physician should not lose time before rendering his services in taking steps to protect himself, as the tradesman would and should do, before allowing indebtedness to be incurred."

Executive Value of Medical Training.—Such a neglect of the medical profession in public affairs is nowhere found, excepting in this country. In France, Italy and Germany, a large number of physicians are found in the legislature and in many administrative positions. Some of the leading statesmen and politicians of the continent have had medical educations or have achieved signal distinction as medical teachers or practitioners. In this respect the profession in England is less prominent than that of the continent, but even in England the role played by the medical profession in the control of affairs is greater than in this country. One would think that a republic would be a place where all occupations would be represented in government; and yet it is a singular fact that almost the sole avenue to political preferment is through the legal profession. Nearly nine-tenths of our legislators and a large proportion of those who hold executive positions are drawn from the law, with the result that in the conduct of public affairs the commercial and other interests of the country are practically unrepresented. We believe that there are more lawyers engaged in governing in this country than in all the balance of the world beside, so that it has literally become a government of lawyers, by lawyers, and for lawyers. In France and Germany just the opposite conditions prevail. The sentiment of these countries is to the effect that a legal education does not especially fit one as a legislator.—[*Medicine.*]

Fees and Commissions—A Remedy.—The *Cleveland Journal of Medicine*, in order to stop the division of fees behind the patient's back, recommends that the medical societies shall arrange a fee bill for medical cases, not as now on the principle of the number of visits made, but "for services rendered," according to the disease, its severity, complications, etc. A provision could be inserted in this fee-bill, e. g., "For sharing the responsibility of urging surgical intervention, 25% in addition to the fee charged by the surgeon." This charge would be explained beforehand to the patient and his friends as having been agreed upon by all physicians. In each case then the surgeon and the physician could regulate their charges to accord with the gravity of the case, the difficulties to be encountered, and the ability of the people to pay. It would not be a commission paid clandestinely, but a regular fee for a definite service. By this plan the demand for commissions would pass away by the complete relief of the difficulties that seems to demand them.

The Widal test is by no means simply a positive or negative answer to the question, Is typhoid fever present? It may prove to be a valuable prognostic measure that will point out the failure of immunization and the con-

sequent danger of relapse. Its practical importance from this standpoint can be scarcely exaggerated. A delayed Widal reaction will be the indication for exercise of the greatest care in the resumption of ordinary diet. Relapses will not come as the surprise they have been heretofore, and the practitioner will realize during the course of the first attack the necessity for the conservation of the patient's strength.—[*The Medical News.*]

Dyspeptic Glycosuria.—The *Bulletin* of the French Academy of Medicine contains an interesting communication from M. Albert Robin upon the relations of glycosuria and diabetes to dyspepsia and stomach disorders. Although the writer is mistaken in supposing that this relation had not been previously observed, he carries the subject a step forward by connecting it definitely with hyperchlorhydria or that condition in which there is an excessive secretion of hydrochloric acid by the stomach. He points out that there is entire failure of the ordinary symptoms of diabetes, the quantity of sugar being small and its presence irregular; it appears during digestion, and is absent at other times. Albuminuria is frequently present. The quantity of urine is slightly increased; its density varies from 1,022 to 1,032, and there is excess of urea, phosphoric acid, and uric acid. The liver is swollen, the stomach distended, and in addition to dyspeptic troubles there may be neurasthenia, with vertigo, phosphaturia, skin troubles, cardiac disturbance, profuse sweating, etc., but none of these symptoms have any special significance. This mild and comparatively unimportant glycosuria occasionally becomes transformed into what the author calls dyspeptic diabetes with all its classical symptoms—namely, thirst, polyuria, and wasting. For the treatment of dyspeptic glycosuria, M. Robin recommends the use of remedies calculated to control the hyperchlorhydria, such as absolute milk diet, with magnesia, bicarbonate of soda, chalk, Vichy water, etc. When dyspeptic diabetes supervenes, regular antidiabetic treatment must be commenced.—[*Brit. Med. Jour.*]

Regulation of Marriage.—The *Medical Record*, in speaking of the Chilton Bill, which has passed the Minnesota Senate and is expected to become a law, says the bill is not only intended to restrict the marriage of persons afflicted with physical or mental disorders, but will affect all wishing to marry, as every candidate for matrimony must undergo a physical examination by a competent medical practitioner. "Even if its provisions, in many instances, should be covertly violated, every attempt at enforcing the law would prove a valuable educational measure, and carry with it a proper deterrent effect."

The Oleomargarin Bill and Substitution.—The argument is advanced that oleomargarin is an excellent food and a good substitute for butter. We shall not attempt to argue this question, for even if we admit that oleomargarine is a wholesome and palatable food, there is still no reason why it should be sold as butter. If wholesome and nutritious, it can easily rest upon its own merits as a food, but there is no reason why it should masquerade as butter; those who want the latter article should have it, and those who wish a substitute should be able to obtain it to a certainty. The public should not be asked to buy a mixture of lard, tallow, cottonseed oil and 1.5% of butter fat as pure butter. We question that the food value of this mixture is equal to pure butter fat, and the substitution of one for the other is a fraud with which the medical profession has had abundant experience in the matter of drugs. The bill now before Congress aims simply to prevent the coloring of oleomargarin in imitation of butter, and as such it is to be hoped that it will pass, as it will lessen in so much substitution and adulteration.—[*Medicine.*]

AMERICAN NEWS AND NOTES

GENERAL.

Blackleg.—The vaccine sent out by the Department of Agriculture for treating blackleg among cattle is in great request.

Smallpox in the United States.—The total number of cases for 1901, as officially reported, is 16,748, and for the same period in 1900, 8,013.

Rinderpest is reported from Manila as spreading in the provinces of Tayabas and Pangasinan and more remote districts. Military physicians have been sent to inspect the localities where the disease prevails.

Sanitary Condition of Havana.—The tabulated report of the vital statistics of Havana for March is accompanied by a letter from Major W. C. Gorgas, Chief Sanitary Officer there, calling attention to the fact that the death-rate (26.28) is lower than that of any March since 1889. There were only 4 cases and 1 death from yellow fever. He attributed this to the systematic and extensive destruction of mosquitos, and also to the quickened ability of physicians to recognize the milder types of the fever, consequently cases formerly overlooked are now promptly recognized and reported. The smallpox situation is equally satisfactory.

Increase in Drunkenness among the private soldiers of the army is reported to the War Department from every part of the country where troops are stationed. This is regarded as the result of the abolition of the sale of beer in the post canteens as there has been an increase in the number of saloons in the villages adjoining the military reservations dispensing cheap whisky and other heavy liquors, and the soldiers are led into vices which are excluded from the limits of a military post. In Manila the effect has been the same where "bino" is drunk instead of beer. It is stated that $\frac{1}{3}$ of the men who have deserted to the enemy or have gone home sick or insane are "bino" fiends.

Obituary.—H. S. SCRUGGS, JR. of Memphis, Tenn., April 17. CHARLES M. COVERNTON of Toronto, Canada, April 14, aged 88. THOMAS PHILLIPS GRAHAM of Pittsburg, April 14, aged 61. HENRY AUGUSTUS ROWLAND, renowned physicist of Johns Hopkins University, April 16, aged 53. ALERIO HERMANSE of Brooklyn, April 16, aged 66. JOHN WANLESS of Toronto, April 14, aged 88. B. F. HILL of Bardstown, Ky., April 16, aged 45. JOHN P. ROBB of Fredericksburg, Va., April 17, aged 80. J. G. MCCRARY of Macon, Ga., April 15, aged 81. WILSON A. SMITH of Middlebourne, W. Va., March 23. CHARLES H. DANA at Bartow, Fla., March 25. LOUIS T. DAWSON of Club Run, Ky., March 29, aged 36. W. B. HARLAN of Danville, Ky., April 6, aged 72. ALBERT E. KELLEY at Newark, N. J., April 2. COLON C. WATSON of Crystal Lake, Ill., March 20, aged 45. MERRITT H. CHANDLER of Woodstock, Vt., April 6, aged 56. THOMAS HEPBURN BUCKLER of Baltimore, April 20, aged 90. LEWIS R. KIRK of Rising Sun, Md., April 19, aged 69. GEORGE W. COX of Germantown, Pa., April 19, aged 60. EDWARD M. SCHIAEFFER of Baltimore, April 21. WALTER W. MEDILL of Denver, March 14. ASHLEY N. DENTON of Austin, Texas, March 4. SHERMAN A. YULE in Philippine Islands, March 4, aged 33. GEORGE COGSWELL in Haverhill, Mass., April 21, aged 93.

Smallpox.—In New York City 9 new cases were reported April 10 from scattered localities, and in Albany it has broken out in the Lathrop Memorial Home.—It is reported in a malignant form from Union Hill, N. Y., and in Jersey City and Paterson, N. J.—In Steelton, Pa., 40 cases are reported in the borough, and to prevent its spread an order has been issued to stop all public meetings in Steelton, Enhaut, New Benton, and Oberlin, Pa. New cases are reported in Pittsburg and Sharon, Pa. At Bradford, Pa., a mob burned a schoolhouse that had been fitted up for a pesthouse, and at McKeesport the authorities find any plan to establish a pesthouse frustrated by the adjacent property owners.—From Laurel, Del., it is reported that nearly all the schools in the western part of the State are closed on account of smallpox. In Sussex county of that State the State Board of Health reports the enjoined regulations are being faithfully carried out and the people are using their utmost endeavors to stamp out the disease by quarantining, disinfection and vaccination.—At Guthrie and Springfield, Tenn., the smallpox situation is considered serious, but at the State lines it is improved; 31 patients reported discharged from quarantine and 25 still under medical care.—In Hartselle, Ala., it is reported prevalent, and as existing extensively in a mild form about Batesville and Subline, Texas.—At Springfield, Ill., 5 fully developed cases were found April 13 at the Salvation Army hotel. At Metropolis, Ill., an outbreak is feared on account of the infection of some of the clothing sold at a church rummage sale which has already resulted in 1 case.—Official information received by the United States Marine Hospital Service states that at Merida, Mexico, smallpox has an

endemic form, over 500 deaths having occurred since last April. There are now about 600 cases of the disease in the place (Merida) and the deaths average about 8 per day. Cases have occurred in almost every house. Progreso is situated about 42 miles from Merida and is a little place with a half dozen warehouses and with a population of about 500. Twenty-five cases have occurred in Progreso, with a few deaths. Private advices report its presence in Panama. Smallpox is officially reported from Kentville, 70 miles from Halifax, Nova Scotia and compulsory vaccination has been instituted there. In Philadelphia 8 cases have been reported in the Twenty-fourth ward April 22, and it is also increasing in Chicago. It has been discovered in the Western Reserve Academy in Hudson, Ohio. At Anna, Illinois, there has been a crusade against the cats of the town, the physicians having discovered that these animals were suffering from the disease and spreading it. The schools and churches are closed on account of its prevalence. On board the transport Lawton which left Manila, March 16, a case of smallpox occurred and the patient was left at the U. S. Hospital at Nagasaki. Two other cases occurred later and the patients were landed at Honolulu.

EASTERN STATES.

New Hospital for Boston.—Provisions to this end are made in the will of George L. Thorndike, of East Boston, who has directed that after the death of the last legatee under the will, and when the estate exceeds \$200,000 it shall be used to found a hospital. He has also bequeathed to the city \$10,000 in trust, the income of which is to be expended in the distribution of coal among the indigent widows of East Boston.

Hospitals for Tuberculosis.—Connecticut will probably have a hospital for tuberculosis capable of caring for 200 patients in the incipient stages of the disease if the bill now pending passes the Legislature. The bill carries with it \$150,000 for building and equipment. As a result of the action taken by the Trenton Board of Health against the spread of tuberculosis, Senator Hutchinson will introduce a bill into the New Jersey Legislature asking for an appropriation of \$50,000 for the establishment of a hospital for cases of tuberculosis. Bills have been introduced in the Michigan Legislature providing for the establishment of a hospital for sufferers from tuberculosis. Chicago will have a hospital for tuberculous patients under the management of the Sisters of St. Elizabeth Hospital. The fund now aggregates \$20,067.

American Climatological Association.—The eighteenth annual meeting will be held at the Cataract House, Niagara Falls, on May 30, 31, and June 1, 1901. The following papers will be read and discussed: President's Address, Dr. R. H. Babcock; Puerto Rico: Its Climate and its Diseases, Charles H. Alden; Nantucket and the Ocean Climate, Harold Williams; paper by R. G. Curtin; The Association of Tuberculosis and Syphilis, F. I. Knight; A Case of Mechanical Obstruction of a Bronchus Simulating Rapid Phthisis, J. B. Walker; The Selection of Favorable Cases of Pulmonary Tuberculosis for Sanatorium Treatment, E. R. Baldwin; The Carrying Out of the Hygienic Treatment of Pulmonary Tuberculosis Outside of Sanatoriums, Charles L. Minor; Devitalized-air Toxemia a Prime Cause of Tuberculosis, Charles Denison; Cases on which Tuberculin Test Seemed Justified and Decisive, W. E. Casselberry; The Home Treatment of Tuberculosis, Irwin H. Hance; Discussion on the Home Treatment of Tuberculosis vs. The Climatic Treatment, opened by A. C. Klebs; The Relation of Sunshine to the Prevalence of Influenza, Howard S. Anders; A Case of Pulmonary Osteoarthropathy, R. C. Newton; Physiologic Influence of Climate on Nervous Diseases, F. Savary Pearce; The Use of Strychnia in Diseases of the Heart, Abraham Jacobi; The Etiology, Pathology and Clinical Aspects of the Bovine Heart, Leonard Weber; The Hygienic Treatment of Heart Disease, Boardman Reed. Titles to receive a place on the final program must reach the secretary not later than May 1. They should be accompanied by abstracts to facilitate discussion. A favorable arrangement by which the papers read at the last meeting have been printed in the *Journal of Bacteriology and Climatology* (British) has delayed the appearance of the *Transactions*, but in other respects has been of advantage to the association.

NEW YORK.

Diphtheria.—The Public School in Highbridge has been closed on account of an epidemic of diphtheria which prevails in that region.

Asked to Resign.—Dr. Van Gieson, director of the Pathological Institute of New York State Hospitals, has been notified that the State Lunacy Commission will dispense with his services after the first of May. The 7 members on the staff of the Institute threaten to resign if Dr. Van Gieson is forced out.

Tenement Legislation.—Four laws passed at the present session of the New York Legislature regulating the building of tenements have been signed by Governor Odell and are now operative. They provided for the abolition of dark interior rooms, for proper sanitary appliances for every family, protection against fire and efficient enforcement of existing tenement house laws.

Common-law Marriage.—The bill to prohibit common-law marriages has been signed by Governor Odell. It provides that after January 1, 1902, there shall be no common-law marriage recognized in the State of New York except the parties thereto shall have signed a contract in the presence of witnesses and filed it with the clerk of the town, village or city in which the contract was made.

Nonunionists.—The Unchristian Unscientists of New York are gravely contending that in obedience to prayer the lettering on the cornerstone of their temple was changed according to the Mother's orders. The *New York Times* says that this should be brought to the attention of the Stonecutters' Union every one of whose rules was violated by the employment of non-unionists to do the work of alteration.

Scarlet Fever.—The town of Norwich, N. Y., has an epidemic of scarlet fever, and 65 houses are quarantined. About 60 of these families purchased milk of a milkman in whose family there had been a mild case. A young lad assisted in milking during the time his hands were desquamating. The disease is running a mild course and no fatalities have been reported.—A number of cases of scarlet fever have appeared in the Borough of the Bronx and some deaths are reported.

The State Prison at Sing Sing has been condemned as unfit for use because of its very unsanitary condition and a concurrent resolution has been introduced by Assemblyman Morgan Bryan, as chairman of the Prison Committee of the Assembly, providing for a commission to consider the necessary steps for the transfer of the prisoners confined there and to examine and report upon a suitable site for the reconstruction of the prison buildings and to report to the Legislature not later than January 20, 1902.

PHILADELPHIA, PENNSYLVANIA, ETC.

The Pennsylvania Board of Pharmacy continues the prosecution of Pennsylvania druggists. Last month 26 indictments were returned by the grand jury against 19 druggists in Pittsburg on the charge of adulteration.

An **Obstetrical Amphitheater** will be added before the close of the present year to the University Hospital. The new building will be known as the Scott Amphitheater, in memory of Mrs. Thomas A. Scott, the mother of Mrs. C. B. Newbold, who has donated \$25,000 for its erection. It will be built adjoining the west wing of the present Maternity Pavilion, with the entrance on Hamilton walk. The building will be of brick, 50 feet square, and will accommodate 150 students. A complete sterilizing plant for instruments and bandages will be an important feature. A system of piping will also be introduced, to be used for flooding the operating department after each operation.

Pay Hospital for Contagious Diseases.—The committee appointed by the Philadelphia County Medical Society to investigate ways and means for such an establishment reported April 10 to the effect that in response to circulars sent out replies were received from 561 physicians endorsing the measure. Of this number 63 were homeopaths. The object is first to get the medical profession interested, and then appeal to the public for money. The municipality can be expected to assist, as it is a supplement to the Municipal Hospital. The plan provides for only 2 pavilions, 1 for scarlet fever and 1 for diphtheria; another is deemed advisable for other contagious diseases. A tract of 5 acres in the northwest section of the city has been purchased as a site.

Philadelphia Polyclinic.—The Board of Trustees has accepted the resignation of Dr. Samuel D. Risley, and has elected him emeritus professor. Dr. William Campbell Posey has been elected professor of diseases of the eye, to succeed Dr. Risley. Dr. Ralph W. Seiss has resigned his chair of diseases of the ear, and the board has elected Dr. Francis R. Packard to succeed him. The resignation of Dr. Packard as Dean has been accepted, and Dr. B. M. Randolph, of Richmond, Va., has been elected Dean and also director of the laboratories, succeeding the late Dr. Thomas S. Kirkbride, Jr., who died in July last. Dr. Randolph at present holds the post of adjunct professor of pathology in the Richmond Medical College. He will spend this summer in Germany and Austria doing advanced pathologic work, and will assume his new duties at the Polyclinic about September 1.

The Pennsylvania Society for the Prevention of Tuberculosis held its annual meeting in Philadelphia. It was reported that its influence aided in securing the new rule of the Bureau of Health by which cases of tuberculosis are to be registered in Philadelphia. It has published a leaflet on the subject of Registration. Its publications have been sent all over the United States in response to many requests. Its officers have endorsed and assisted the Free Hospital for Poor Consumptives of Philadelphia and have gone to the New Jersey Legislature to assist in pleading for a State Hospital for consumptives in that State. The society has made strong efforts to show the need of a State hospital for tuberculosis.

SOUTHERN STATES.

Resident Physicians Elected.—Dr. Thomas H. Magness of Baltimore and Dr. Joseph T. Devine, of New York, have been elected resident physician and assistant resident physician, respectively, of the Baltimore University Hospital.

Medical Training and Christian Science.—Judge Lumpkin of the Georgia Legislature handed down a decision to the effect that Christian Scientists cannot practise in that State without having graduated in medicine or passed the Medical Examining Board.

Heart-suture.—H. L. Nietert, superintendent of the St. Louis City Hospital, sutured a stab-wound $\frac{3}{4}$ of an inch long in the heart of a young man brought to him in a semi-conscious condition. It was necessary to resort to artificial respiration several times during the operation. He died 25 hours later. A paper by Dr. Nietert on this subject will appear in a future number of *AMERICAN MEDICINE*.

Hygiene and Sanitation of the Public Schools.—The fact that the School Board of New Orleans contends that the Board of Health has no power in connection with the hygiene and sanitation of the schools except to fumigate them at their request, has excited considerable comment. It would seem that if the Board of Health has power to enter and inspect private properties, the schoolhouses would certainly be under their jurisdiction in all matters pertaining to sanitation and hygiene.

The North Carolina State Board of Medical Examiners' regular annual session will be held in Durham, N. C., beginning May 16, 1901. Applicants desiring examination will carry with them a diploma from a college of medicine requiring not less than 3 years' attendance, evidences of clinical instruction, and certificates of character. The license fee is \$10. The president of the board is Dr. E. C. Register, Charlotte, N. C.; secretary-treasurer Dr. J. Howell Way, Waynesville, N. C.

Georgia Pasteur Institute.—The Board of Governors of the Georgia Pasteur Institute and Laboratory met in Atlanta April 12, 1901, and received the first semiannual reports of the physician, James N. Brawner, and the pathologist, Claude C. Smith, in charge. Since December 1, 1900, 11 cases have been treated and dismissed as cured. Of these, 8 were bitten by rabid dogs, as proved by inoculation of rabbits. A number of applicants were not treated as there was no evidence that the animal inflicting the wound was rabid.

WESTERN STATES.

Ann Arbor Medical Department is so overcrowded that to relieve this condition a building is to be erected near the present one during the coming summer which will accommodate the bacteriologic and histologic laboratories. It is to cost \$100,000.

Tuberculosis.—The State Health Commission of Colorado has promulgated the rule that when tuberculosis is known to be in a family, a certificate declaring no danger of contagion must be presented by any child applying for admission to the public schools of the State. All teachers or children afflicted with that disease are excluded.

Pure Food Bill.—Because he has been charged with scratching out the words "or bitartrate of potassium" from an Indiana "pure-food bill," prohibiting the use of formaldehyd, arsenic and bitartrate of potassium, in food or food products, the Secretary of the Senate has been arrested and must stand trial. Had the bill gone through without mutilation it would have barred the sale in Indiana of any food or food product containing cream of tartar.

Amendment to Medical Bill Killed.—On April 12, the amendment to the medical bill which provided a special examining board for osteopaths was killed by the Wisconsin Legislature. It is stated that both sides have made concessions which will result in a substitute bill allowing the osteopaths to practice in certain cases and giving the osteopaths one member on the regular examining board. The bill prohibiting marriages between whites and blacks was also quashed.

Christian Science.—Judge Eugene S. Elliott rendered recently a decision in the Wisconsin Circuit Court that Christian Scientists are not liable to prosecution under the State medical law and that they can no more be held for practising medicine when their means for healing is by prayer than a minister who prays at the sickbed and receives therefor a fee. The case was that of the State against Crecentia Arris and Emma Nichols, Christian Scientists who treated a child named Gosenbach, afflicted with diphtheria, and who died from the disease.

National Sanatorium for Consumptives.—The establishment of a National Sanatorium in Colorado for the treatment of consumptives has been officially announced. Physicians of Denver, and other professional men and women are its founders. It will be conducted as an industrial colony—the labor of the patients being utilized in the carrying on of remunerative industries, as well as in doing the work of the institution. In

this way patients in moderate circumstances can avail themselves of a change of climate during the incipient stage of the disease.

Typhoid fever has been prevalent in Milwaukee for 2 years, and its presence is now being traced to the ice supply. In fact, the Health Commissioner has been conducting a microscopic examination of all the ice delivered to consumers. Ice is harvested from the river above the dam, where a large amount of sewage gets into it, and, as freezing does not destroy bacteria, contagion is probably frequently caused in this way. The city has been under great expense to insure a pure water supply, and it is certainly against all ideas of good government to permit ice-dealers to deliver disease-laden ice to customers; consequently, the people are asking for a law prohibiting the cutting of ice on the impure water, except solely for the use of brewers and shippers for cooling purposes alone.

Mortality of Michigan during March, 1901.—The total number of deaths reported to the Secretary of State for the month of March was 3,488, corresponding to a death-rate of 17.2 per thousand population. This is an increase of 343 over the number for the preceding month, and of 355 over the number returned for March, 1900. There were 673 deaths of infants under 1 year of age, 203 of children aged 1 to 4 years, and 1,024 deaths of persons aged 65 years and over. Important causes of deaths were as follows: Pulmonary tuberculosis, 217; other forms of tuberculosis, 34; typhoid fever, 45; diphtheria and croup, 35; scarlet fever, 44; measles, 7; whooping-cough, 20; pneumonia, 489; influenza, 320; cancer, 112; accidents and violence, 126. There were 3 deaths from smallpox during the month.

Municipal Cleanliness.—The Superintendent of Streets in Chicago has been putting into execution the new ordinance enforcing municipal cleanliness, which requires immediate removal of all street cleanings and provides for the separation of garbage from ashes and other waste, the householder being directed to put ashes in one receptacle and the garbage and waste in another. The ordinance was drawn with the idea of using the ashes for filling and grading, and burning the garbage and other waste. It is purposed to increase the incinerating capacity of one crematory now in operation for over a year, from 25 tons to 100 tons a day and to utilize the heat for light, warmth and power for the institution; another of 25 tons capacity the heat of which is to be utilized is nearly completed in connection with one of the city's electric light stations.

Responsibility for Crime.—In a case tried in California, in which a crime was committed by a person subject to alcoholism, the judge made a ruling that a person of more than ordinary intelligence, with no delusions, good memory, who appreciates the exact nature of a criminal charge and his relations to the proceedings, who is sane as the average person, although his brain may be affected by excessive use of intoxicants so as to change his character that he loses ambition, becomes trifling and aimless, and degenerate so that if at liberty he invariably takes to drinking, and while intoxicated becomes dangerous, he is not insane within the meaning of the statutes which provide for the suspension of proceedings against insane criminals, and if he has been committed to an insane hospital pending the prosecution, he may be returned to the sheriff for trial.

Professional Defense.—A bill prepared by the Legislative Committee of the Medical Association of Missouri asking that no medical college and no diploma not properly registered in the State at the time of the law going into effect be recognized, has become operative. Hereafter all who wish to practise medicine in any branch must pass an examination before the State Board of Health, and if accepted will receive a license to practise. The board has the right to refuse a license to anyone guilty of dishonorable or unprofessional conduct and may revoke a license for like cause after giving the accused opportunity to make a defense. The bill does not prevent Christian Scientists from practising, but does prohibit their charging for services; thus while the public does not receive perfect protection, the measure is an improvement on the former law as it gives the board of health power to proceed against quacks and unlicensed practitioners.

Women in Medicine.—Dr. Victor C. Vaughan, of Ann Arbor, denies having made the statement attributed to him that he had found women superior to men as textbook students in medicine, but that in original work requiring personal judgment they fail in efficiency. He says that during 25 years' connection with the University of Michigan, a coeducational institution, he has found that the women students average quite as high as the male students, and the percent of success among the women graduates has been quite as high as among the male graduates. In delivering a lecture on Mental Hygiene he stated that in his laboratory work he had frequently observed that the women students were less self-reliant, and more frequently applied for advice than the male students; but he went on to state that this was not altogether a fault, and that it would be far better if the male students should more frequently call for advice. A person who heard this statement rushed a story into print that Dr. Vaughan condemned women in medicine.

Rats.—The Board of Health of Denver, Col., taking its cue from health organizations in the Orient, some months ago issued a bulletin declaring rats responsible for much of the contagious disease that existed in that State, and urged the communities that had rats to exterminate them. The Health Board has concluded that drastic measures will have to be adopted to this end, and several plans are under consideration. It is announced that a war of extermination is to be waged against rats and mice by one of the largest manufacturing firms in Chicago, by means of a virus made under the direction of the Pasteur Vaccine Company, and which is harmless to other species of animal life. This virus has been tested officially in France and in this country in the United States Marine Hospital in San Francisco, where the results of the test were indorsed by Dr. Kinyoun, Chief of the Marine-Hospital Service at Washington. The virus is mixed with food, and disposed in the haunts of rats. It produces a fatal disease which spreads rapidly and retains its virulence for some time.

Indiana Mortality and Morbidity in March.—The report of the State Board of Health shows: Total number of deaths 3,272, rate 15.3, corresponding month of 1900—deaths 3,217, rate 15.0. Deaths from important ages: Under 1 year 566; 1 to 5 inclusive 230; 65 years and over 847. Deaths from important causes and rates per annum per 100,000 were: Pulmonary tuberculosis 373, rate 174.9; typhoid fever 44, rate 20.6; diphtheria 29, rate 13.5; scarlet fever 24, rate 11.2; measles 43, rate 20.1; whooping-cough 26, rate 12.1; pneumonia 603, rate 282.7; diarrheal diseases 15, rate 9.0; cerebrospinal meningitis 39, rate 18.2; influenza 174, rate 81.5; cancer 81, rate 37.9; violence 114, rate 53.4. Deaths from smallpox 5. Urban deaths 1,164, rate 16.2, rural deaths 2,108, rate 14.9. Morbidity: There were 472 cases of smallpox reported from the following counties: Marion 22, Steuben 1, Pike 4, Fulton 12, Tipton 6, Fanderburgh 1, Lake 12, Posey 6, Lawrence 101, Vermillion 16, Dekalb 5, Howard 8, Perry 1, Dearborn 4, Wabash 4, Ohio 46, Switzerland 220, Wayne 1, Mobile 2. The smallpox cases are generally mild, but not a few are more or less severe. In all new localities invaded, the uninformed physicians fail to recognize the disease, but what is worse, usually cling to their erroneous diagnosis and so make it hard to apply preventive measures. The diseases which decreased in area of prevalence during March were: bronchitis, influenza, pneumonia, tonsillitis, diphtheria, typhoid fever, inflammation of bowels. Those increasing in area of prevalence were: Rheumatism, measles, intermittent fever, diarrheal troubles, whooping-cough.

CANADA.

The Victoria Cross has just been conferred upon Dr. H. E. M. Douglass, a Canadian, for bravery on the battlefield of Magerfontein, South Africa. He was surgeon to the Gordon Highlanders and although wounded himself crawled to the head of the column where the officers of his regiment were lying dead or wounded. He dressed the wounds of those within reach, made his way back in safety, and being then the senior officer rallied the ranks of the scattered Gordons and led them out to action.

Vaccination.—The City Council and School Board of Halifax, N. S., both passed resolutions recently in disapprobation of the action taken by the Board of Health in ordering a general vaccination in the city as there is no smallpox within 75 miles. The physicians appointed by the Board to vaccinate the poor refuse to accept the fee of 25 cents per case allotted them and are holding out for 50 cents.—The Board of Education of Kingston, Ont., has refused to rescind the resolution making the vaccination of school children compulsory. Until medical certificates are produced 200 children will be debarred from school.

Medical Matriculation in McGill University will have an increased standard to come into effect September, 1902, when a practical knowledge of chemistry and a sound theoretical acquaintance with physics, statics and dynamics will be required of all candidates. The only elective studies after that date will be Greek, German and French, one of which must be taken. Later on the standard will be raised to the degree of requiring that all candidates before matriculating in medicine shall show that they have taken the first year arts course. Recently McGill lengthened its session from 6 to 9 months and established a combined arts and medical course.

Chinese in Canada.—A royal commission appointed by the British Columbia Legislature to investigate the question of Chinese labor as affecting Canadian labor, has been sitting in Victoria, B. C., and summoned the health officer of that place recently to report upon the sanitary conditions of the Chinese quarters. He stated that owing to the erection of new buildings their quarters had been much improved but he considered that they were constantly a slight menace to the public health on account of fresh arrivals from Chinese ports which are always infested with smallpox. Personally, they were eager to be vaccinated. They took every pains to conceal leprosy; he had attended 5 cases of leprosy among them. The Chinese hospital was under the supervision of the medical health officer who made regular visits. The wealthy class called in white physicians when ill.

FOREIGN NEWS AND NOTES

GENERAL.

Opium Smoking.—A law enforcing the penalty of death for opium smoking, it is reported, has been promulgated by the Korean Government.

Famine and Death in India.—The depopulation of India through famine and cholera is assuming alarming proportions. It is estimated that 5,000,000 have died since 1896 from causes directly due to famine. The latest census returns from the central provinces show a decrease of 1,000,000 since 1891, when an increase of 1,500,000 might have been expected. The parts of Western India that have been visited by plague show an even larger percentage of deaths. On the other hand the localities which escaped the plague show a very satisfactory increase.

Women Resident Physicians.—The Royal Free Hospital of London has engaged several women doctors as resident house surgeons and physicians. This is a new experiment, there being no hospital in the kingdom, except those exclusively attended by female doctors, where the resident physicians are women. The young women probably take these positions with a view to gaining experience; it remains to be seen whether the nursing staff, who have been accustomed to act on the orders of a man, will treat them with the proper respect.

Obituary.—MAX RING of Berlin, March 28, aged 84.—V. MARCHERANO in Palermo.—THEODOR WYNEN of Marburg Hygienic Institute.—H. GOSSE, Professor of Forensic Medicine in University of Geneva.—HENRY ERNEST HILL SMITH of London, at Cairo, Egypt, February 22, aged 40.—CHRISTOPHER MERCER DURRANT of Suffolk, April 6, aged 86.—JAMES HOOPER of Bath, England, March 27, aged 95.—ANDREW FLEMING of Edinburgh, March 25.—JAMES POWELL WILLIS at Cork, Ireland, March 27, aged 29.—JOHN SYKES of Doncaster, England, April 1, aged 84.—C. K. D. TANNER at Reading, England, April 21, aged 51.

Leprosy.—The United States Consul, Solomon Berliner, reports officially that on the island of Teneriffe there exist 3 distinct classes of leprosy, *lepra arabum*, *lepra elephantiasis*, *lepra tuberculosis*, and that it is somewhat endemic on account of the people eating a good deal of fish (often putrid) and of their general uncleanliness. Formerly Spain established a colony at Grand Canary for lepers where they were housed but had perfect liberty to wander about with the restriction that they must sleep at the houses built for them. This law became a dead letter in time and gradually they spread over the different islands. Officially it is not recognized that leprosy exists on these islands and it is classed as a scrofulous or skin disease. The provincial government at Teneriffe has taken up the subject and a large building 2 miles out of town from the capital has been provided to segregate them there in 1 wing—the other wing to accommodate the insane. In the island of Grand Canary leprosy is decreasing decidedly, is not in a virulent form and is not believed by the natives to be contagious. In Las Palmas, however, in the lepers' hospital, there are about 59 patients who are not allowed to go beyond the large courtyards and are not allowed to marry. In the whole island there are perhaps about 100 cases of what is there called elephantiasis.

House Rats as Means of Spreading Plague.—The report of the director of the Imperial Institute for Infectious Diseases in Japan, on the epidemic of plague in Kobe and Osaka from November, 1899, to January, 1900, is very interesting as demonstrating the amount of work that has been done to determine the relationship between house rats and the spread of the infection. The municipal authorities at Kobe and Osaka paid 5 sen (about 2½ cents) for rats whether dead or alive, and many other cities not infected followed the same example. A peculiar superstition prevails in Osaka that the house rat is the guardian angel of the empire. During the period of the epidemic 20,000 rats were paid for in Kobe, and 15,000 in Osaka. In Kobe 291 dead rats were found, of which 61 contained *Bacillus pestis*. In Osaka 200 dead rats were found of which 23 were infected with *Bacillus pestis*. There is no doubt that many more were found and disposed of. Fear of the disinfection that followed the finding of a dead rat induced the people to hide them from the authorities. Bacilli very similar to *Bacillus pestis* were often found in the dead rats, and these could readily be mistaken for the true cause of plague, so that cultural and experimental methods in addition to the microscope were used in order to make a diagnosis. The relation of the individual cases to the rats is not fully evident; however, it is proved that the rats take the disease first and afterwards man. This can easily be accounted for in the greater opportunity afforded the rats for contact with infected material.

Malaria in German East Africa.—The Surgeon-General of the United States Hospital Service has received from Joseph B. Greene a report on the result of Koch's study of malaria, carried on in Italy, German East Africa and the East India Islands, from the summer of 1898 until near the end of 1900. Koch confirmed the conclusions of Manson and Ross as regards the propagation of malaria by mosquitos, but Koch holds that not only the genus *Anopheles* is concerned in its transmission

but that *Culex* is also culpable. Every attempt to find plasmodium of malaria in any species of the lower animals was without success so that it is not deemed probable that the parasite can complete its life history in any other organism than the human body. Efforts were unavailing to inoculate other animals such as the monkey and bat with malarial blood from the human subject. Dr. Koch observed in Italy that during the winter months the number of cases of malaria dropped to a minimum and only manifested itself again with the warm spring days. He holds that these early spring cases are relapsing cases either untreated or imperfectly treated and that the malarial parasite exists in a latent form in the human body during the apparent disappearance of the malaria. He considers the free use of quinin the best and most practical method of ridding a community of malaria and that it is of the utmost importance to continue its administration long enough to eradicate the organism from the human body and thus avoid recurrence in the spring. That the free use of quinin alone is capable of ridding a community of malaria is shown by the following statistics from Spandau, a small town in the vicinity of Berlin: Population, 1874, 3,853; 1885, 4,800, and 1891, 5,883. Cases of malaria, 1874, 2,557; 1885, 111, and 1891, 1. The German army is also quoted to show the influence of quinin in eradicating malaria: Cases of malaria, 1869, 13,563 (54.5%); 1896, 230 (0.45%), which is more than 99% decrease in the number of cases. The cheapening of quinin which is now within the reach of the poor, has contributed largely to the eradication of malaria. Although useful, he does not consider mosquito nets so specific as some claim, as on account of heat in the tropics, one cannot always be under the protection of netting. The use of petroleum is in many cases impracticable on account of large marshy areas devoted to the cultivation of rice, and of the number of small cavities capable of receiving the larvae of *Anopheles*, as palm cones, tree trunks, etc. It is stated that the practical disappearance of malaria is not due to better drainage, as *Anopheles* is found in considerable numbers. Dr. Koch found that malaria, existing as an endemic, is distinctly a disease of childhood and among infants under 2 years of age. Dr. Koch found the malarial parasite in the blood of 80% of the cases. Between 2 and 5 years of age it was much less frequently found and later in life it was exceptional to find it at all. He holds that a long attack of malaria confers a certain immunity. As a means of eradicating malaria from the German colonies he recommends sending out young physicians who are trained microscopists and the free distribution of quinin to the natives. In Dutch India more than 2,000 kilograms of quinin are distributed gratis to the natives annually, and to this he attributes their success in diminishing the cases of malaria.

GREAT BRITAIN.

School Hygiene.—In an address before a teachers' conference at the Durham College of Sciences, on the Medical Aspects of Education, Professor Oliver referred to several important considerations—as ventilation, heating, and the physical examination of teachers and pupils. His report of the bacteriologic examination of slates, pencils, and pens used in schools, showing the adherence to them of pyogenic microorganisms, is interesting.

Prevention of Tuberculosis.—At the recent annual meeting of the National Association for the Prevention of Tuberculosis, held in London, there was allusion to the great progress which had been made in Liverpool in relation to the prevention of tuberculosis by the adoption of voluntary notification of it and by the establishment of depots for the supply of sterilized milk. Two sanatoriums for open-air treatment were in course of erection, and one it was hoped would be ready for patients in July. Attention was drawn to the satisfactory result of an experiment made by 3 Liverpool boards of guardians, which had adopted the plan of making it a condition of granting outdoor relief that the family should remove to more wholesome quarters, and they had adopted simple but effectual precautions against infection. They granted relief at a special scale to meet the expense of removal and for better nourishment for the patient.

John W. Garrett International Fellowship of University College, Liverpool, has the following Provisional Regulations: (1) This Fellowship has been founded by William Johnston, Shipowner, of Liverpool, to commemorate the late John W. Garrett, of Baltimore, U. S., and shall be called the John W. Garrett International Fellowship in Pathology and Physiology. (2) This Fellowship shall be open to members of Universities and Medical Schools in the United States, without, however, absolutely precluding members of other foreign schools. (3) The Fellow shall be elected by the Faculty, on the nomination of the Professors of Pathology and Physiology. (4) The Fellow shall be elected for one year, and shall be eligible for reelection. (5) The Fellow shall devote himself to Research in Physiology or Pathology and Bacteriology under the direction of the Professors of Physiology and Pathology. He shall undertake no work which shall in any way interfere with these duties. (6) The work shall be done in the Thompson-Yates Laboratories of University College, but by special permission from the Faculty the Fellow may be allowed to follow his investigations elsewhere. (7) The expenses of any research shall be met out of the funds of the Laboratory, under the direction of the Professors of Physiology and Pathology.

CORRESPONDENCE

HEMORRHAGE IN CHRONIC JAUNDICE.

BY
WILLIAM OSLER, M.D.,
of Baltimore, Md.

In connection with Dr. Deaver's paper on the *Mortality of Operation for Obstructive Jaundice*, I do not see that surgeons can either foresee or avoid an occasional fatality from hemorrhage, and exception may be taken to so strong a statement that "neither consecutive nor secondary hemorrhage should occur, and particularly consecutive hemorrhage." The experience of the past few months in my wards may be of interest, as illustrating how common and how serious is this tendency to bleeding in chronic jaundice:

(1) Mrs. K., admitted January 9, 1901; jaundice of 4 months' duration; recurring attacks of pain; coagulation time, 10 minutes. The condition was very serious, and the pain was so severe that an exploratory operation was performed on January 29. Carcinoma of the gallbladder and of the liver was found. She bled profusely during the night following the operation, and continued to bleed until death, February 1.

(2) Mrs. F., admitted January 30, 1901; jaundice of 4 months' duration, with recurring intermittent fever, associated with stones in the common duct; blood coagulation-time on admission, 8 minutes, gradually reduced by the use of the calcium chlorid to 3½ minutes. Operation, March 5; numerous gallstones in gallbladder and in common duct. Hemorrhage the day after operation, with the formation of hematoma, and March 9, very severe bleeding, with collapse; gradual recovery.

(3) Mrs. C., admitted February 19, with a remarkable jaundice of nearly 10 years' duration; she had recurring attacks of hemorrhage, in 2 of which she nearly died. These had been chiefly from the nose and from the uterus. She was admitted pulseless, and blanched in the third attack. The hemoglobin was 20%, red blood-corpuses 1,600,000. Both she and Mrs. F., the previous patient, had multiple xanthoma. Coagulation-time on admission, 14 minutes; a month later, 4½ minutes, and her blood-corpuses had risen to 4,000,000 per em. On March 22 she had a little nosebleed and a few spots of hemorrhage in the skin. Considering the remarkable tendency to hemorrhage, even when her coagulation-time was at 4 minutes; that her general condition was good, and that she seemed to have got accustomed in an extraordinary way to the persistent jaundice, I did not advise operation.

(4) Mrs. N., admitted February 19, 1901; a stout, healthy-looking woman, with pain, nausea and vomiting, and jaundice of 4 weeks' duration. She had a good deal of vomiting while in the ward, and the blood coagulation-time was 3½ minutes. The nature of the case was doubtful, and she was transferred to the surgical side. The day before the operation she became collapsed, had hematemesis and died. The autopsy showed gallstones, cancer of the neck of the gallbladder, extensive hemorrhage into the lesser peritoneum and about the tail of the pancreas, and hemorrhage into the stomach.

(5) The fifth case was admitted a few days ago. He had been under my care a year before with jaundice of 4 years' duration, and was operated upon on the surgical side by Dr. Finney, I think. On attempting to separate the adhesions about the ducts he bled so profusely that the operation had to be abandoned.

Surgeons must take into consideration the liability to bleeding in chronic jaundice. The calcium chlorid, used as Prof. Wright suggests, in doses of 20 grains 3 times a day, usually increases the blood coagulation-time; for the same purpose the subcutaneous injections of gelatin may be used. But we have had cases in which bleeding has occurred even when the blood coagulation-time was normal. It is to be remembered that hemorrhage from the stomach in these cases cannot always be attributed to the state of the blood, since surgeons have taught us of late that this is by no means an infrequent feature after operation upon the abdominal organs.

The practical points to be emphasized are the importance of study of the blood coagulation-time and the use of calcium chlorid, should it be retarded.

TAIWAN BOZU: EPIDEMIC SYPHILITIC ALOPECIA.

BY
ALBERT S. ASHMEAD, M.D.,
of New York City.

A recent associate press dispatch states that "the dancing girls of Japan are losing their hair from a new disease which is

causing consternation among all the pretty women. The new disease is epidemic in some parts of Japan, and is frightening the people more than the plague. In some villages the hair of all the women in the place has fallen out. The people call the hair plague 'Taiwan Bozu.' The disease has robbed several dancing girls of their beauty. It is said to have been imported from Formosa, and the health authorities have gangs of men at work disinfecting the poor quarters of the towns. The hair plague seems to be spreading over a large area."

Allow me to observe that Taiwan Bozu is not a new disease. The words mean *Formosan Priest*. All Buddhist priests in Japan have the head shaved, and thus one who is completely bald is said to look like a priest, in fact is called "priest." The disease, according to Dr. Kitasto, who writes of the epidemic, in a long letter published in the *Tiji-Shimpo*, February 24, 1901, is supposed to have been brought back by the troops from Formosa; hence the name given to the outbreak, of Taiwan, the Japanese name of the island. It appears suddenly, in one night even, a large field of the scalp will become bare. Some cases are due to disease of the nerves; some to direct infection. Dr. Kitasto says that "it is not the first time the disease has been epidemic in Japan. It does not come from Formosa, although the people think so. It is not very contagious. It is the same disease which occurs all over Europe, etc." Inasmuch as the syphilis of Formosa is fiercer than the syphilis of Japan, and the syphilis of Europe is fiercer than that of Formosa, so *Taiwan Bozu's* ravages differ in different countries. "Regulations by the police of Tokio are being instituted among the barbers to prevent its spread." The itinerant barbers of women, who go from house to house to dress and oil the ladies' hair, are the main carriers of the contagion. Dr. Sasakawa, Professor of Skin Diseases, University of Tokio, in a letter to the *Tiji-Shimpo*, February 25, says that "the disease is of nervous origin," and he says, "when improvement begins, new hair appears as down, of blonde color, which gradually becomes normally black." A peculiarity which he notes in the present epidemic is that old men of yesterday appear like young men today when their hair has returned.

The disease is simply epidemic *Tokuhatz-fizo* (bald disease); Alopecia areata of specific origin (syphilitic), and it is contagious.

I add that in 1867, when the licensing of prostitution went into effect in Japan, the professions for women of "Geisha" dancing, tea-house and archery-gallery keeping, became crowded with prostitutes (more or less syphilitic) to evade the payment of the government tax. Then the hospitals of Tokio had to do with a great number of cases of syphilitic alopecia in no way different from the present outbreak.

REMOVAL OF POWDER GRAINS BY HYDROGEN DIOXID.

BY
FREDERICK K. SMITH, M.D.,
of Warren, Ohio.

I note on page 16 of the first issue of AMERICAN MEDICINE a report of the use of hydrogen dioxid for removal of powder grains, by Dr. J. N. Rhoads. In the *Cleveland Medical Gazette* for January, 1897, Vol. XII, p. 184, you will find a report of the same procedure, presented by Dr. George W. Crile, of Cleveland, at the Cuyahoga County Medical Society, from which it appears that he had used it at that time for several years. I do not think that the method had been previously published, but it is one of those things that would be likely to originate from a number of independent sources. While various discoverers of the same truth or originators of the same method may be entitled to the same credit, we have agreed upon the rule of according to the earliest, usually decided by the date of publication, the principal honor. By this rule Dr. Crile is entitled to the honor in this case, unless further evidence displaces him.

ORIGINAL ARTICLES

AN ANALYSIS OF MY VAGINAL ABLATIONS IN 181 CASES OF PELVIC INFLAMMATION AND UTERINE FIBROID DEGENERATION.*

BY
W. R. PRYOR,
of New York City.

Professor of Gynecology, New York Polyclinic; Consulting Surgeon, City (Charity) Hospital; Visiting Surgeon, St. Elizabeth Hospital; Founding Member Internat. Gyneec. and Obstet. Society; Fellow American Gynecological Soc; Fellow New York Academy of Medicine; Fellow New York Obstetrical Society, etc., etc.

The vaginal radical operation in this country has had a singularly interesting career. Those who first brought it here seem to have abandoned it almost entirely, while a few have become more and more enthusiastic about it. My own experience with the application of the vaginal method of operating not only in those cases which require the radical procedure, but also in those in which conservatism may be applied, has been such as to convince me that the greater proportion of operations now performed through the abdomen could more easily and with better results be made through the vagina.

An analysis of all my cases of pelvic inflammation and fibroid shows that since 1895 I have been enabled to

cure by the vaginal operation 83% of all those who have applied to me and without mortality. These enviable results are not secured by picking my cases nor by applying the radical operation where conservatism might succeed. Many of these women have been so profoundly septic that intravenous infusion was necessary before I could operate. No one who has seen the illustrations I have published in my book and in the *American Journal of Obstetrics* will deny that no greater difficulties are met in pelvic surgery than have confronted me in my vaginal work. Yet some critics of this method of operating have been so carried away by their affection for the abdominal route and animosity against the new comer as to hint at unfairness on my part in making my report, and selection in my cases.

For the sake, not only of those who have followed me in this line of work but that the claims of this operation to the attention of the surgeon may be substantiated, I have tabulated my cases. I shall not give the names of my patients, but any gentleman who wishes to consult my records in the proper spirit is free to do so. In this first paper I give my results, reserving for a future publication a detailed analysis of the more important points.

* Read before the Medical Society of Tennessee, April 10, 1901.

Date.	Age.	Hospital.	From	Diagnosis.	Operation.	Result.
1. May 2, 1898	44	Private.	Dr. Strauss.	Genital sclerosis multiple adhesions, uterine hypertrophy, constant pain, menorrhagia metrorrhagia.	Vaginal ablation by hemisection.	Cured.
2. Mar., 1896	39	City Hospital.	D. P. P. C.	Left pyosalpinx. A previous vaginal salpingo-oophorectomy for pyosalpinx.	Vaginal ablation <i>en masse</i> . Vaginal ablation.	Cured.
3. Feb., 1901	18	Private.	Office.	Diffuse pelvic suppuration. Profound septicemia. Intravenous infusion.	Vaginal ablation by hemisection. Intravenous infusion.	Cured.
4. Dec. 13, 1897	26	Polyclinic.	Patient of Dr. Mallet. Post-abortion sepsis, 3 curettages, menorrhagia, metrorrhagia. Is bedridden.	Right pyosalpinx, left ovarian cyst. Many old adhesions.	Vaginal ablation by hemisection.	Cured.
5. Jan. 3, 1899	32	Polyclinic.	Repeated attacks of pelvic inflammation abscess discharged by rectum Dec. 23, 1898.	Diffuse pelvic suppuration, broad lig. abscesses, very large	Vaginal ablation by hemisection.	Cured.
6. Feb. 6, 1899	26	Polyclinic.	Postpartum infection. Patient of Dr. Gilday.	Left ovarian abscess, right pyosalpinx, left broad lig. abscess, acute nephritis.	Vaginal ablation by hemisection. May 1, found her at home with right thrombophlebitis and broad lig. abscess, opened abscess above Poupart a lig.	Improved (intravenous infusion.) Cured.
7. Mar. 20, 1899	32		Plastic operation, cervix and laparotomy, Sep., 1896, by Dr. Hanks.	Salpingitis, diffuse pelvic adhesions. Found silver suture in cervix.	Vaginal ablation by hemisection.	Cured.
8. Nov. 16, 1898	28	Polyclinic. Private.	A chronic invalid. Has the morphine habit, has been flowing for 6 weeks.	Left ectopic, right pyosalpinx, syphilitic.	Vaginal ablation by hemisection.	Cured. Subsequently contracted gonorrhoea with vulvo-vaginal abscess.
9. Oct. 10, 1898	31	Polyclinic. Private.	Patient of Dr. Potter, of Newton, N. J.	Salpingo oophoritis, suspected carcinoma of cervix, many adhesions, no cancer found by microscope.	Vaginal ablation <i>en masse</i> in 5 minutes.	Cured. Slight secondary oozing controlled by pressure.
10. Feb. 2, 1899	22	Polyclinic.	Post partum sepsis 6 months ago, pain, fever, flooding.	Right ectopic, left pyosalpinx.	Vaginal ablation by hemisection.	Cured.
11. Apr., 1895		City Hospital.	Laparotomy in French Hospital, Mar. 14, 1895.	Bilateral salpingitis suppurative, specific, infected ligatures.	Vaginal ablation <i>en masse</i> , the previous operation had left half of each tube (at least).	Cured.
12. Dec. 11, 1895	29	Polyclinic.	Dispensary.	Bilateral pyosalpinx, small fibroid, bladder wounded.	Dec. 24 hysterectomy <i>en masse</i> .	Bladder opening not sutured, closed spontaneously.
13. Nov. 1, 1895	47	Polyclinic.	Dispensary.	Pachysalpingitis, multiple adhesions.	Dec. 12 curettage.	Cured.
14. Nov. 16, 1895	25	Polyclinic.	Dispensary.	Multiple adhesions, edematous ovaritis, menstrual epilepsy.	Vaginal hysterectomy <i>en masse</i> .	Cured of pelvic pain, marked improvement in epilepsy.

Date.	Age.	Hospital.	From.	Diagnosis.	Operation.	Result.
15. Oct. 17, 1899	26	Polyclinic.	Dispensary.	Left purulent stump of tube with calcified ligature, right purulent stump of tube, general pelvic peritonitis, 3 previous laparotomies.	Vaginal ablation by hemisection.	Cured.
16. Oct. 2, 1899	25	Polyclinic.	Dispensary.	Septic uterus, fibroids and double pus sacs.	Vaginal ablation by hemisection, intravenous infusion.	Cured.
17. Jan. 3, 1898	26	Polyclinic.	Dispensary.	Right pachysalpingitis, left broad lig. cyst, left ovarian apoplexy, multiple adhesions.	Vaginal ablation by hemisection.	Cured.
18. Apr. 14, 1897	30	St. Elizabeth's.	Patient of Dr. Frank.	Chronic pelvic peritonitis and lymphangitis, very large uterus.	Vaginal ablation, morcellation of uterus, 10 pieces.	Cured.
19. May 24, 1896	21	Polyclinic.	Patient of Dr. Gilday. Operation by Paul Ségond, of Paris.	Double pyosalpinx, granular casts in urine, streptococci in discharge from vagina.	Vaginal ablation by hemisection, subcutaneous infusion repeated.	Cured.
20. June 13, 1896	27	Polyclinic.	Dispensary.	Double pyosalpinx, diffuse pelvic suppuration.	Vaginal ablation greatly adherent. Large woman, small vagina.	Cured.
21. July 12, 1900	24	Polyclinic.	Patient of Dr. Tingley.	Diffuse pelvic suppuration.	Vaginal ablation by hemisection.	Cured.
22. Mar. 7, 1901	26	Polyclinic.	Dispensary.	Bilat. occluded tubes, multiple adhesions, atrophied soft uterus.	Vaginal ablation <i>en masse</i> .	Cured.
23. May 12, 1900	57	Private.	Office.	Fibroids (uterine).	Vaginal ablation.	Cured.
24. Mar. 9, 1898	29	Polyclinic.	Patient of Dr. W. R. Townsend.	Large retro-peritoneal cyst, bilat. tubular pyosalpinx, 3 previous vag. sections. On fourth day appendectomy transfusion.	Vaginal ablation by hemisection. Secondary appendectomy for acute appendicitis.	Cured.
25. Sep. 6, 1898	27	Polyclinic.	Dispensary.	Bilat. hydrosalpinx, many adhesions, small fibroid.	Vaginal ablation by hemisection.	Cured.
26. Jan. 4, 1898	32	Polyclinic.	Patient of Dr. Strauss. Twice cured.	Bilat. pyosalpinx.	Vaginal ablation by hemisection.	Cured.
27. July 11, 1899	39	Private.	Dr. Marvel.	Dif. pelvic suppuration, tuborectal fistula, small fibroids.	Vaginal ablation by hemisection.	Cured.
28. Feb. 16, 1898	28	Private.	Patient of Dr. Frank.	Bilat. pyosalpinx, one very large.	Vaginal ablation by hemisection.	Cured.
29. Oct., 1895	39	City Hospital	D. P. P. C.	Diffuse pelvic suppuration.	Vaginal ablation <i>en masse</i> .	Cured.
30. Apr. 27, 1899	40	Private.	Dr. Kelly.	Uterine fibroids (septic).	Vaginal ablation by morcellation.	Cured.
31. Sep. 15, 1897	24	St. Elizabeth's.	Dr. Davidson.	Left ruptured ectopic pyosalpinx. Has syphilis.	Vaginal ablation by hemisection.	Cured.
32. Mar. 29, 1899	29	Polyclinic.	Dispensary.	Bilateral hydrosalpinx, small ovarian cystoma.	Vaginal ablation by hemisection.	Cured.
33. Mar. 3, 1897	42	St. Elizabeth's.	Dispensary.	Bilateral cystic ovaries, bilateral hydrosalpinx.	Vaginal ablation by hemisection.	Cured.
34. Oct. 13, 1900	27	Polyclinic.	Dispensary.	Bilateral broad lig. cyst. Chr. salpingitis adhesions.	Vaginal ablation by hemisection.	Cured.
35. Aug. 24, 1895	25	Polyclinic.	Dispensary.	Cystic ovaries, bilateral pyosalpinx.	Vaginal ablation <i>en masse</i> .	Cured.
36. July 19, 1898	24	Polyclinic.	Dispensary.	Double pyosalpinx, dif. peritonitis, streptococci, septicemia.	Vaginal ablation by hemisection.	Cured.
37. Jan. 25, 1899	32	Polyclinic.	Dispensary.	Bilat. ovarian apoplexy and tubal sclerosis, multiple adhesions.	Vaginal ablation by hemisection.	Cured.
38. July, 1899	22	Polyclinic.	Dispensary.	Ruptured ectopic peritonitis due to infected clots	Vaginal ablation by hemisection.	Cured.
39. Oct. 29, 1897	28	Polyclinic.	(Dr. Van Arsdale.)	Diffuse suppuration, profoundly septic.	Vaginal ablation by hemisection.	Cured.
40. Nov. 7, 1900	56	Polyclinic.	Dr. Thompson.	Complete prolapse, old pelvic peritonitis, many adhesions, occluded tubes.	Vaginal ablation by hemisection, plastic for prolapse.	Cured.
41. Mar. 31, 1900	35	Polyclinic.	Dispensary.	Dif. pelvic suppuration, abdominal fistula, 6 mos. ago laparotomy in St. Vincent's hospital.	Vaginal ablation by hemisection.	Cured.
42. Sep. 17, 1899	45	Private.	Office.	Fibroids.	Vaginal ablation, large fibroid removed by morcellation.	Cured.
43. Feb. 28, 1895	28	Private.	Dr. Griswold.	Fibro-cyst.	Vaginal ablation by morcellation.	Cured.
44. Dec. 6, 1898	24	Polyclinic.	Dispensary.	Bilat. chr. salpingo-oopharitis, many pelvic adhesions.	Vaginal ablation by hemisection.	Cured.
45. Jan. 25, 1896	23	Polyclinic.	Dispensary.	Bilateral pyosalpinx.	Vaginal ablation by hemisection.	Cured.
46. Jan. 29, 1895	35	Private.	Office.	Adherent retroversion, chr. salpingitis, adherent adnexa.	Vaginal ablation <i>en masse</i> .	Cured.
47. Jan., 1895	34	City Hospital.	D. P. P. C.	Bilateral pyosalpinx.	Vaginal ablation <i>en masse</i> .	Cured.
48. Oct. 16, 1895	16	Polyclinic.	Patient of Dr. Wells. 3 previous vaginal punctures.	Double pyosalpinx.	Vaginal ablation by hemisection.	Cured.

Date.	Age.	Hospital.	From.	Diagnosis.	Operation.	Result.
49. Feb. 12, 1898	39	Private.	Dr. Beers.	Purulent salpingitis, copharitis, small fibroids and uterus large.	Vaginal ablation by hemisection, fecal fistula, plastic operation.	Cured.
50. Mar. 12, 1898	38	Private.	Dr. Tingley.	Ruptured ectopic and left salpingitis, general pelvic peritonitis.	Vaginal ablation by hemisection.	Cured.
51. Dec. 1, 1897	24	Private.	Dr. Griswold.	Dif. pelvic suppuration.	Vaginal ablation by hemisection.	Cured.
52. Sep. 9, 1899	37	Polyclinic.	Dispensary.	General pelvic suppuration.	Vaginal ablation by hemisection.	Cured.
53. May 4, 1900	89	Private.	Dr. Henrotin. A laparotomy in California years ago, septic convalescence.	Dif. pelvic suppuration	Vaginal ablation by hemisection.	Cured.
54. June 6, 1895	34	City Hospital.	D. P. P. C.	Bilat. tuberculous salpingitis.	Vaginal ablation <i>en masse</i> .	Cured.
55. June, 1895	30	City Hospital.	D. P. P. C.	Left pyosalpinx and dif. pelvic peritonitis; laparotomy a year before for right pus tube by Dr. Dudley.	Vaginal ablation by hemisection.	Cured.
56. Jan. 25, 1897	27	St. Elizabeth's.	Dispensary.	Left pyosalpinx, right salpingo-oophoritis, syphilitic.	Vaginal ablation by hemisection.	Cured.
57. Nov. 14, 1897	27	Private.	Dr. Torrens. A previous vaginal section.	Bilat. pyosalpinx.	Vaginal ablation by hemisection.	Cured.
58. Aug. 19, 1899	39	Polyclinic.	Dispensary.	Uterine fibroid.		Cured.
59. Sep. 8, 1898	20	Polyclinic.	Laparotomy at Bellevue Hospital.	Abdominal fecal fistula; ventral hernia; pelvic peritonitis.	Vaginal ablation by hemisection.	Cured.
60. July 20, 1899	33	Polyclinic.	Dr. Torrens.	Bilat. chr. salpingitis.	Vaginal ablation by hemisection.	Cured.
61. Jan. 8, 1898	25	Private.	Office.	Double pyosalpinx, left ovarian abscess.	Vaginal ablation by hemisection.	Cured.
62.	46	Private.	Dr. Frank.	Bilat. pyosalpinx; dif. pelvic suppuration.	Vaginal ablation by hemisection.	Cured.
63. Feb. 15, 1901	46	Polyclinic.	Dispensary.	Bilateral hydrosalpinx, multiple adhesions.	Vaginal ablation by hemisection.	Cured.
64. Jan. 24, 1898	42	Polyclinic.	Office.	Chr. salpingo-oophoritis and carcinoma of cervix.	Vaginal ablation.	Cured.
65. June 29, 1900	51	Polyclinic.	Office.	Uterine fibroids, and secondarily vesico vaginal fistula.	Vaginal ablation for fibroids. Secondarily closing fistula.	Cured.
66. Dec. 15, 1900	31	Private.	Dr. Taylor.	Uterine fibroids.	Vaginal ablation by morcellation.	Cured.
67. Oct. 11, 1899	35	Polyclinic.	Dispensary.	Double pyosalpinx and cystic ovaries.	Vag. ablation by hemisection.	Cured.
68. May 1, 1896	35	Polyclinic.	Dispensary.	Bilateral pyosalpinx, bronchopneumonia.	Vag. ablation by hemisection.	Cured.
69. Apr. 1, 1895	[?]	Polyclinic.	Dispensary.	Bilat. pyosalpinx, secondary hemorrhage, laparotomy, bleeding from ovarians.	Vag. ablation by hemisection.	Cured.
70. Mar., 1896	28	Polyclinic.	Dispensary.	Unruptured tubal pregnancy of right side, chronic salpingitis of left, gonorrhoeic.	Vag. ablation by hemisection.	Cured.
71. Oct. 12, 1900	24	Polyclinic.	Dispensary.	Double pus tubes.	Vag. ablation by hemisection.	Cured.
72. Oct. 7, 1897	30	Polyclinic.	Office. 4 years ago uterus curetted, adhesion between uterus and rectum broken up.	Phthisis pulmonalis, bilateral pyosalpinx.	Vag. ablation.	
73. Oct. 24, 1897	45	St. Elizabeth's.	Office.	Uterine fibroids.	Vag. ablation, morcellation.	Cured.
74. Mar. 14, 1899	37	Polyclinic.	Dr. Brownson.	Uterine fibroids.	Vag. ablation, morcellation.	Cured.
75. Dec. 10, 1897	51	Polyclinic.	Dispensary.	Prolapse of uterus (complete).	Amputation of cervix, curettage.	Cured.
76. Oct. 3, 1896	22	Polyclinic.	Dispensary.	Right ectopic gestation, ovarian apoplexy, left acute salpingitis.	Vag. ablation by hemisection.	Cured.
77. Nov. 10, 1897	35	Private.	Dr. Dawbarn.	Uterine fibrosis, left pyosalpinx and ovarian abscess, right pyosalpinx.	Vag. ablation by hemisection.	Cured.
78. Oct., 1895	29	City Hospital.	Laparotomy at Bellevue.	Gen. pelvic peritonitis due to infected ligatures after celiotomy.	Vag. ablation <i>en masse</i> .	Cured.
79. Apr. 20, 1898	52	Polyclinic.	Dispensary.	Small multiple fibroid and genital fibrosis, uterus 3 times normal size.		
80. Feb. 16, 1899	36	Polyclinic.	Dr. Baldy 2 previous laparotomies.	Fibroid uterus, ventral hernia, multiple broad ligament and sub-peritoneal cysts.	Vag. ablation by hemisection.	Cured.
81. Apr. 1, 1895	23	City Hospital.	D. P. P. C.	Bilat. sup. salpingitis.	Vag. ablation <i>en masse</i> .	Cured.
82. Mar. 13, 1897	28	St. Elizabeth's.	Dr. Davidson.	Septic metritis, retroflex adherent uterus after lap, uterine fibrosis after lap, infected stump and ligatures.	Vag. ablation by hemisection.	Cured.
83. Jan. 5, 1899	49	Private.	Dr. R. Nicholls.	Right ovarian cyst, left pyosalpinx.	Vag. ablation by hemisection.	Cured.

Date	Age.	Hospital.	From.	Diagnosis.	Operation.	Result.
84. Apr. 1, 1899	45	Private.	Dr. Wyeth. Previous curet- tages.	Bilat. salpingo-oophoritis, chr. uterine fibrosis, many adhe- sions.	Vag. ablation by morcellation.	Cured.
85. June 7, 1900	52	Polyclinic.	Dispensary.	Prolapsus uteri, chr. bilateral chr. salpingitis, multiple adhe- sions.	Vag. ablation with ligatures.	Cured.
86. July 19, 1899	25	Polyclinic.	Vaginal puncture for "abscess" of tubes a year ago.	Bilat. hydro. and chr. ovaritis, many adhesions.	Vag. ablation by hemisection.	Cured.
87. Oct. 31, 1899	19	Polyclinic.	Dispensary.	Double pyosalpinx, septic me- tritis, small ovarian cyst.	Vag. ablation by hemisection.	Cured.
88. Oct. 8, 1900	43	Private.	Office.	Sclerosed occluded tubes, scler- osed ovaries, large hard uterus.	Vag. ablation by hemisection.	Cured.
89. Jan. 11, 1901	39	Private.	Dr. Griswold.	Genital sclerosis, retroverted, adherent uterus.	Vag. ablation by hemisection.	Cured.
90. Sep. 6, 1899	35	Private.	Dr. Munde. Vag. removed uterine fibroids. Sepsis.	Bilateral pyosalpinx, septic me- tritis.	Vag. ablation by hemisection, intravenous infusion.	Cured. Was told that she died after an ap- pendectomy performed after she returned home
91. Jan. 1, 1901	36	Polyclinic.	Patient of Dr. Wyeth.	Dif. pelvic suppuration, phthisis, bronchopneumonia.	Vag. ablation by hemisection.	Cured.
92. Sep. 22, 1900	22	Polyclinic.	Dispensary.	Genital sclerosis, old multiple adhesions, 2 previous opera- tions at Bellevue through vagina.	Vag. ablation by hemisection,	Cured.
93. Nov. 9, 1898	44	Polyclinic.	Dr. Liell.	Uterine fibroids.	Vag. ablation, morcellation.	Cured.
94. Mar. 26, 1899	42	Private.	Patient of Dr. Griswold.	Acute sepsis, small fibroids, pelvic peritonitis.	Vag. ablation by hemisection and morcellation.	Cured.
95. Aug., 1899	34	Private.	Dr. S. Strauss.	Large edematous ovaritis and papillomatous cyst on right side. (Chr. bilat. salpingitis).	Vag. ablation by hemisection be- tween 4 prs. of forceps.	Cured.
96. Nov. 20, 1900	28	Polyclinic.	Dispensary.	Bilateral pyosalpinx, intravenous infusion.	Vag. ablation by hemisection.	Cured.
97. Feb., 1901	23	Polyclinic.	Dr. Dillingham.	Many pelvic adhesions, left cyst of ovary and hydrosalpinx, laparotomy 2½ years ago.	Vag. ablation <i>en masse</i> .	Cured.
98. Nov. 3, 1900	28	Dispensary.	Dispensary.	Bilateral pyosalpinx, small fibroids.	Vag. ablation by hemisection.	Cured.
99. Sep. 28, 1898	34	Polyclinic.	Office.	Uterine fibroids.	Vag. ablation, morcellation.	Cured.
100. Dec. 20, 1897	23	Polyclinic.	Patient of Dr. Tucker. Pre- vious curettage.	Right pyosalpinx, left pachysal- pingitis adhesions.	Vag. ablation by hemisection.	Cured.
101. Feb. 7, 1898	44	Polyclinic.	Postabortum infection.	Bilat. pyosalpinx, small uterine fibroid.	Vag. ablation by hemisection.	Cured.
102. Mar. 15, 1898	26	Polyclinic.	Dispensary.	Very large bilat. tubo-ovarian abscess.	Vag. ablation by morcellation.	Cured.
103. Aug. 1, 1898	Polyclinic.	Had been in bed 5 weeks with acute peritonitis.	Right ovarian cyst, acute bi- lateral salpingitis, gen. pelvic peritonitis.	Vag. ablation by hemisection.	Cured.	
104. Mar. 13, 1899	45	Polyclinic.	Dr. Griswold.	Fibroids.	Vag. ablation by morcellation.	Cured.
105. Oct. 28, 1898	46	Polyclinic.	Dr. Griswold.	Fibroids.	Vag. ablation by morcellation.	Cured.
106. Jan. 6, 1899	45	Polyclinic.	Patient of Dr. Goldstein.	Fibroids.	Vag. ablation by morcellation.	Cured.
107. Aug. 12, 1899	21	Polyclinic.	Laparotomy by Dr. Van Ram- dohr 3 months ago.	Pyosalpinx of left side, sup- about ligature of right stump, many adhesions.	Vag. ablation by hemisection.	Cured.
108. Nov. 2, 1899	47	Private.	Dr. Sewell.	Double cystic ovaries adhesions, tubal sclerosis, old lesions.	Vag. ablation by hemisection.	Cured.
109. Nov. 2, 1898	22	Private.	Patient of Dr. W. R. Town- send.	Peritonitis, bilat. pyosalpinx, aortic and mitral lesions.	Vag. ablation by hemisection.	Cured.
110. Feb. 1, 1898	54	Private.	Patient of Dr. Griswold.	Doub. pyosalpinx, left ovarian abscess, acute gonorrhoea.	Vag. ablation by hemisection.	Cured.
111. Aug. 11, 1897	23	St. Elizabeth's.	Dr. Gilday.	Right broad ligt. abscess, left pyosalpinx	Vag. ablation by hemisection.	Cured.
112. May 25, 1899	32	Polyclinic.	Dispensary.	Pyosalpinx right side, ovarian abscess and pyosalpinx of left.	Vag. ablation by morcellation.	Cured.
113. Oct. 12, 1898	22	Polyclinic.	6 previous operations, 3 laparot- omies, 2 nephrorrhaphies. Dr. Tucker.	Pelvic peritonitis after laparot- omy, abdominal sinus, dis- charging feces and urine.	Vag. ablation <i>en masse</i> .	Cured.
114. Mar. 26, 1898	23	Polyclinic.	Dispensary.	Left ectopic gestation, right pyosalpinx.	Vag. ablation <i>en masse</i> .	Cured.
115. May, 1900	39	Private.	Office.	Bilat. pyosalpinx.	Vag. ablation by hemisection.	Cured.
116. Apr., 1901	36	Private.	Office.	Multiple uterine fibroids.	Vag. ablation by morcellation.	Cured.
117. Jan. 11, 1898	27	Polyclinic.	Dispensary.	Ruptured ectopic, left pyosal- pinx, ovarian cyst.	Vag. ablation by hemisection.	Cured.

Date.	Age.	Hospital.	From.	Diagnosis.	Operation.	Result.
118. Oct. 26, 1895	24	City Hospital.	Dr. Outerbridge, laparotomy, Nov., 1894.	Abdominal sinus and dif. pelvic suppuration about infected ligature left after coelotomy, ligature recovered.	Vag. ablation, <i>en masse</i> . Ligatures recovered. Dr. Jacobs of Brussels (present).	Cured.
119. Nov. 1, 1895	21	City Hospital.	D. P. C. C.	Bilat. pyosalpinx.	Vag. ablation <i>en masse</i> .	Cured.
120. Aug. 14, 1897	33	St. Elizabeth's	Office.	Chr. bilat. salpingo-oophoritis, multiple adhesions, fixed retroversion.	Vag. ablation by hemisection.	Cured.
121. Sep. 25, 1898	25	Polyclinic.	Curetage in Russia 4 years ago, ill ever since.	Bilat. pyosalpinx, subperitoneal cyst.	Vag. ablation by hemisection.	Cured.
122. Jan. 24, 1899	30	Polyclinic.	Dispensary.	Bilat. hydrosalpinx multiple adhesions.	Vag. ablation by hemisection.	Cured.
123. Mar. 20, 1895	21	City Hospital.	D. P. C. C.	Bilat. pyosalpinx, dif. pelvic suppuration, large chancroids on vulva.	Vag. ablation <i>en masse</i> .	Cured.
124. June, 1896	22	Polyclinic.	Office.	Ruptured ectopic gestation salpingitis on other side.	Vag. ablation by hemisection, bronchopneumonia.	Cured.
125. Oct. 1, 1899	20	Private.	Dr. Wyeth.	Double pyosalpinx and ectopic gestation, syphilitic.	Vag. ablation by hemisection.	Cured.
126. Oct. 29, 1898	42	Polyclinic.	Office.	Uterine fibroids.	Vag. ablation by morcellation.	Cured.
127. July 8, 1898	38	Polyclinic.	Dispensary.	Retroverted uterus following abortion, dif. pelvic sup.	Vag. section.	Cured.
128. 1897	42	Polyclinic.	Dispensary.	Uterine fibroids.	Vaginal ablation by morcellation.	Cured.
129. Oct. 2, 1895	20	Polyclinic.	Dispensary.	Suppurating salpia. on left side, pachy on right.	Vaginal ablation by hemisection.	Cured.
130. Apr. 5, 1900	38	Polyclinic.	Lap. 3 years ago for pelvic abscess. Lap. 2 years ago, right ovary removed.	Genital sclerosis, multiple adhesions.	Vaginal ablation by hemisection using 3 clamps.	Cured.
131. June 8, 1898	26	Polyclinic.	Dr. Bodine. Ovarian cyst removed by lap. by Dr. Fullerton, of Phil'a, 2 years ago.	Dif. peritonitis, adherent uterus, broad lig. cyst.	Vaginal ablation by hemisection.	Cured.
132. Dec. 20, 1897	36	Private.	Dr. Zitz. Left tube and ovary removed 3 years ago by Dr. Krug, through vagina.	Enormous right ovary, ovarian abscess.	Vaginal ablation by hemisection and morcellation.	Cured.
133. Mar. 17, 1893	33	Polyclinic.	Dr. Munde. Curettag 2 years ago, infection since.	Multiple uterine adhesions, etc.	Vaginal ablation by hemisection.	Cured.
134. Feb. 13, 1898	39	Polyclinic.	Dr. Dawbarn.	Ruptured right tubal gestation, pyosalpinx left.	Vaginal ablation by hemisection.	Cured.
135. Nov. 1, 1897	41	Private.	R. L. Pritchard. Dr. Abbe in consultation.	Multiple adhesions, bilat. occluded tubes, large cystic ovaries. Adhesions more general than I have ever seen them due to puerperal septicemia.	Vaginal ablation by hemisection.	Cured.
136. Feb. 27, 1901	27	Private.	Dr. S. Lewingood.	Chr. salpingo-oophoritis, genital sclerosis, many minor operations.	Vaginal ablation by hemisection.	Cured.
137. Oct. 1, 1900	42	Private.	Dr. Marvel.	Fibroids, old ruptured ectopic, endocarditis, typhoid fever, pneumonia.	Vaginal ablation by morcellation.	Cured.
138. Dec., 1895	35	Polyclinic.	Dispensary.	Pyosalpinx, bilat. cystic ovaries, intraligamentous fibroid.	Vaginal ablation by morcellation.	Cured.
139. Mar., 1901	40	Polyclinic.	Dispensary.	Bilat. hydrosalpinx, multiple adhesions, uterine fibrosis and small fibroid.	Vaginal ablation by morcellation.	Cured.
140. Dec. 29, 1900	30		Dr. Nichols.	Ruptured ectopic, multiple adhesions.	Vaginal ablation by hemisection.	Cured.
141. Dec. 1, 1898	27	Polyclinic.	Dispensary.	Retroversion, adhesions, bilateral hydrosalpinx.	Vaginal ablation.	Cured.
142. May 26, 1900	42	Polyclinic.	Dr. Schaviour, of Stamford, removed fibroid.	Fecal fistula and uterine fibroids.	Vaginal ablation fistula curetted & plugged from above. Fistula did not heal.	
143. July 7, 1899	67	Polyclinic.	Dr. Bodine.	Occluded tubes, many adhesions, prolapse.	Complete hysterectomy.	
144. May 1, 1895	30	City Hospital.	D. P. C. C. Abdom. ovariectomy, Harlem Hospital, 6 months ago.	Bilat. salpingitis, acute peritonitis.	Vaginal ablation <i>en masse</i> .	Cured.
145. Mar. 16, 1896	40	Polyclinic.	Dr. Krug.	Chr. bilat. salpingitis, repeated attacks.	Vaginal ablation by hemisection.	Cured.
146. Apr. 20, 1896	46	Polyclinic.	Dispensary.	Old ectopic which had ruptured into right broad lig. Dif. pelvic suppuration.	Vaginal ablation by hemisection.	Cured.
147. Mar., 1895	44	City Hospital.	D. P. C. C.	Bilat. pyosalpinx.	Vaginal ablation <i>en masse</i> .	Cured.
148. Nov. 27, 1897	24	Polyclinic.	Many attacks gonorrhoea, repeated curettages.	Chr. salpingitis, oophoritis, Chr. metritis. General sclerosis.	Vaginal ablation by hemisection. Very difficult.	Cured.
149. Jan. 31, 1899	37	Private.	Dr. Tingley.	Bilat. pyosalpinx.	Vaginal ablation by hemisection. Intravenous infusion.	Cured.

Date.	Age.	Hospital.	From.	Diagnosis.	Operation.	Result.
150. Feb. 27, 1899	32	Private.	Dr. Griswold.	Left ectopic gestation, right pyosalpinx. Specimen sent to Dr. Williams, Johns Hopkins.	Vaginal ablation by hemisection.	Cured.
151. Mar. 3, 1899	45	Polyclinic.	Dispensary.	Multiple pelvic adhesions, bilat. salpin oophoritis.	Vaginal ablation by hemisection.	Cured.
152. July 10, 1898	39	St. Elizabeth's.	Office.	Specific history. Bilat. sclerosed tubes and ovaries. Many adhesions.	Vaginal ablation by hemisection.	Cured.
153. Sep. 28, 1899	38	Polyclinic.	Jan. 29, 1900, Dr. Wells operated for cure of fistula.	Endometritis, doub. ovarian abscess, doub. pyosalpinx and abscess of left broad lig.	Vaginal ablation by hemisection.	Cured.
154. Aug. 11, 1898	24	Polyclinic.	Dispensary.	Bilat. ovarian cystoma, purulent ovarian abscesses. Chancroid in upper part of left side of vulva. Iliac glands of left side enlarged.	Ablation, vaginal.	Cured.
155. May 16, 1898	23	Polyclinic.	Dr. Rupp curetted 1 year ago. Dr. Polk drained through vagina after.	Right pyosalpinx, left pyosalpinx, uterus large and ante-flexed.	Vaginal ablation by hemisection.	Cured.
156. June 6, 1898	30	Polyclinic.	Dispensary.	Bilat. pyosalpinx.	Vaginal ablation by hemisection.	Cured.
157. Sep. 15, 1898	19	Polyclinic.	Dispensary.	Dif. pelvic suppuration.	Vaginal ablation by hemisection.	Cured.
158. Jan. 5, 1899	22	Polyclinic.	Dispensary.	Bilat. pyosalpinx, acute peritonitis.	Vaginal ablation by hemisection.	Cured.
159. Dec. 31, 1896	30	St. Elizabeth's.	Dr. Gilday.	Bilat. pyosalpinx.	Vaginal ablation by hemisection.	Cured.
160. Nov. 28, 1899	30	Polyclinic.	Dr. McPhee.	Uterine fibrosis, bilat. pyosalpinx, right bystic ovary.	Vaginal ablation, Nov. 30, 1899.	Cured.
161. Nov. 21, 1898	31	Polyclinic.	Dispensary.	Bilat. ovarian apoplexy, multiple adhesions, twisted and occluded tubes.	Vaginal ablation by hemisection. Secondary hemorrhages on 10th & 18th days from right uterin vaginal anastomosis.	Cured.
162. June 28, 1899	22	Private.	Office.	Right lig. abscess, bilat. ovarian apoplexy, left pyosalpinx, syphilitic.	Vaginal ablation by hemisection.	Cured.
163. Jan. 26, 1898	26	Polyclinic.	Dr. Thompson.	Uterine fibroid, bilat. pyosalpinx.	Vaginal ablation by morcellation.	Cured.
164. Sep. 22, 1896	37	Private.	Dr. Hewlett.	Prolapsus uteri, cervix at vulva, large cystic ovaries. Chr. salpingitis, tubes occluded and adherent.	Curettage, later vaginal ablation.	Cured.
165. May 24, 1896	24	Polyclinic.	Operation by Paul Ségond.	Doub. pyosalpinx-hystero-epileptic convolutions.	Vaginal ablation by hemisection iliac.	Cured.
166. Sep. 10, 1898	26	Polyclinic.	Dispensary.	Left ovarian cyst, prosalpinx (right).	Vaginal ablation by hemisection.	Cured.
167. Nov. 3, 1898	22	Polyclinic.	Dr. Nichol.	Left papilloma of tube, right pyosalpinx syphilitic.	Vaginal ablation by hemisection.	Cured.
168. Nov. 22, 1898	28	Polyclinic.	Dispensary.	Left ectopic gestation, right pyosalpinx, profoundly septic.	Vaginal ablation by hemisection. Intravenous infusion.	Cured.
169. Mar. 12, 1899	40	Polyclinic.	Dr. Bodine.	Dif. pelvic suppuration.	Vaginal ablation by hemisection. Bronchopneumonia. Intravenous infusion. Typhoid fever.	Cured.
170. Oct. 9, 1900	58	Private.	Dr. Berkely.	Multiple fibroids.	Vaginal ablation by morcellation.	Cured.
171. Oct. 18, 1899	34	Polyclinic.	Dispensary.	Fibroids of uterus.	Vaginal ablation by morcellation.	Cured.
172. Nov. 16, 1899	29	Polyclinic.	Dispensary.	Genital sclerosis, pelvic adhesions, many infections.	Vaginal ablation by hemisection.	Cured.
173. Sep. 9, 1896	28	Polyclinic.	Dispensary.	Bilat. chr. salpingitis general pelvic adhesions. Many previous minor operations, etc.	Vaginal ablation by hemisection.	Cured.
174. June 22, 1898	38	Private.	Dr. Griswold.	Dif. pelvic suppuration.	Vaginal ablation by hemisection, iliac.	Cured.
175. Jan. 21, 1898	33	Private.	Dr. Griswold.	Left ovarian abscess and right pyosalpinx.	Vaginal ablation by hemisection.	Cured.
176. 1898	3	Private.	Patient of Dr. Gray.	Old chr. salpingitis, multiple adhesions, carcinoma of cervix.	Vaginal ablation <i>en masse</i> .	Cured.
177. Sep. 28, 1900	35	Private.	Dr. Leo.	Gen. pelvic peritonitis, retroversion and adhesions, carcinoma of cervix.	Vaginal ablation by hemisection.	Cured.
178. Nov., 1895	35	City Hospital.	D. P. C. C.	Bilateral pycsalpinx.	Vaginal ablation <i>en masse</i> .	Cured.
179. Oct. 6, 1897	21	Polyclinic.	Dr. Wells.	Ectopic pregnancy and pelvic suppuration.	Vaginal ablation.	Cured.
180. June 1, 1899	36	Private.	Dr. Griswold.	Uterine fibroids.	Vaginal ablation by morcellation.	Cured.
181. Oct. 16, 1899	29	Polyclinic.	Dispensary.	Genital sclerosis, general adhesions.	Vaginal ablation by hemisection.	Cured.
182. Mar. 23, 1901	24	Private.	Dr. Dillingham.	Diffuse pelvic suppuration, preliminary evacuation.	Vaginal ablation by hemisection.	Cured.
183. Mar. 28, 1901	30	Private.	Dr. Gilday.	Bilateral pyosalpinx.	Vaginal ablation by hemisection.	Cured.

THE GOOD AND BAD EFFECTS OBTAINABLE FROM DIGITALIS USED AS A THERAPEUTIC AGENT.*

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[Concluded from page 117.]

With this general understanding in relation to the functional activity of the glomeruli and epithelial cells constituting the kidney and our knowledge of the chemistry and physiologic action of digitalis, its therapeutic possibilities in relation to the excretory action of the renal glands, both in health and disease, can be intelligently discussed. Considerable doubt and difference of opinion prevail in regard to both the degree and mode of utility of digitalis and its various preparations in relation to the action of the renal glands—this is true, notwithstanding that this drug has been extensively administered for more than a century, some praising it highly, while others with equal vigor condemn it as worthless. The varying composition of the different preparations would alone easily account for this diversity of opinion; but when to this is added the complex mechanism of the renal function there is little wonder that there is a multiplicity of opinions upon the subject.

Hurchard not many years ago advanced the opinion that digitalis, even when given in large doses, was not hurtful in pathological conditions of the kidney. He claimed, on the contrary, that it was useful in the condition known as parenchymatous metamorphosis or degeneration, because it diminished the amount of albumin excreted with the urine.

Owing to the facts as already detailed, that digitalis contains a number of glucosidal principles, some of which antagonize others, and as the various preparations differ widely in their composition, it is very difficult to secure a uniform preparation for therapeutic use. At the same time one or all of these glucosides must be oxidized and eliminated from the system; when this is being done the animal economy is, in a large measure, uselessly taxed in transmitting those active agents that are foreign bodies in the sense that they are useless and antagonistic to those active principles that alone might be of true therapeutic value. As a natural sequence the oxidation and elimination of these worthless products from the body, must damage the system to greater or less degree, and so far as these principles are concerned, without in the least degree securing the desired physiological action.

Under conditions like these, the therapeutic results from the chemical nature of the drug alone at best become problematic and uncertain which easily explains the abundance of contradictory clinical evidence recorded concerning this drug. If we add to this a misinterpretation of the physiological laws governing the functional activity of the renal glands the uncertainty becomes greatly intensified.

Further than this, it has been ascertained that digitalis is not eliminated from the system by the kidneys in any of the above mentioned glucosidal forms; therefore its diuretic effects upon the system can not be explained

by its elimination, as such, through the kidneys, thus exciting the glands into activity by its irritating properties as it passes through these organs.

As all the active or glucosidal principles are composed of carbon, hydrogen, and oxygen, they are all capable of being oxidized within the system into carbon dioxide and water. While these elements are passing through this transmutation process, they yield heat and energy; and, by acting upon the nervous mechanism, they chiefly yield the physiological action of digitalis. Primarily, the first 3, digitalein, digitoxin and digitalin when oxidized act upon the cardiac-innervating center and the primary or medullary vasomotor centers, thus causing an increase in the number of the cardiac pulsations, and at the same time, they progressively tighten up the entire arterial system outside the splenic arcade. A little later, the cardioinhibitory center feels the stimulating effects, more positively than the cardioinnervating, which fact, together with the heightened arterial tension already produced, naturally increases the peripheral resistance to the heart action.

As a natural sequence, the heart at first beats more rapidly and forcibly against a steadily increasing, peripheral, arterial resistance. Excepting of course the splenic arcade in the domain of which obeying the common law of physiology, the capacity of the bloodvessels is increased and a large volume of blood is moved from the general arterial system and through those of the splenic arcade in a given space of time. At this point the common law of physics comes into play, in this, that the increased resistance in front of the heart, as the result of the augmented arterial tension, greatly augments the task of the heart as a mechanical pump. Consequently, the number of strokes to the minute must be reduced, to increase the power of the heart per stroke, in overcoming the greater resistance placed against it.

If the increased volume capacity in the splenic arcade were equal to the general decrease in the remaining portions of the arterial system, the actual amount of work imposed upon the heart by the contraction of the arteries would not be augmented, but this absolute, equal balance between the 2 systems does not, as a rule, seem to take place. The contraction in the general arterial system is much greater than the expansion in the splenic arcade, which, together with the increased high tension in the coronary arteries, as already elucidated, cuts down the time for the nutritive interchange between the blood in the coronary vessels and the muscular tissue that constitutes the heart wall. As a natural result of this increased work thrown upon the heart, and at the same time of a reduction in nutritive supply, the heart must work slower and ultimately less effectually. Thus it becomes clear that the chief action of digitalis in influencing the renal functions may be explained through its power to change the mechanical workings of the heart and of the circulatory vessels, the combined action of which causes an abnormal distribution of the blood, and therewith an equally abnormal distribution of the nutritive supply.

If digitalis is continuously administered with rapidly increasing dosage, the secondary or spinal vasomotor centers will be actively stimulated as well as the primary vasomotor centers in the medulla, and thus a high ten-

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sion is produced in the vessels of the splenic arcade as well as in the rest of the arterial system. When this has been produced, almost all nutritive interchange throughout the body is thereby arrested. Owing to the reduction of the lumina in the renal arteries, whatever blood reaches there is driven so rapidly through the kidneys that proper time is not allowed for the epithelial cells to formulate and eliminate the effete material taken from the blood.

If the stimulation of the secondary or spinal vasomotor centers is more intense than can be secured by large doses of digitalis, the contractile effect upon the renal arteries will be still greater, and can be carried to such an extent that the renal arterioles will be so much contracted that the circulation in them is almost if not completely arrested. In either instance a rapidly developing anemic condition of the system is induced in the tissues generally; the functions of the kidneys is practically or absolutely abolished; and the patient finally dies practically with toxic symptoms, commonly classed as uremia.

With this knowledge at hand, and remembering that all renal lesions have for their chief etiological factor an increase in the amount of work imposed upon them at a time when their nutritive supply is below the normal standard, the therapeutic possibilities of digitalis in connection with the renal function can be rationally considered.

Having found in the study of the functions of the kidneys that the quantity of water discharged is largely dependent upon the hydraulic pressure reigning in the glomerule, we shall see that this law is the chief factor in explaining and determining the excretory output of the kidneys.

To summarize, when digitalis is given to a normal individual the general blood tension is increased and the heart's action intensified. This might be expected to increase the hydraulic pressure in the glomerule and augment the flow of urine, but owing to the fact that there is no obstruction to the exit of blood from the kidneys, the blood is simply driven more rapidly through the kidney, and the pressure in the glomerule is not increased above the normal. Consequently the amount of water discharged from the kidney remains about normal; but owing to the greater speed of the blood in passing through the kidneys, less time is allowed for the epithelial cells to take up the fully utilized proteid elements together with active oxygen from the passing blood stream, oxidize and eliminate them as the nitrogenous excreta of the body.

What oxidation does occur is less perfectly effected, and the normal kidney, when the system is under the influence of digitalis naturally excretes more uric acid and less urea. If the system is brought more completely under the influence of digitalis the renal arteries may become so much contracted that the renal function is suspended. This, however, rarely if ever occurs during the ordinary therapeutic use of digitalis. Yet it is clear, that the normal condition of the kidneys, and in many of the lesions of the renal organs, digitalis decreases the elimination of the water and diminishes the perfection and amount of the nitrogenous excre-

mentitious products of these glands. Further than this, the increase in the speed of the blood in its passage through the kidneys also lowers the perfection in the nutritive interchange between the blood and the renal tissue. Therefore, in all kidney lesions, in which there is no marked swelling of the epithelial cells, which when present, compresses the venous capillaries on the efferent side of the Malpighian tufts, and in which the venous exit from the kidneys, so far as the large veins are concerned is impeded, digitalis, as in the normal kidney, simply drives the blood through the renal organs more rapidly, without augmenting the hydraulic pressure in the glomeruli. Consequently, digitalis, in this class of cases, does not produce any diuretic action, but decreases the excretory function of the kidneys, impairs the nutritive function of the renal tissue still more, and practically makes the kidney lesion worse. This arrest in the functional activity may decrease the elimination of the albumin, but proves conclusively, in opposition to Hurchard's opinion, that "digitalis is not hurtful"—that it is very damaging under these circumstances. On the other hand, if there is a general venous engorgement of the system, a passive congestion of the kidney, or an active determination of blood to the renal organs until the circulation therein is impeded, a result entirely different from the one just described is obtained from the use of digitalis. Likewise in all forms of parenchymatitis, metamorphosis, or degeneration of the epithelial cells, when these become swollen and compress the veins outside the Malpighian tufts, and thus prevent the normal and free escape of blood from the efferent vessels of the glomeruli, digitalis improves the nutritive condition as well as the excretory function. In all these instances, when digitalis is first administered, the results will be as follows: the heart's action will be intensified, and the general arterial tension will be greatly increased. At the same time the splenic arcade, which includes the renal system, and which is not thus affected, is, by the general arterial pressure, driven to expand; the volume of blood discharged into the arteries of the kidneys is therefore greatly augmented, and the volumetric blood-pressure in the vessels of the glomeruli rapidly rises. As a result of the obstruction to the venous escape, one of 3 things must follow: The circulation through the kidneys must stop; or the capillaries constituting the Malpighian tufts must burst, and this increased pressure be relieved by an escape of the blood into the tubules; or, what more frequently occurs, the watery constituents of the blood must flow off through the capillaries, constituting the Malpighian tufts, into the uriniferous tubules. When this latter results, there is a rapid increase in the amount of water discharged into the bladder, from which it is finally expelled, thus furnishing typical clinical evidence of the diuretic properties of the drug. With the relief of pressure within the glomeruli, and with the continued steady high pressure upon the engorged venous system in the kidneys from the arterial side, the sluggish circulation through the secondary or venous plexuses of the renal gland is greatly improved, thus allowing a more nearly normal volume of blood to pass through the kidneys in a given space of time than before.

When this stage is reached, a larger volume of the utilized proteid constituents will be drawn into the protoplasm of the renal cells, together with a larger quantity of active oxygen. This will result in a more perfect and more active oxidation reduction of the proteid constituents. As a necessary sequence the amount of albumin discharged from the renal cells will be decreased, the output of uric acid will fall, and the percentage of urea will be proportionately increased. Both the solids, as well as the water, are increased and the true functional activity and the nutrition of the renal tissue is augmented, provided at the same time the patient is properly dieted, and due attention given to improving digestive function.

This is true because too slow a passage of the blood as well as a too quick flow of blood, as already shown, prevents the proper nutritive and functional activity not only of the renal organs, but of every gland in the body. Thus digitalis, in this class of cases, becomes a true diuretic in every sense, while in all other cases its action is the reverse, and often does positive damage.

The improvement in the circulatory activity, which, in this special class of cases, is raised from a low ebb to a normal standard, together with the increased excretory activity of the renal glands, very decidedly tends to enhance the local nutritive activity in the kidney itself, and thus helps to cure the parenchymatous lesion and all lesions of the before described, allied group. Thus fully is sustained the assertion of Huchard in this class of renal lesions. It also shows why the giving of digitalis empirically, and without first determining accurately the true nature of the pathologic changes, will result in failure both in connection with cardiac and renal lesions, quite as often as in success, and in many instances must result in absolute damage to the human economy. Administered as a diuretic when it has no power to act, its therapeutic result must be nil; but given when and where it has the power to act, digitalis is one of the most valuable drugs in the pharmacopia.

The conclusions naturally arrived at from this critical review of digitalis, have been based largely upon a close and extensive observation of the drug and its various preparations in all forms of disease. This study of its action has extended over a period of more than 20 years, both in the hospital wards and in private practice.

The conclusions therefrom are summarized as follows:

1. The composition of digitalis is, chemically speaking, very complex, and some of its active principles antagonize others.
2. That the different preparations differ widely in their composition and action.
3. That its cumulative action is due to its contracting the arterioles, thus shutting off nutrition.
4. That it is both a useful and dangerous remedy; and one that has a very limited range of usefulness.
5. That it is only of use in lesions of the mitral valve, and even then only for a short time.
6. That it should only be used when there is low arterial tension and marked venous engorgements and as soon as these conditions are overcome, its action should be suspended.
7. As a diuretic it is only of value when there is low

arterial tension, venous engorgement and obstruction to the exit of blood from the kidney.

8. Acting upon the normal, and in all diseased conditions in which there is obstruction to the exit of blood from the kidney, it decreases the excretory activity of the renal glands, and impairs their nutritive activity.

9. If pushed to its fullest extent it may completely arrest the functional activity of the renal glands.

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THE LOGIC OF HYDROCHLORIC ACID THERAPY, RESTORATION OF LOST GASTRIC HCL SECRETION BY MEDICAL AND SURGICAL METHODS.

BY

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(Concluded from page 130.)

Professor Biedert claims to have used 120 drops of dilute HCl daily, for a number of years, with much benefit¹⁷ to his achylia. Hänni introduced into the stomach 400 cc. of a 2.5 : 1000 solution of HCl, containing also 2 gm. of pepsin, together with an Ewald test-breakfast. So early as 15 minutes afterward, when some of the test-meal was withdrawn, the free HCl had completely disappeared and the digestive power of the sample was equal to zero;¹⁸ and Boas cites this statement to show that the digestive value of HCl therapy is doubtful. To this we might reply that a patient who gets rid of 400 cc. of semi liquid food in 15 minutes has hypermotility; so much could not possibly be absorbed in that short period (the stomach does not absorb dilute HCl solutions). Nor could all of 1 gm. of absolute HCl which 400 cc. of a 2.5 to 1000 solution contains, enter into combination with the proteid of a single roll; for 100 gm. of wheat roll contain only 7 gm. of nitrogenous or HCl-binding materials. We know, however, that 1 gm. of absolute HCl can digest 18 gm. of dried egg-albumen. Therefore the 400 cc. had probably all been rapidly expelled into the duodenum before they could even be thoroughly triturated with the test-breakfast. This does not occur normally, and we are not justified in drawing conclusions from such hyperkinetic cases regarding the value of HCl therapy.

As the amount of absolute HCl introduced in Hänni's experiments equaled 1 gm., and as so much could not enter into combination with the proteid of 1 roll, or 100 gm., of wheat bread, it stands to reason that if the motility had not been so exaggerated, some of the HCl would have been regained. Whenever Hänni¹⁹ succeeded in regaining some of the solution of HCl after it had remained in the stomach 45 to 50 minutes, or even 30 minutes,²⁰ the tests for HCl were positive and fibrin was well digested by the filtrate. The experiments of von Mehring, Moritz, and myself apparently agree in permitting the deduction that 15 minutes is an abnormally rapid time for the expulsion of 400 cc. of semiliquid food (even if it were only water) into the duodenum, and whenever there is a fuller meal given than a simple test-breakfast, this rapid expulsion does not occur, because solid and semisolid food can not be moved out so readily. Again, we must make allowance for a certain unavoidable nervous tension, and for the influence of suggestion, which

takes hold of patients under experimentation, and which, from experience, we know has a decided influence on the rate of peristalsis.

On clinical as well as reliable experimental grounds I feel justified, therefore, in recommending hydrochloric acid, believing in its efficacy in supplementing the digestive work of the stomach in bringing about the normal conditions for duodenal digestion. Whenever it is indicated, I usually give 20 drops of the diluted HCl (U. S. Pharm.) in 2 ounces of water every 15 to 20 minutes, beginning 15 minutes *before* the meal; then 20 drops are taken during the eating, and 20 drops a half-hour after the meal. The medicine should always be taken through a glass tube, and the mouth rinsed with a weak solution of sodium carbonate afterward. Dr. Chas. D. Aaron, of Detroit, has suggested giving the acid in strong, gelatine capsules—a good plan. As a remedy for improving the appetite, HCl is conceded, even by those skeptical of its digestive power, to be of value. For this purpose it is best given in small doses diluted with water (10 to 20 drops in 3 ounces H₂O), on an empty stomach, before meals. With regard to its disinfectant and anti-fermentative effect we entertain serious doubts, since it cannot be given in sufficient quantity to be of much benefit in that direction when given with meals. Whenever there are decided fermentations in the stomach, lavage is the most efficient means of combating it, and for this purpose HCl in the form of a 6:1000 solution may be used.

Hydrochloric acid is contraindicated when the normal gastric secretion is augmented. We have observed cases in which there was no free HCl to be detected on Congo paper or phloroglucin-vanillin, but HCl given by the mouth produced gastric distress and pain; so that there can be no doubt that cases of hyperesthesia toward HCl exist analogous to those described by Talma²² which do not depend upon hyperhilia. One female patient in my private practice could detect whenever 6 drops of the diluted acid were given surreptitiously in the meals or medicine, by the gastralgia caused thereby. This was a highly neuropathic case.

The amount of HCl consumed in the digestion of albumin has been very carefully studied. It takes 0.05 gm. of HCl to transform 1 gm. of egg-albumen into acid albumin. As human beings frequently take in 150 gm. of egg-albumen in 24 hours, it would require 7.5 gm. of pure HCl (or 30 gm. of the 25% solution of the laboratories) to transform this amount into acid albumin. As the gastric juice contains HCl to the amount of 2 per mille, 3½ liters of gastric juice would be required to digest that amount of egg-albumen. Many children consume about one liter of milk daily; this would require 4.5 gm. of pure HCl or 18 gm. of a 25% solution of HCl (100 gm. of cows' milk combined with 0.45 gm. of HCl). These amounts of HCl would bring the ingested albumin only to the stage of acid albumin or syntonin; but as hemialbuminose and peptone would require twice the amount of HCl, the quantity combined with must eventually be increased beyond the figures stated. A portion of the albuminous foods passes over into the intestines, however, and is digested there long before it reaches the stage of hemialbuminose; but when

the transit of the food into the duodenum is obstructed, it is evident that enormous quantities of HCl must be secreted to digest all the albumin that is taken in. For a purely physiologic reason, it is not possible that the glandular layer can secrete the requisite amount. The absence of free HCl in these cases may be due to an invasion of the mucosa by the disease causing the pyloric obstruction. It is not impossible, however, that, even without this invasion, the mucosa has become exhausted, its secretory function being paralyzed. An analogous result has long been known to physiologists in connection with prolonged or overstimulation of the submaxillary (salivary) gland. Stimulation of these gland cells, through the chorda tympani nerve at first causes a secretion rich in ptyalin, but as the stimulation is prolonged for 12 to 16 hours the secreted saliva becomes poorer and poorer in ptyalin and finally contains none whatever. After the stimulation ceases and the gland cells have rested, any renewed secretion will again contain ptyalin.

Whenever the gastric secretion shows an absence of free HCl and it can be concluded that it is not due to an atrophy of the mucosa one of the most efficacious means of restoring the secretion is by lavage with a solution of HCl—3 to 4 parts to 1000 of warm water. As many of these cases require lavage, it is therefore expedient to carry it out with this solution even if there is no stagnation—the lavage is not intended here so much for cleansing the stomach as for stimulating the mucosa.

The diet should consist largely of foods requiring considerable amounts of HCl for digestion as these contain the substances that are the most effective stimulants to the gastric secretion—the extractive substances of beef, finely minced or scraped beef, mutton, fish, soft boiled eggs, etc. Such stomachs require dietetic gymnastics (always precluding dilations, atrophies, neoplasms) and too bland or sparing a diet will simply permit the secreting cells to atrophy from deficiency of work.

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¹⁹ *Loc. cit.*, p. 306.

²⁰ See cases No. 3, Schmid, and No. 4, Hännli, p. 307, loc. cit.

²¹ *Zeitschr. f. klin. Med.*, Bd. viii.

Plague.—The United States Consul, Robert M. McWade, at Canton, China, reports that 10,000 deaths from the plague have occurred there during the past 6 weeks, and that 13 cases of smallpox exist on board the United States monitor Monterey. A case of bubonic plague is reported from Alexandria, Egypt. In Capo Colony a steady increase of the plague is indicated in reports received both in London and Paris, there having been 366 cases up to April 10, of which number 85 were Europeans. At Simonstown the rats are reported to be dying from plague. The total mortality from plague for all India during the week ended March 9 is 7,879 deaths, an increase of 952 upon the previous week, which is the highest number of deaths from this disease for any week since its first appearance in India. In Bombay Presidency and Bombay City there is a decline of plague mortality, but in some other parts of India an alarming increase has prevailed. In Bengal, exclusive of the metropolis, 4,525 deaths from plague occurred during the week ended March 9, an increase of 459 deaths in the previous week. In Calcutta, in consequence of the marked recrudescence of plague, inspection of railway passengers at stations has been resumed, and on March 12, 142 fresh cases were reported and 557 plague deaths occurred there during the week ended March 9. It is understood in India that when deaths from plague in large cities number 100 daily a serious epidemic prevails, and this would seem to have been the case during a part of the third week of March. In the northwest provinces there were 417 deaths from plague, and in the Mysore State 169 during the week ended March 9. For the week ended March 28, 2 fatal cases of plague were reported in Mauritius.

HYPERPLASTIC COLITIS: EXTIRPATION OF THE ENTIRE COLON, THE UPPER PORTION OF THE SIGMOID FLEXURE AND FOUR INCHES OF THE ILEUM.

BY

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The following history is a singularly remarkable one not only because of the final recovery after many very dangerous intraabdominal operations, but because of the surgical surprises which were encountered throughout the entire progress of the case. The patient, a girl of 21, was referred to the surgical department of Mt. Sinai Hospital by Dr. Manges, who had observed her for some days in the medical side of the institution. She had for years suffered from diarrhea, accompanied by hemorrhages and the passage of foul mucus, and finally became so weak and anemic that a left inguinal colostomy had to be performed to give rest to the lower portion of the colon and rectum. The surgeon who opened the colon at this time saw that the walls of the viscus were covered with polypoid growths which bled easily even on gentle manipulation. The patient was very much benefited by the operation, the hemorrhages finally ceasing so that it was thought best to close the artificial opening. No sooner had she left the hospital, however, than her old trouble returned in all its severity and the girl became once more profoundly anemic and very weak. She then first came under my care. She had as many as 12 stools a day. There was much abdominal pain and some vomiting. The diarrhea and bleeding were worse after the ingestion of certain articles of food; she could not eat meat at all. On examining the abdomen considerable tympanites was noted, but no distinct mass could be felt. Examination of the rectum disclosed the presence of several small polypoid masses. I determined, on account of the inability of the surgeon to reach the upper limits of the disease with the finger through the original colostomy wound, to open the caput coli through a wound in the right iliac region in order to give the entire colon as thorough functional rest as possible. This operation was performed on December 30, 1899. I found the colon here in much the same condition which had been noted in the descending colon. There was no normal mucous membrane, the entire mucosa being covered by large and small papilloma-like excrescences. One of these was removed for examination and proved to be an hypertrophied solitary follicle (examination by Dr. F. S. Mandelbaum, pathologist). Incidentally the vermiform appendix was removed at this time. Its mucosa was hyperplastic. I will not go into the details of the treatment but will simply say that everything, which in my mind promised success, was tried—nitrate of silver injections and irrigations, saline irrigations, etc. The patient rapidly improved in her general condition. The hemorrhages almost entirely ceased, but it was evident that the closure of the right colostomy wound would surely be followed by the recurrence of her trouble since the condition of the visible mucous membrane was unchanged. I therefore made up my mind that the exclu-

sion of the entire colon from the alimentary tract promised the greatest relief with the least degree of risk. Accordingly, on March 6, 1900, the operation of end-to-end ileo-sigmoidostomy was performed. Through a median incision the ileum was sought out and divided about 4 inches from the ileocecal valve. The intestine here was observed to be healthy. The lower end of the ileum, that adjoining the ileocecal valve, was closed by invagination with the help of a purse-string suture of silk. The sigmoid flexure was then drawn into the wound, and was in turn divided somewhere in its lower half, its upper portion being also invaginated by means of a heavy purse-string suture. The lower portion of the sigmoid was then united by Murphy's button with the upper portion of the ileum, so that the intestinal contents would pass directly from the ileum into the lower half of the sigmoid flexure, which was comparatively healthy. A drainage wick was left in the lower angle of the wound, the remainder being closed by sutures. The right iliac colostomy was, of course, not disturbed, because it was understood that a vent for the secretions of the excluded portion would be necessary. The patient was kept quiet with opium, following this operation. Full stimulation was necessary, as there was considerable shock. The urine on March 10 showed the presence of albumin and casts. The patient was then having numer-



Fig. 1.

Fig. 2.

Fig. 3.

Fig. 1. (a) Colostomy. Fig. 2. (a) Continuity restored. Fig. 3. (a) Right colostomy and removal of appendix.

ous small involuntary liquid stools. There was a large amount of exceedingly foul discharge from the right iliac wound, and it was necessary to wash out the excluded colon several times a day with a long rubber tube passed as far as possible into the lumen of the gut. On March 19 the Murphy button was extracted from the rectum with forceps. The patient's general condition at this time was greatly improved although she still had 10 or 15 stools a day. On March 26 the number of stools had fallen to about 9 a day.

I was now surprised to learn that the irrigation through the colostomy wound seemed to act as an enema, the patient insisting that the water injected through this wound was passed by the rectum. Irrigations with methylene-blue solutions showed that this indeed was the case. At first I could hardly believe such a thing possible but afterwards came to the conclusion, in the face of the stubborn fact itself, that a tract of suppuration must have formed between the site of the anastomosis and the invaginated end of the sigmoid. It certainly was an example of the wonderful way in which nature tries to reestablish normal conditions.

The patient now rapidly improved. The discharge from the colon became less and less and I was perfectly willing to consider the case ended so far as I was concerned. I had been cauterizing the visible mucous mem-

brane of the colon in the right iliac region, using the Paquelin cautery with the hope of causing the formation of cicatricial tissue so that there would be no annoyance from the wet everted mucous membrane. The patient insisted, however, that she would not be satisfied until the opening was closed. Knowing that the only way which promised success would be the total extirpation of the colon and the stump of the ileum, I hesitated to gratify her wish. Still, on considering the matter, I believed that this operation might, after all, be feasible in view of the fact that the colon was already, so to speak, out of commission. Then too, the mucous membrane had not atrophied and still bled at the lightest touch so that I was obliged to consider the probability that it would become the seat of malignant degeneration. I therefore consented to operate once more.

On June 15, 1900, a median incision at the site of the old sear was once more made. The first point sought out was the region of the anastomosis between the ileum and the sigmoid. I found here a fibrous cord, over an inch long, connecting the invaginated end of the sigmoid with the point of anastomosis. On dividing this a central channel was found which explained the appearance of the methylene-blue solution in the stools after its injection into the colon. This cord was cut off



Fig. 4.



Fig. 5.

Fig. 4 (a.) Invaginated end of ileum. (b) Anastomosis of ileum with sigmoid. (c.) Invaginated end of sigmoid. Fig. 5. The shaded portion was removed in one piece; arrows show direction of traction to evert stump excised at the final operation.

flush with the anastomosis, the place was inverted into the intestine and the opening closed with a few Lembert sutures. The line of the button anastomosis was very perfect and there was no induration. Beginning now at the sigmoid flexure numerous ligatures were passed through the mesocolon, the extirpation coincidentally proceeding. The patient's condition became somewhat critical, and in order to save time I was obliged to take large masses in the grasp of each ligature. At about 2½ inches from the colostomy wound I cut off the colon and removed it from the abdomen. A long forceps was now inserted from without through the colostomy wound, and the end or stump of the colon was grasped and withdrawn thus everting the stump. I tried to treat the stump of ileum, which had shrunk to about 2½ inches in a similar manner, but was unable entirely to evert it. With one hand in the abdomen I guarded against possible protrusion or prolapse of a loop of intestine into the funnel of the everted colon. At the same time I ligated with a heavy piece of silk the entire everted stump, cutting away the external redundancy. The median incision was now closed by sutures, a gauze drain being left in its lower angle and another passed down to the right flank where there had been some bleeding. The patient reacted well after the operation, but on the following

day she developed a pneumonia of the right side at the base. It yielded to treatment. There must have been infection at this operation, for an abscess formed beneath the median wound through which foul-smelling pus and apparently fecal matter but no gas was discharged. On the fourth day I encountered another surprise in the appearance of a distinct fecal discharge from the right iliac wound, the ligature having come away. This I was at a loss to explain. My finger in the abdomen had carefully guarded against prolapse of the intestine at the time the ligature was tightened and yet I could only account for the appearance of feces at this point by assuming the prolapse of a knuckle of intestine which was strangulated by the tightening of the ligature. On June 27 there occurred a spontaneous rupture of a large abscess at the site of the old left colostomy wound and the evacuation of the pus was accompanied by the discharge of a piece of gangrenous mesocolon with 5 or 6 chromicized catgut ligatures still in place upon it.

With varying fortunes all the wounds finally healed with the exception of the fistula in the right side. Realizing that this would not close without another operation I excised the entire cicatrix and fistula on October 6, expecting naturally to come upon the loop of small intestine which it was my intention to excise, anastomosing the ends. What was my astonishment to find a single piece of intestine, *not a loop*, passing directly to the fistula. A large probe passed in at the fistula was seen traversing the lumen of this intestine. The intestines were matted together in many places, but it was possible to explore easily for fully 10 inches along this gut without encountering adhesions. Not wishing to place the patient in further danger for the sake of satisfying my curiosity and knowing that she had passed but a very small portion of the daily quantity of feces through the fistula, I merely cut off this piece of intestine and invaginated it, then closed the wound by suturing, with drainage.

The result has been most gratifying. All the wounds are now closed, and I believe I have finally seen the last of this most interesting but perplexing case. I am absolutely unable to explain the condition of things present at the final operation.

The patient was shown at a meeting of the Section on Surgery of the New York Academy of Medicine on January 14, 1901. At that time there was a pinhole sinus in the right iliac region, but it has now (April 16) closed. The patient is in excellent general health and has 2 movements a day. The stools are usually semi-solid but are sometimes formed.

Malaria.—For a long time many parts of Italy have been infested by the severest forms of malaria. Naturally the scientists of the country are greatly interested in the banishment of the disease, the responsibility of the mosquitos for which is generally conceded and a bill recognizing this fact is now under serious consideration. It provides for the declaration of affected zones and free distribution of quinin to the poor until the extermination of the mosquitos is accomplished. Government departments or contractors responsible for the execution of public works must make free distribution of quinin and must pay indemnity if a person dies or becomes disabled while engaged on such works. Precautions must be taken against the entrance of insects to habitations of public employes within the malarial zone from June to the end of December, and a reward not to exceed \$200 is offered proprietors and manufacturers who do the same for houses of their servants and the peasants.

THE VALUE OF INTESTINAL ANTISEPTICS WITH SIMPLE ASEPTIC PADS IN OBSTETRIC PRACTICE.

BY

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That antiseptics are necessary in obstetrics is beyond question, but how they shall be used is still a matter for discussion. Some clinical experiences, which came to me years ago, led me to change my mode of procedure.

CASE I.—On February 6, 1888, I was called to deliver Mrs. F. in her second labor. She belongs to a very intelligent family, and was nursed by her mother. The parturition was unusually easy. At the first indications of labor, the husband came six blocks for me with his horse and sleigh; and I returned with him immediately. When I reached the patient, the head was distending the perineum; and the next uterine contraction delivered the child. The placenta followed in a few minutes. The hips were elevated and the genital tract cleansed with a bichlorid douche, 1 to 3,000. The soiled linen and bedding were replaced by dry and warm. The patient, bright and smiling, was placed in a comfortable posture, and left in as favorable a condition as it has ever been my lot to leave an obstetric case, no shock or exhaustion.

The first two days of the puerperium were uneventful beyond a couple of nervous shocks: the first, produced by her child (aged 2) having been supposed to have swallowed a penny; and the other, by the servant reporting the house to be on fire; also, the weather became exceedingly cold, so that her room was very uncomfortable. She was given every day, as a douche, a quart of warm water containing 1% of carbolic acid. The third day I ordered a saline laxative to be followed by an enema if the laxative did not produce a free evacuation. The fourth day I saw the first unfavorable symptom; the pulse was 90, temperature 100° F. As the patient felt well, and there had been no chill, neither was there any distension or soreness through the abdomen, I attributed the slight febrile action to want of evacuation of the bowels through failure to give the enema as directed. I ordered the patient to be moved into a comfortable room, as she thought she might defecate if she could assume a sitting posture; and if there was not a free movement, to give an enema of turpentine emulsified in soapsuds. On the morning of the fifth day, I arrived just after she had been carried into a comfortable room. The other directions had not been followed. There had been no chill, but the patient said she felt very sick. The temperature was 105° F., pulse 120. There was no distension nor tenderness over the abdomen; the lochia, though scanty, was of good color and free from odor. I asked for a consulting physician and, while waiting, gave a turpentine enema which produced a free evacuation of such material as might be expected from a patient whose bowels had not moved for 5 days. A part of the feces was hard, but the remainder was soft and its appearance showed that the saline laxative had passed through the bowels.

Every day, as is my custom, I had carefully palpated the abdomen and had given gentle massage to the uterus and had found nothing abnormal except, on the fourth day, a distended bladder which was emptied naturally as soon as I called attention to the condition and before I began the massage. My consultant pronounced it a case of septicemia and proceeded to wash out the uterus. To his expressed surprise no debris of any kind was brought away by the return current. After the fresh blood was washed out the water returned as pure as it entered. As the irrigation produced no change in pulse or temperature, my consultant directed antipyrin to be given in 10-grain doses every 4 hours, to be followed in 1 hour by quinia sulf. in 5-grain doses every 4 hours and brandy *pro re nata*. I remained constantly with the patient until a trained nurse could be secured, which was in 36 hours. After the third dose of antipyrin the temperature dropped to 102° F., but before 4 hours, it began rising again. After the fifth dose she sank into a stupor with stertorous breathing from which she was aroused with difficulty, but under free doses of brandy it soon passed.

During the time I was detained, as irrigating the uterus produced no change and the antipyrin only temporary change in temperature, satisfying me that we had not found the source of the irritation which caused the high temperature, I spent a good deal of time in carefully examining the abdomen. As there was no tenderness, this was not disagreeable to the patient. At last I found in the sigmoid flexure, which was back of the uterus, a mass of irregular shaped lumps about 1 inch in diameter. By gentle movements I succeeded in filling the lower rectum with these, and by an enema and digital effort brought away a quart. They proved to be masses of hardened, desiccated feces, and, from their blackened appearance, they must have been there some time. The patient afterward admitted that she had been very careless, and, although repeatedly cautioned, had not had a copious movement of the bowels for several weeks previous to her confinement, but had expelled every day a few hardened lumps. That there was a passage through or beside this mass in the sigmoid flexure is proven by the appearance of the saline laxative in the first evacuation. By repeated efforts and 2 grains of calomel, in 24 hours from the time the mass was discovered, the bowels were free and the emperature soon dropped to normal. In 2 days there was another rise which proved to be due to a small abscess which formed in the cellular tissue to the right of the uterus, which discharged by the vagina in 10 days, and which I thought was due to some of the irrigating fluid having passed through a patulous fallopian tube. The patient soon recovered and has since borne 3 children, one in 20 months after this illness.

This experience caused me to study intestinal antiseptics in its relation to the puerperium. Now, when called to a case of obstetrics, I see that the intestinal tract is rendered aseptic as soon as possible. If you are not sure that the colon, the sigmoid flexure, and the rectum are empty and there is not time to clear them with an antiseptic enema before delivery, then begin to cleanse them as soon as possible after delivery. For this purpose the saline laxatives are preferable on account of their antiseptic action; the best of these is potassium et sodium tartras. Begin with dram doses within 4 hours of delivery and give a dose every 4 hours. The laxative may be aided by an enema if the bowels do not act in 24 hours. If the bowels have moved freely during labor, allow 12 hours to elapse before giving the saline, and if the bowels have not been acted upon freely or the tongue is foul, give a pill, cathartic comp. U. S. P. within 24 hours of the delivery. The pill will relieve the engorgement of the liver which usually accompanies the last weeks of pregnancy. In addition to these precautions, the gastrointestinal tract is further rendered free from danger by giving other antiseptics. So far I have found a 2-grain powder of salol and a 2-grain capsule of quinia sulf., to give the best results. The salol in tablet form is just as good if given so that its antiseptic action begins in the mouth. I begin giving the salol and quinin as soon as labor terminates and give them every 4 hours during the day, for 5 days. The *primæ viæ* being now in good condition we are sure of a supply of pure blood and that this is the best destroyer of virulent germs there is a concurrence of opinion among all authorities.

A free flow of pure blood is nature's way of freeing the genitalia of toxins, therefore, what is now necessary is to maintain a proper flow and prevent it being dammed anywhere internally to form a culture medium for germs. To do this a binder must hold the uterus in proper position so that the cervix does not press anywhere upon the vaginal wall thus allowing the os to

become tamponed with a blood clot; and it must be free from constrictions. To keep the os patulous I use, if there are signs of obstruction or not sufficient flow of clear blood,

R
 Fl. ext. cimicifugae racemosae.
 Tr. gelseminii āā 5ij
 Sig. Two drops every hour until the flow is normal.

All that now remains to be done is to keep the external genitals aseptic. They should be bathed with hot boiled water and covered with a soft cloth made aseptic by being freshly roasted. This is an antiseptic measure so simple that it can be carried out among the most unfavorable surroundings as any cloth can be rendered aseptic by prolonged roasting in an oven or over any fire; even the most smoky kerosene lamp will do. And the most delicate patient enjoys the soothing influence of a hot, freshly roasted napkin. Four of the cases in which this treatment was used are here recorded :

CASE II.—Mrs. S., primipara, aged 32, delivered with forceps December 26, 1892. The labor was tedious from the large size of the child, 13 pounds, and from the short cord, 20 inches, which was wound around the child's neck thus dragging upon the placental attachment at every pain, making the uterine expulsive efforts weak and ineffectual. The broad shoulders of the child tore the perineum through to, but not into, the rectum. A bichlorid douche 1 to 3,000 was given and then 7 stitches were placed so as to restore the perineum. Absorbent cotton dusted over with iodoform was placed over the laceration and over this a pad made aseptic by roasting, these to be changed whenever soiled. My consulting physician agreed with me in directing the nurse not to use the douche unless the lochia became foul, but to confine her attention to the external genitals. While observing the case I noticed that the absorbent cotton became so soon saturated with lochia as to be an undesirable dressing. I then tried various other materials, and finally decided that a very fine brand of ordinary roll cotton, freshly roasted and dusted with iodoform comes the nearest to an ideal dressing of anything yet tried for a newly repaired perineum. It does not absorb the lochia, but if properly applied, obliges the discharge to pass into the pad above the cotton, thus keeping the wound dry. It is an easy matter to instruct a nurse how to prepare and use it. By the advice of my consultant I allowed the stitches to remain 11 days. One stitch caused an abscess which soon healed. The perineal wound had united by first intention and there were no other complications during the puerperium.

CASE III.—Mrs. B., primipara, aged 28; delivered August 27, 1894, with forceps; child, a girl, weighing 11 pounds. Through some mistake when I reached the case, 3 miles from my office, my obstetric bag was destitute of antiseptics and labor too far advanced to wait for them. By the time the bowels were cleansed with an enema, the head was pressing the perineum. It remained in that position so long that, fearing it would injure the body of the perineum, I applied forceps and completed the delivery. Although I had instructed an attendant to make gentle pressure over the contracted uterus, when I was ready to deliver the placenta, I found the fundus uteri above the umbilicus. A little watching, with my hand gently kneading and pressing the uterus, showed me that the longitudinal muscular fibers were not contracting and that the circular fibers were squeezing the placenta into the long, narrow uterus reaching from near the pelvic outlet to above the umbilicus. Not being able to correct this condition by external manipulation, I cleansed my hands with soap and hot water, anointed my right hand with homemade lard, poured brandy over this, and then passed it up to the fundus internally. This was no easy task, as the cavity was so narrow and was filled up by the placenta. The hand had to be formed into a cone as for dilating the cervix, and kept in constant contact with the left uterine wall, allowing the fingers to gently feel their way between the

wall and placenta. After reaching the fundus, the fingers were flexed above the placenta and withdrawn. In this way the whole interior of the uterus was swept clean and the longitudinal fibers stimulated to contract. The parts were then cleansed by a hot douche of solution of sodium bicarbonate, the perineum was repaired with 4 stitches; the favorite dressing applied, and the puerperal regimen laid down in this paper ordered. The perineum united by first intention and in 2 weeks the patient was assisting her mother, in whose house she was staying, in the housework. In a month she returned with her baby daughter to her home in Chicago.

CASE IV.—Mrs. T., delivered January 22, 1895; primipara, child weighed 10½ pounds; perineum ruptured to the second degree, requiring 3 stitches for repair. The only thing noticeable about the case was entire lack of attention to the parts by the nurse after the first day. Every morning, as is my custom (since, in one of my cases, a trained nurse washed out one of the lower stitches, allowing the lochia to form a sinus through the repaired perineum, which was difficult to heal), I see to the cleansing of the parts around the wound, only requiring the nurse to apply fresh dressing whenever it becomes displaced or soiled. When I visited Mrs. T., I never found the wound protected by dressing, and no amount of remonstrance on my part or that of the patient could induce the nurse to replace the dressing when it was removed for urination; and as she was a member of the family I could not dismiss her. But by faithful dressing the first day and keeping the bowels free and cleansed with potass. et sod. tartras, the wound healed by first intention and Mrs. T. convalesced rapidly.

CASE V.—Mrs. B., primipara, aged 19, delivered December 2, 1899, after 14 hours of labor. Mrs. B. was small, weighing 98 pounds, while the child weighed 12 pounds. Slight laceration of cervix, perineum unruptured; was under the influence of chloroform for the last 4 hours, never to complete narcosis. Mrs. B. had been a chlorotic girl and had enlarged lymphatic glands at the time of confinement. As she was very much exhausted, nothing was done but to remove the soiled clothes and make her comfortable. The nurse was directed to apply a binder as soon as she was rested. As I was exceedingly busy in one of the smallpox epidemics, now so common, having 10 cases on my hands when called to attend Mrs. B., I did not see her again for 22 hours. As she had not urinated, I made an examination to ascertain the cause, and found protruding from the vagina a large clot which completely filled it and had pushed the uterus up to the umbilicus. The uterus was enlarged as though it was also distended by a clot. No binder had been used. I cleaned the external genitals, drew 10 ounces of normal urine, applied a binder from the os pubis to above the fundus uteri in such a way that it would steadily press downward on the uterus, and gave quinia and strychnia to stimulate uterine contraction, with Dover's powder to prevent closing the os. In 2 hours the clot was expelled, in 7 hours she urinated, and the next morning the bowels responded freely to the cathartic pill which had been given the previous night. As she was in good condition and I was busy with cases of the epidemic I thought best not to see her again. Continued the saline laxative to be assisted by boiled water enema if necessary to keep the bowels free. Salol and quinia ordered. Lactation well established. Seventy-two hours after delivery she was taken with severe rigor. I responded promptly to the telephone message, to find her livid, with a pulse of 130 and temperature of 105¼° F., lochia scant. Her bowels had not moved since my last visit; enema had not been given. I immediately gave her 5 grains of calomel; ordered a normal salt enema of all the water that could be used, spts. ether. nit. ¼ teaspoonful in water every 2 hours, the vagina to be kept clean by alternate douches of bichlorid 1 to 5000 and permanganate 2% solution every 12 hours. The enema produced free evacuation and the temperature dropped to 102° F. In 12 hours there was free action of the calomel with temperature 99° F. Toward evening there was a slight rise in temperature, but by morning it was normal and remained so throughout convalescence. Lactation was never disturbed. Three weeks after delivery an examination by speculum showed a little endometritis with a shallow laceration in the cervix. A few applications of a 10% solution of ichthyol in glycerin healed both and the patient has since been well.

To conclude: In all obstetric cases have a normal contracted uterus with a patulous os which does not rest against any part of the vaginal wall that pure blood may constantly flow over the endometrium and vagina cleansing them from all bacteria. Bathe the vulva with antiseptics and keep it covered with an aseptic pad. Have a *prima via* free from obstructions and constantly cleansed with antiseptics.

If this regime is carefully carried out 99% of the cases will make an uninterrupted recovery, and vaginal and uterine douches should be omitted until near the close of the puerperium when they will be agreeable to the patient.

GASTROPTOSIS.

BY

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This condition is so frequently encountered and is in many cases accompanied by such marked discomfort that its consideration is of much importance. With the displacement of the stomach there is also always displacement of some of the other viscera, sometimes of all of them, general splanchnoptosis. It occurs at all ages and in both sexes. In a boy of 7, examined since January 1, 1901, the greater curvature of the stomach was a little below the umbilicus and the right kidney could be easily palpated during inspiration. He was rather anemic, had an irregular appetite, and was not vigorous. In his case the position of the stomach may have been congenital.

In regard to gastroptosis 2 errors are common: first, the opinion that the condition is infrequent; and second, that when it does exist, it must necessarily give rise to grave disturbance, and form part of that medley of symptoms known as Glénard's disease. That the condition is very common any one can verify for himself by careful examination of patients presenting symptoms of malassimilation with or without digestive disturbances. Not infrequently, ptosis of the stomach is met in persons presenting no such symptoms, just as many persons have prolapsed kidney without any discomfort arising therefrom.

The symptoms may be local or general, or, more commonly, both combined. Local symptoms arise from digestive disturbances, especially from gastric motor insufficiency with consequent prolonged lodgment of food in the stomach. In most of these cases there is also excessive secretion of HCl, causing epigastric distress, acidity, flatulence, and general depression. These symptoms may be very slight in degree or they may be severe, at times causing much distress. In these cases relief is obtained by stimulating gastric peristalsis, so that the stomach is emptied before each recurring meal; by suiting the diet both as to quality and quantity to the powers of the stomach; and endeavoring by means of massage, exercises, suitable medicines and hygienic conditions, to restore the stomach, as well as the general physical state, to a normal condition of function. The

following case may be briefly cited to illustrate these statements:

M. E. S., aged 51, 5 feet 8 inches in height, but only weighing 128 pounds, had been ailing for some years with epigastric distress, flatulence, debility, irregular appetite and constipation. Five hours after a light breakfast "splash" was easily demonstrated in the epigastrium. The tube was passed and 5 ounces of grumous material containing pieces of white-of-egg and remains of bread were removed from the stomach. The stomach was inflated and the lesser curvature found to lie below the umbilicus, as shown in Fig. 1. HCl was present but in deficient quantity. The right kidney was easily palpable. The abdomen was almost flat so that an abdominal support would be of little use. His diet was restricted to 1 egg and a piece of toast for breakfast, a glass of warm milk at 11 o'clock, a little tender meat, or fish, and 1 vegetable for luncheon, a cup of soup or fluid beef at 5 o'clock, and a dinner at 7 o'clock similar to the luncheon. The abdomen was well massaged morning and night after the patient drank a glass of hot water. This was followed by systematic exercise of all parts of the body, and especially of the abdomen. Strontium bromid was given before meals and strychnin with some antiseptic such as resorein, bismuth naphtholate, sodium salicylate, etc., after

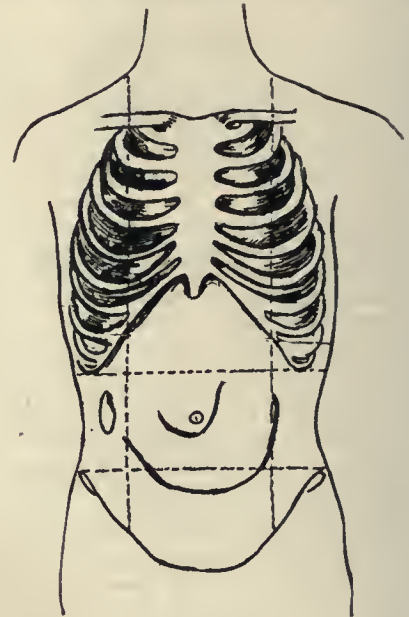


Fig. 1.

meals. As soon as the epigastric distress was relieved dilute hydrochloric acid was substituted for the bromid. He improved satisfactorily and in a few months his weight was 150 pounds. The lesser curvature of the stomach was raised somewhat above the umbilicus, but care as to diet was necessary to prevent retention of food in the stomach, as shown by the splash.

When constitutional symptoms are marked, the condition is really one of neurasthenia with symptoms of digestive disturbances predominating. In the treatment of these cases the patience of both patient and physician is certain to be taxed. The treatment is that of neurasthenia, plus such measures as are necessary to correct the digestive derangement. The latter can often be overcome and the digestive function restored to a fair degree of efficiency long before the symptoms referred to the stomach are relieved, or the general neurasthenic condition materially improved. The following case is a good illustration of the truth of these statements:

Mrs. P., aged 38, suffered for many years with attacks of neuralgia of the head of great severity, often accompanied by

nausea and vomiting. In the intervals there was always some, often much, epigastric discomfort. She slept badly, the appetite was poor and the bowels were constipated. She is thin, sallow and nervous. She has been married 11 years but has had no children. When she first came under observation considerable residue was found in the stomach several hours after food was taken and always without any trace of free or combined HCl. Test-meals of several kinds were successfully given and the tube passed at varying intervals afterward; in no instance was there any HCl present. The stomach on inflation was found prolapsed, as in the accompanying diagram. The right kidney, as is usual in such cases, was also prolapsed (Fig. 2). She was directed to have systematic exercises short of fatigue, abdominal massage, several hours rest in the fresh air daily and nutritious food of small bulk. On awakening in the morning, and likewise on retiring at night, she was ordered a glass of hot water followed by abdominal massage for a few minutes. Her diet was similar to that of the case already detailed, and with her food she was to take common table salt freely in order to furnish the Cl element of HCl.

Dilute hydrochloric acid before meals to stimulate peristalsis, and after meals to aid digestion, should have been useful,

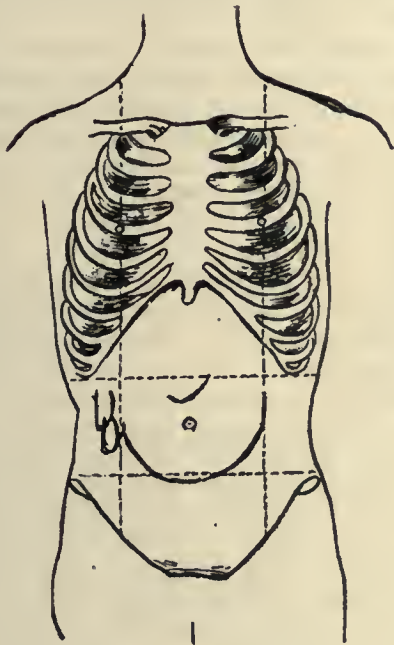


Fig. 2.

but it caused distress. Most benefit was obtained from strontium bromid with resorcin before meals, to act as a sedative and disinfectant. Strychnin, arsenate of iron and ichthalbin were given after meals with benefit. The digestion improved so that even with the recurrence of neuralgic attacks and epigastric distress, the stomach, on passing the tube, was found to be empty. The general neurasthenic condition improved fairly and she was then sent to the Welland Sanatorium, at St. Catharines, to undergo a course of salt-baths and massage.

Similar cases might be added indefinitely but the foregoing serve to illustrate the object of this short paper.

It is usual to direct a well-fitting abdominal support for such cases; if the abdomen is prominent, in which condition the walls are relaxed, such a support does good and in many, gives a great sense of relief. It supports the abdominal contents and tends to prevent further prolapse. In many cases, however, the abdomen is flat, or even retracted. In these a support is of little, if any, service. In fact, in a number of cases it proves irksome. In all cases, probably massage and suitable exer-

cises of the abdominal muscles constitute the most effective means to relieve the symptoms and restore the stomach to healthy function. By these means the circulation in the abdominal viscera is improved and peristalsis stimulated, consequently renal excretion is increased and the processes of digestion and assimilation improved.

The prognosis in gastroptosis is fairly illustrated by the following case:

J. R., aged 27, a draughtsman. Last autumn he was very neurasthenic from overwork, and was thin, anemic and much depressed. The stomach was prolapsed so that the greater curvature was 3 inches below the umbilicus, as shown both by the gastrodiaaphane and inflation. There was a moderate degree of hyperacidity. The treatment consisted in a regulated diet similar to that directed for M. E. S., massage exercises, out-door life without fatigue, and strychnin with antiseptics after meals. He worked hard all winter supervising the repairs of an electric road. On examination this spring, the stomach was found to be above the umbilicus and its digestive power much improved. His general condition is good, although he remains thin.

The following conclusions may be offered:

1. Gastroptosis frequently exists without giving rise to any discomfort. So long as the functions of the stomach are performed efficiently no symptoms will arise from its abnormal position.

2. The symptoms of gastroptosis are due to the protracted retention and decomposition of food in the stomach with the local irritation and constitutional poisoning resulting therefrom.

3. In the condition known as Glénard's disease the gastroptosis or splanchnoptosis plays only a part, often a minor one, in the production of the symptom-group. In not a few instances the splanchnoptosis is rather the result than the cause of the condition.

PNEUMONIA.—A HISTORICAL REVIEW OF ITS TREATMENT.

BY

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of Frederick, Md.

I shall endeavor in this paper to present a summary of the treatment of pneumonia-lung fever, or as Hippocrates called it, peripneumony. As this paper is intended merely to open a discussion as to treatment, I will review very briefly the various modes and medicines suggested by medical writers.

Hippocrates, who lived about B.C. 3450, treated pleurisy and peripneumony in the same manner: by expectorants, errhines and laxatives, not checking the fever until the seventh day, putting the patient in the bath on the fourth and seventh days, anointing with oil on the fifth and sixth days; from the fifth to the eighth the most active expectorants to be used, the food to be of a fatty and saline quality, with wine of a rough character. The actual cautery, cups and elaterium are mentioned as of use in certain conditions.

Galen, who lived to the age of 100 years, and died about A.D. 230, adds nothing to our knowledge except that he maintains the importance of bloodletting, in opposition to Erasistratus, who opposed it violently.

These views have prevailed down to the present time with little variation. Thomas, in his "Modern Practice of Physic" (1822), states the case thus :

"As in many cases of peripneumony the patient is destroyed in the course of a few days by the passage of the blood through the lungs being obstructed, the antiphlogistic plan, in its most rigorous extent, ought to be adopted on the very first attack of the disease. If the difficulty of breathing and pain are not relieved while it flows, the bleeding should be continued until the patient turns pale and seems likely to faint, as one copious evacuation will be far preferable to repeated small bleedings. If a powerful impression be produced by the abstraction of a large quantity at first, the disease is suddenly corrected and will often, in the course of a few hours, be converted from a most violent pneumonia to a simple catarrh."

This quotation from Thomas should be recalled when at the close of this paper I present the latest ideas upon the subject.

Little new is gleaned by a perusal of writers down to 1840, their efforts being confined to discussions as to which remedies of the classes before enumerated are to be preferred and as to the amount of blood to be let. Laennec cautions "that in every case the more feeble the pulse the less indication for venesection," and prefers tartar emetic to bleeding. Dewees—1830—says "perhaps there is no disease that attacks the human body in the treatment of which there is so much coincidence in the opinion of all practical writers." He names the principal remedies as: (1) Bloodletting, both general and local; (2) general evacuations; (3) blistering; (4) alteratives; (5) tonics; (6) large doses of tartar emetic.

Marshall Hall (1839) says, "if bleeding be done early, if the patient be placed perfectly upright and bled to incipient syncope, much blood flows and much benefit follows."

About 1845 mercury and opium were advocated in inflammations of the lungs, especially in the combination of calomel and Dover's powder. In the second stage of pneumonia, digitalis, squills and alkaline mixtures were used; in the third stage, carbonate of ammonia, lobelia, ether and camphor were advised.

In 1855 Dr. George B. Wood gives minute directions as to the use of previously known remedies, and refers to a paper by Varentrapp, of Frankfort, Germany, who employed chloroform by inhalation as the main or exclusive remedy, with remarkable success; having lost only 4½%, while of cases previously treated by him in the ordinary mode he lost 15%. About 60 drops were placed on compressed cotton and the vapor allowed to enter the lungs for 10 or 15 minutes, and the dose repeated every 2, 3 or 4 hours. It was not permitted to produce unconsciousness.

In the '60s and early '70s quinin, aconite and veratrum viride had the call. In the '80s the Germans introduced the cold-water compress and the wet pack. Herrick in "The Reference Handbook of the Medical Sciences" (1887) advocates, as the result of 20 years experience, blisters in croupous pneumonia. Juergensen, in Ziemensen's Cyclopaedia, cautions against collapse of the lobules from catarrhal accumulations in the catarrhal form of pneumonia, suggesting forced inflation of the lungs by pouring a small stream of cold water on the occipital region over the medulla oblongata, which induces violent respiratory efforts. In threatening pul-

monary edema, rapid emesis by a hypodermic of apomorphia is desirable.

Bartholow (1890) advocates local or systemic bloodletting as of the greatest value; he also values highly following this with calomel as an antipyretic, and mustard plasters as local counterirritants. He quotes Juergensen as to the value of the cold bath and quinin as antipyretics. In conclusion he emphasizes the evil effects of cardiac sedatives during the stage of exudation and of coagulation of the exudate, and says that the administration of veratrum viride, digitalis, aconite and tartar emetic can only add to the burden of the heart, already laboring in consequence of the stasis on the venous side, and lack of blood on the arterial side. Paralysis of the heart is one of the imminent dangers because of this state. It is true that a continued high temperature contributes to bring about this state of paralysis of the heart, but we possess the means of correcting this by the administration of quinin, and by the cold wet pack or cold baths.

Anders (1900) approves of venesection in sthenic cases of lobar pneumonia, urges cardiac stimulants, suggests saline injections to increase the blood pressure, and cold baths to overcome high temperature; he speaks approvingly of the antiseptic method, preferring carbolic acid, thymol or mercuric chlorid.

In the *Medical News* for December 16, 1899, Andrew H. Smith, of New York, published an article upon "The Treatment of Pneumonia as Based upon Views as to its Pathology." In this he restricts the word pneumonia to what is variously designated as lobar, fibrinous or croupous pneumonia. He argues that there is not a pneumonitis or local inflammation, but that all the phenomena of the disease center in the colonies of bacteria growing in the air cells; that, therefore, the problem is, first of all, to arrest this growth. These facts are established: first, that the life of the organism is short, not exceeding 10 or 12 days in artificial cultures; second, that it is very difficult to cultivate at all, *i. e.*, easy to kill, except under most favorable environments; third, the probability of successfully inhibiting the action of a germ through the influence of an agent diffused in the blood is greatly enhanced if the germ is located in the lung, as the whole mass of the blood passes through the comparatively small pulmonary circulation every time it passes the vastly greater systemic circuit, hence any substance in the blood comes into much more intimate contact with a germ in the lung than it would with a germ placed elsewhere, and the assault is proportionately concentrated and energetic. This, he claims, is why calomel is of value, not for its antiplastic, but for its antigermic effect. The article continues with a plea for the use of creasote with its compounds, or the salicylates, as germicides. These are to be given in large doses and pushed to the point of intolerance. Within 2 months after this paper appeared I had several cases in which I tested this treatment, with most happy results, using the salicylates for 24 hours, then pushing guaiacol and creasote in combination with liquid peptonoids.

In conclusion I will ask you to note that from the most remote ages to the present time we have the same verdict, that early and free bloodletting is of great clin-

ical value, its drawback being the weakening effect upon the patient. Recollect that modern medicine counteracts excessive bloodletting by injections of normal salt solution, and combine these in your cases of pneumonia and you have theoretically a valuable method of treatment. So far as I can ascertain this has been suggested first by Dr. William Porter, of St. Louis, in a communication published in the *Philadelphia Medical Journal* for December 15, 1900. Recalling the value of venesection and stating that within the last year or two injections of normal salt solution have been used in cases of lobar pneumonia with advantage, he continues, "It is a fair proposition that these two procedures can be combined, and while by venesection we attempt to relieve the tendency to right-sided heart failure and remove a certain amount of toxin-laden blood, we at the same time, by means of the salt solution, increase the pulmonary circulation, accomplish dilution of the toxins that remain and increase the oxygen-carrying capacity of the blood."

He reports an unusual case of marked lobar pneumonia of the right lung with threatened heart-failure, complicated by violent delirium tremens; the patient was bled to the extent of 18 ounces the day after admission, and normal salt solution of 24 ounces injected. No other treatment except strychnia was used and the patient made a good recovery. The salt solution used is as follows:

R	
Sodium chlorid	30 grains
Potassium chlorate	60 grains
Sodium sulfate	60 grains
Sodium phosphate	40 grains
Sodium carbonate	60 grains
Distilled water to make	6 fluidounces.
Mix. One part of this solution to 60 of distilled water.	

In concluding Dr. Porter expressed the hope that further investigation may justify this method as an *addition* to the treatment of pneumonia, not claiming it as a substitute, saying that the pathologic conditions outlined demand the greatest care in the ordinary methods of promoting elimination by the skin, bowels, and kidneys, and above all, of heart-support. He says the value of oxygen in cases of greatly impaired aeration is not sufficiently understood and that it seemed to be especially useful after the injections of the salt solution.

Dr. Porter's suggestions seem to me most valuable and I shall await the clinical reports of this method with the deepest interest.

ADDENDA.—Since writing the above article I find the credit of inaugurating the use of saline infusion belongs to Dr. Clarence A. Penrose, of Baltimore, who reported his case in *Johns Hopkins Hospital Medical Bulletin*, July, 1899. Dr. Penrose, in a recent letter confirms his report of 2 years before, endorsing this method of treatment most highly.

The Chilton Law.—The amendment to the bill for regulating the marriages of the insane and epileptic in Minnesota as it finally passed the Legislature, strikes out the penalties of fine and imprisonment and the clause requiring a physician's certificate. As it now reads it prevents any woman under 45 years of age or man of any age from marrying if afflicted with the disabilities the act mentions. The officers issuing the licenses are charged with the enforcing of the act, and any failure in this respect is made a misdemeanor.

PRACTICAL THERAPEUTICS

Under the charge of

A. A. STEVENS,

Assisted by

L. F. APPLEMAN.

The Treatment of Aortic Aneurysms.—Considering the very imperfect success which has attended the treatment of aortic aneurysms by the subcutaneous injection of gelatin, Hunner's recent review of the Moore-Corradi method of treatment (*Johns Hopkins Bulletin*, November, 1900,) is worthy of a most careful study. In 1864 Charles H. Moore, of the Middlesex Hospital, first suggested the introduction of wire into the sac, and subsequently Corradi suggested as an improvement the addition of electrolysis. With the combined method (Moore-Corradi) there have been treated 23 cases, 17 thoracic and 6 abdominal. Four of these, or 17%, 3 thoracic and 1 abdominal, were apparently cured; 9 cases, or 39%, attest the value of the operation by amelioration of the symptoms, and prolongation of life; and in 10 cases death was probably hastened by the treatment. The best results are obtained with fine wire (No. 27) of silver alloy (75 parts of copper to 1,000), or with gold wire (No. 28 or 30). In the successful cases no more than 10 feet was used, but it is probable that in some instances 20 feet might be employed with advantage. The strength of the current varies from 10 to 100 ma., and the duration of electrolysis from 30 to 60 minutes. The weaker currents, however, seem preferable, and the stronger currents above 70 ma., not altogether free from danger. In cases of thoracic aneurysm a general anesthetic is not required, cocain or ethyl chlorid being used locally. The needle is inserted where the sac wall seems nearest to the surface, and as nearly as possible in the direction of the entering current. The chief dangers are from (1) sepsis; (2) the development and rupture of a secondary sac on account of the rapid filling of the main sac by coagulum (apparently this occurred in 6 cases); (3) the entering of a loop of wire into the aorta (this accident occurred in 3 cases); (4) embolic breaking from the sac-wall (probably the cause of death in 1 case); and in abdominal aneurysms the closure of important vessels by the sudden filling of the sac with clot. Failure must be expected if an error in diagnosis be made or a *fusiform* sac is treated (as occurred in 5 cases). General arteriosclerosis should weigh against operation. In view of the gravity of the disease the results so far obtained from this method of treatment must be considered very encouraging, and with improvement in the technic it is highly probable that future reports will present even a more favorable showing.

Calcium Iodate as an External and Gastrointestinal Antiseptic.—Mackie (*Merck's Archives*, February, 1901), after extensive experimentation with calcium iodate as a surgical antiseptic, reaches the following conclusions as to its use: It is an excellent substitute for iodoform, its advantages over the latter being the absence of smell, the checking of fetor, the prevention of hypergranulation and the inhibition of pus formation. Besides, it can be used in cases where iodoform is inadmissible—for example, in gargles and mouth-washes, and for washing out the bladder, vagina or uterus, etc. Internally the author has used the drug but little, but he can testify from personal experience to its efficiency in checking fermentative processes in the stomach. The average internal dose for an adult is 3 or 4 grains.

Iodipin Hypodermically in Pulmonary Tuberculosis.—Croftan (*Jour. Amer. Med. Association*, November 17, 1900) has used hypodermic injections of iodipin in 27 cases of pulmonary tuberculosis with uniformly good results. Beginning with 1 drop of iodipin dissolved in 30 drops of sterilized oil, the injections were gradually increased 1 drop each day. The dosage was regulated by the symptoms; as soon as an improvement became apparent the dose exhibited at the time was continued for a period of 30 to 60 days; more than 60 minims a day have not been given. No discomfort of any kind was ever caused, no inflammatory reaction observed at the site of the injections,

though some patients received daily injections for a period of 3 or 4 months. In a few cases amelioration of the symptoms was marked from the beginning; appetite improved, the cough and night-sweats grew less severe, and the patients gained in weight and improved in spirits. The physical signs were modified and seemed to show that the process was at least being held in check and rendered latent.

Treatment of Acne Rosacea with Suprarenal Extract.—Munro (*Treatment*, March, 1901), administered suprarenal extract both internally and externally to cause constriction of the dilated bloodvessels in the affected area. Tablets to 5 grains are given at first twice daily, and afterwards increased to 6 daily. If giddiness or nausea occur, the dose is reduced or the drug temporarily discontinued. Locally the extract is applied as a paint by dissolving one tablet in a dram of sterilized water. This is painted on each night after hot bathing. The first application causes smarting and hyperemia, which soon passes off, leaving the parts anemic. In addition to this the face is bathed with hot water, and the following lotion applied and allowed to dry:

℞	
Precipit. sulfur	1½ drams
Zinc oxid	2 drams
Calamin	3 drams
Glycerin	2 drams
Rose water	6 ounces

The object of this is to prevent the formation of pustules. This treatment does not apply to hypertrophic forms of the disease.

The Bromids in the Treatment of Epilepsy.—According to the *Therapeutic Gazette* (November 15, 1900), the effectiveness of bromids in the treatment of epilepsy may be increased by withdrawing the chlorids from the diet, the bromids then taking the place of the chlorids in the system. In a diet of milk, eggs, meat, meal and potatoes, a small amount of chlorids is obtained. If it is necessary to cut the quantity of salt down to the lowest possible measure, an absolute milk diet should be insisted upon. If the bromids are then administered, Toulouse asserts as much as 60 grains of sodium bromid may be given each day, which may be later cut down to 30 grains daily, will diminish the number of convulsions 92% and the number of attacks of vertigo 80%. Further experiment showed that neither the diet nor the bromids alone produced equally good results, and it was proved that in the condition of the body brought about by this method of treatment, small doses of the bromids produce effects similar to large doses under ordinary conditions. Rumpf believes that epileptic attacks are excited by the accumulation of certain unknown products of metabolism, and thinks that the mixture of potassium bromid, sodium bromid and ammonium bromid produces better results than one of the bromids alone in a similar dose.

Intestinal Obstruction Relieved by Atropin.—Holz (*Munch. med. Woch.*, November 27, 1900) reports the case of a man, aged 42, who was suddenly seized with symptoms of acute intestinal obstruction. Opium injections and copious enemas were ineffective. On the fourth day he was given 1-60 of a grain of atropin hypodermically. In a short time flatus was expelled in large quantity, and the bowels moved normally. Demme (*ibid.*) reports 2 cases of intestinal obstruction relieved by injection 1-12 of a grain of atropin in the abdominal wall. Lutgen (*ibid.*) reports another case in woman with femoral hernia. Operation was performed, but the bowel was found normal. One-twelfth of a grain of atropin was then injected into the abdominal wall. Symptoms of poisoning followed, but the obstruction was relieved, and the patient soon made a good recovery. Ostermaier (*Munch. med. Woch.*, December 4, 1900) reports a case of acute fecal impaction in which hypodermic injections of 1-16 of a grain of atropin proved successful on the fifteenth day of treatment. [This treatment is not new; it has been very strenuously advocated by William Murray (Rough Notes on Remedies), who reports several cases to substantiate his claims for it.]

Lumbago.—Masse (*New York Medical Journal*, February 23, 1901) recommends energetic rubbing of the back with the following liniment:

℞	
Lime water	60 parts
Olive oil	60 parts
Chloral	30 parts

Hemorrhoids.—The following suppository is recommended by *La Presse Medicale* for hemorrhoids:

℞	
Aqueous extract of ergot	3-12 grains
Oil of theobroma	1 dram

Ichthyol in Deep-seated Inflammation.—W. T. Slevin (*New York Medical Journal*, March 9, 1901) has obtained excellent results from the following combination of ichthyol and lead iodid:

℞	
Ichthyol, lead iodid, of each	45 grains
Ammonium chlorid	10 grains
Petrolatum, to make	1 ounce

To be rubbed thoroughly into the affected part.

Thyroid Extract in Graves' Disease.—O. T. Osborne, of Yale University (*Journal of the American Medical Association*, March 23, 1901), believes that Graves' disease is due to hypersecretion of the thyroid gland, but that, ultimately, from retrograde changes in the gland, a condition results which is due to undersecretion. This latter state is characterized by increase in the body weight, muscular weakness and mental sluggishness, and is materially benefited by thyroid extract. He suggests the following rule regarding thyroid treatment in Graves' disease: "If there is cerebral excitement, palpitation and progressive loss of weight, thyroid treatment is contraindicated; if the patient is sleepy, apathetic, palpitation is not bad, has no headache and is putting on weight, thyroid treatment will probably benefit the case."

Membranous Enteritis.—M. A. Brown (*Journal of the American Medical Association*, March 23, 1901) reports the case of a woman, aged 28, well nourished, who for 9 months had been suffering with attacks of severe abdominal pain, colicky in character, followed by the appearance of mucous casts in the stools. The treatment, consisting of absolute rest in bed, milk diet and injection of silver nitrate, and later of boric acid, was without the slightest avail. The plan of astringent injections was finally abandoned and daily high injections of olive-oil substituted. These were given late in the morning or early in the afternoon, and were retained without discomfort for from 12 to 24 hours. Improvement was immediate, and in a week she was discharged practically well. Three months later there had been no return of the symptoms.

Heart Tonics.—J. N. Upshur (*Journal of the American Medical Association*, March 23, 1901) states that he has found caffeine, when given with spartein sulfate and lithium benzoate, especially useful in the dropsical conditions of parenchymatous nephritis, associated with secondary heart involvement. He believes that nitroglycerin is contraindicated in the weak heart of typhoid fever, septicemia and surgical shock. He has found opium in commanding doses a most reliable heart tonic in typhoid fever, when symptoms of heart failure and vasomotor paresis were prominent.

Treatment of Thoracic Aneurysm.—Kingston-Fowler (*Journal of the American Medical Association*, January 5, 1901) states that rest and iodid are very efficacious in the relief of pain. If no improvement takes place, he adds a modified Tufnell diet. Seven ounces of solids and 8 ounces of fluids daily are the quantities he has adopted. His experience has not been favorable to the gelatin treatment which he saw carried out in 3 cases. When spasm of the laryngeal muscles exist inhalation of oxygen and the injection of morphin are useful. He believes that the prognosis is better than is generally supposed. He has known several patients to live for years—one for 13 years, another for 6 and another for 9.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

April 5, 1901. [No. 2101.]

1. A Plea for Promaternity Hospital. J. W. BALLANTYNE.
2. On a Uterus which contained One Hundred and Twenty Fibroids. J. BLAND-SUTTON.
3. Placenta Prævia. R. P. RANKEN LYLE.
4. A Case of Puerperal Infection Treated by Operation (Pryor's Method). NUTTING S. FRASER.
5. A Note on the Separation of the Placenta in the Third Stage of Labor. J. D. SLIGHT.
6. Case of Ectopic Gestation: Operation: Recovery. H. H. LLOYD PATCH.
7. The Lettsomian Lectures on Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. J. MITCHELL BRUCE.
8. The New Type of Scarlet Fever from a Public Health Point of View. WM. ROBERTSON.
9. A Preliminary Note on the Use of Ox-Serum in Rectal Feeding. OTTO F. F. GRUNBAUM.
10. The Value of Diphtheria Antitoxin in the Treatment of Membranous Nondiphtherial Tonsillitis. J. N. D'ESTERRE.
11. Tracheotomy in Cases of Thoracic Aneurysm. F. DEHAVILLAND HALL.
12. A Case of Spontaneous Version. JAMES J. O'DONNELL.
13. Large Salivary Calculus Without Symptoms: Spontaneous Extrusion. GEORGE J. MAGUIRE.
14. Eclampsia Followed by Temporary Mental Derangement. JOHN McELROY.
15. Bilharzia Hæmatobia. JAMES T. BAYS.
16. Note on Epilepsy and Heart Stoppage. R. G. HEBB.
17. Two Cases of Scurvy Rickets. CHARLES FISHER.
18. Notes of Surgical Cases. I. G. MODLIN.
19. Intestinal Obstruction Caused by an Adherent Meckel's Diverticulum: Operation: Death. JAMES TAYLOR.
20. A Case of Acute Ascending Paralysis. F. LINDSAY DICKSON.
21. A Unilateral Coccygeal Cyst. STANLEY N. BABINGTON.

1.—Ballantyne makes a strong plea for the establishment of **promaternity hospitals** for the reception of women who are pregnant, but who are not yet in labor; particularly for those patients who in past pregnancies have suffered from one or more of the many complications of gestation, or in whose present condition some anomaly of the pregnant state has been diagnosed. Such an institution would make it possible to investigate scientifically many of the pathologic conditions of pregnancy, such as eclampsia, hyperemesis gravidarum, recurrent abortion, etc. He believes that the investigation of such cases in a promaternity hospital might lead to the adoption of a more scientific method of management than the artificial induction of abortion, which, of course, entails therapeutic feticide. He also emphasizes the more distinctly economic aspects of the case, especially the fact that working women who are able to rest for the last month or two of pregnancy give birth to larger and more healthy infants. [w.k.]

2.—Bland Sutton describes a case of **hysterectomy for fibroids**. The uterus, which scarcely exceeded the dimensions of the first, contained 120 fibroids. Careful examination was made, and even the smallest of these seedling tumors bore a remarkable similarity to the large, fully-developed fibroid; each was globular and one section quite white, so that the contrast in color with the red of the uterine muscle-fiber made them conspicuous objects on the cut surface. [w.k.]

3.—Ranken Lyle discusses the diagnosis, prognosis, and treatment of the various forms of **placenta prævia**. The treatment which has been adopted at the Rotunda Hospital for many years with marked success is as follows: In cases of central or complete placenta prævia, the placenta is perforated with the fingers; version, if necessary, is performed, and a foot brought down; a tight abdominal binder applied; and the subsequent delivery left to nature unless, of course, the continuance of hemorrhage should necessitate slight traction on the

foot. In cases of incomplete placenta prævia under this heading, the treatment, with the exception of the rupture of the membranes instead of perforation of the placenta, is identical. The advantages of version and bringing down a foot are: It does away with the tampon and consequent danger of infection. It allows early operation. It arrests the hemorrhage with great certainty. It gives time for the patient to rally. It gives time for labor pains to set in, and consequent natural dilation of the cervix, and there is less danger of post-partum hemorrhage. During the 10 years 1889-90, 74 cases of placenta prævia were treated in the Rotunda Hospital. There were 4 maternal deaths. The ages varied from 20 to 40, 68% being 30 years of age or over, and 33% being under 30 years of age; 3 cases only were primipara, the others occurring more or less uniformly from the second to the ninth pregnancy, and a few occurring in the tenth, eleventh, twelfth, and thirteenth pregnancies. [w.k.]

4.—Fraser reports a case of **puerperal infection**, the infection having been introduced from an external source during the first stage of labor. The symptoms not abating under medical treatment, the uterus was cureted and irrigated with salt solution; a broad incision was made into Douglas's pouch and enough 20% iodoform gauze applied to fill completely all the parts posterior to the uterus; the uterus also was packed. A pint of normal salt solution was injected into the cellular tissue of the back, and a quart into the colon every 8 hours. There was a marked decrease of temperature in 24 hours and on the seventh day after operation it was normal. Further convalescence was uninterrupted and no evil effects followed. [w.k.]

5.—Slight advances the hypothesis that in a "labor pain" the thin part of the uterine wall (that is, the placental site) is stretched and the separation of the placenta is unavoidable. Accordingly separation will in most cases occur first at the lower pole because of the proximity of the placental site to the thin lower uterine segment. The placenta having been thus freed is next expelled, and in this process of expulsion the membranes are stripped from the wall of the uterus. [w.k.]

6.—Patch reports a case of **ectopic gestation** in which, after opening the abdomen, he incised the tumor and finding it difficult to separate the membranes from the thickened walls, he connected the opening in the tumor to the abdominal opening by sutures, thus allowing the contents of the tumor to be expelled through the abdominal incision. A small body felt at the operation was expelled on the twenty-fourth day after the operation and proved to be a small ovum about the size of a broad bean. The membranes, coming away in pieces, were all finally expelled by the twenty-fifth day when the temperature became normal and the patient made a good recovery. [w.k.]

7.—Bruce, in the third Lettsomian lecture on **diseases and disorders of the heart and arteries in middle and advanced life**, discusses the prognosis and treatment of these affections. He refers to etiology as a factor in prognosis, to the interpretation of murmurs and other auscultatory signs, and to the interpretation of symptoms. Taking up different phases of the subject seriatim, he discusses the prognosis of the tobacco heart, the alcoholic heart, the gouty heart, the heart in syphilis, the heart the subject of muscular strain, and that the subject of nervous strain. With regard to treatment, he points out the necessity of the study of etiology, a knowledge of which furnishes many valuable therapeutic indications. In addition, one must have a clear idea of the pathologic anatomy of the conditions he would modify, and he must take into account the clinical characters and course of the case in hand. Preventive treatment is the most important; and this, whether the disorder be the result of tobacco, alcohol, gout, syphilis, or muscular or nervous strain. To repair the pathologic changes, if syphilitic, potassium iodid should be given freely. As atheroma depends upon toxemia and anemia, the obvious indication is to purify and enrich the blood. This, at least, in respect to gout, glycosuria, and corpulence must be effected by a thorough reform in every department of personal hygiene. Arsenic and moderate doses of iodids, combined with an excess of alkalis, are calculated to promote the same ends. With regard to the establishing and maintaining compensation, the nutrition and activity of the myocardium can be increased and sustained by

means of specific cardiac stimulants and tonics, such as strychnin, ammonia, and the digitalis group of drugs; with hematinics, stomachics, and laxatives to insure an abundant supply of wholesome food; by the control of nervous influences, one of the conditions of healthy nutrition; and by the employment of the nonmedicinal measures now so extensively used to increase the vigor and benefit the metabolism of the cardiac walls, particularly active and passive exercise and baths. When dilation occurs the measures to be employed are bodily rest, a light solid diet, and a definite allowance of alcohol, if required; active purgation with mercurials, salines, and jalap; and the exhibition of sufficiently large doses of digitalis or one of its congeners, in combination with saline and other diuretics. [A.O.J.K.]

8.—Robertson, writing of the new type of scarlet fever from a public health point of view, points out the difficulty in recognizing the mild form of the disease which may be manifested only by a trifling indisposition, and perhaps slight pain and stiffness about the neck due to enlargement of the glands. He records his experience with an epidemic that occurred in the town of Paisley. The infection is attributed to faulty sanitation—unpaved back-courts and badly constructed privy-ashpits; but especially to the promiscuous association of children that took place in the school-playgrounds during the vacation months. There was strong proof that the aggregation of the children at the see-saws and swings had everything to do with the spread of the disease. Boys especially are wont to wet their hands prior to seizing a rope or bar of wood. If then several infected patients damped their hands in this fashion, one can understand how the microorganisms would be conveyed to many children's mouths. To prevent the diffusion of the infection, Robertson advocates a better system of building houses for the artisan population at least and methodical examination of all scholars by medical men appointed by the School Boards. [A.O.J.K.]

9.—Grunbaum, in a preliminary note on the use of ox-serum in rectal feeding, speaks of the value of enemas consisting of ox-serum, glucose, and liquor pancreaticus (with the addition of 2 grains of chloreton to each ounce of the ox-serum for preservation). He prefers to inject 90 cc. of ox-serum with 60 cc. of milk every 4 hours, and to give a cleansing water enema every morning. The heat value of this injection is stated to be 578 calories. This may be increased by another 300 calories by the subcutaneous injection of sterilized olive oil—30 or 40 cc. daily. By this plan of exclusive rectal feeding it is believed that half of the necessary energy may be supplied and the loss in body weight reduced to 750 grams a week. [A.O.J.K.]

10.—D'Esterre in a note on the value of diphtheria antitoxin in the treatment of membranous nondiphtherial tonsillitis, reports 2 attacks of membranous streptococcal tonsillitis occurring at intervals of 6 months in a woman aged 35 years. The use of diphtheria antitoxin during both attacks was followed by quick subsidence of the manifestations, and its use is accordingly commended. [A.O.J.K.]

11.—Hall discusses the indications for tracheotomy in thoracic aneurysm. Stenosis of the main air-passage may arise in aneurysm from spasm of the abductors, or paralysis of the abductors of the vocal cords—often a combination of both—or by direct pressure on the trachea. In the first 2 conditions only will tracheotomy be of use. In the event of double stenosis due to bilateral abductor paralysis and direct tracheal pressure, if there is marked respiratory excursions of the larynx, indicating that the seat of the obstruction is in the glottis, tracheotomy is indicated. The absence of respiratory excursions point to tracheal stenosis. The importance of recording all cases in which tracheotomy has been performed, with the result in each case, is emphasized. [J.W.M.]

12.—O'Donnell reports a case of spontaneous version of the fetus. When called to the patient he found the arm protruding through the vagina, and the body occupying the abdominoposterior position. He replaced the arm but could not perform version on account of the very frequent and powerful contractions of the uterus. Going to his house for the necessary apparatus to administer an anesthetic, he was recalled by a messenger and found the legs of the fetus were

now protruding. On delivery the child was dead, owing no doubt to pressure on the umbilical cord. The mother explained how after a "terrible" pain she felt the baby turn right around. This case is interesting as showing to what a severe strain the healthy uterus may be subjected, and the great power it is capable of exerting upon the fetus even in such an unfavorable position. [W.K.]

13.—The passage of a salivary calculus without symptoms is the subject of an article by Maguire. Its presence was indicated by a small tumor in the floor of the mouth to the right of the frenum of the tongue. The calculus weighed 45 grains, was 2.5 cm. long, 1.4 cm. thick and 4 cm. in circumference. During the 4 years it was in Wharton's duct it did not give rise to any discomfort, and was extruded spontaneously. The patient suffered from chronic rheumatism. [J.W.M.]

14.—McElroy gives the history of a case of eclampsia, followed by temporary mental derangement. It differs materially from the majority: (1) The fits—followed by mental symptoms—occurred after the death of the fetus; (2) the patient recovered almost completely before the birth of the fetus; (3) albumen had completely disappeared from the urine before the birth of fetus; (4) the urine was copious throughout, and no coincident kidney disease was detected; (5) the temperature never rose above 100.4°. [W.K.]

15.—Mays asserts that the statement that bitharzia haematobia is "apparently unknown" in Cape Colony is not in accordance with facts, and quotes several authorities in corroboration. The idea regarding the manner in which the disease is acquired, is that the armed embryos find their way directly into the urethra of boys who bathe in the rivers near the coast. The life history of the parasite is but imperfectly known, and the treatment of the disease unsatisfactory. [J.W.M.]

16.—Hebb in a note on epilepsy and heart stoppage writes that while listening to the heart of a patient, aged 29 years, suffering with aortic insufficiency, he became aware that the heart had stopped beating; immediately a general convulsion ensued and lasted several minutes. After consciousness returned the patient talked coherently and lucidly and arose without the least difficulty. He had had several attacks previously. [A.O.J.K.]

17.—Fisher reports 2 cases of scurvy rickets occurring in female children, aged 9 and 12 months respectively. The characteristic feature of the cases was the extreme tenderness of the affected parts, the limbs being kept motionless as if paralyzed, and the children screaming even upon the approach of any one, as if fearing manipulation. There was also extreme anemia. In one case there was a history of improper feeding; in the other the history as regards the feeding was untrustworthy. The condition was immediately remedied upon the administration of $\frac{1}{2}$ ounce of orange juice and one dram of raw meat juice 3 times daily, and cow's milk. The first child was given also $\frac{1}{4}$ grain doses of mercury and chalk 3 times daily for 3 days, and the second child $\frac{1}{4}$ dram of equal parts of cod-liver oil and malt 3 times daily. [A.O.J.K.]

18.—Modlin reports a case of compound comminuted fracture of the patella, in which complete recovery followed prompt operation. The patella was diagonally fractured, the outer third only remaining intact. The remainder was broken into 8 fragments, 5 of which were inside the joint. The quadriceps expansion, both above and below the patella, and the periosteum were lacerated extensively. The fragments were removed, the periosteum and quadriceps tendon sutured, the joint irrigated, drainage established and the leg dressed on a posterior splint for 3 weeks, when passive motion was begun. Complete recovery followed, there being no impairment of the usefulness of the joint. He also reports 2 cases of spina bifida in infants 3 months old, successfully operated on. The tumor in each was situated in the lumbar region, and was about the size of an orange. In one a horseshoe-shaped incision was made at the base of the tumor and the skin dissected off. A similar incision, with the convexity opposite, was made through the membranes, the fluid evacuated, redundant skin and membrane removed and the wound closed, the membrane with catgut and the skin with silk-wormgut. The tumor did not recur, the cleft filled up, there being no impulse over the point of

operation, nor did hydrocephalus or convulsions follow. [J.W.M.]

19.—Markley reports a case of **intestinal obstruction due to an adherent Meckel's diverticulum** in which death followed operation. Indefinite abdominal symptoms accompanied by diarrhea had existed for a year. On admission he complained of severe pain in the umbilical, right lumbar, and hypochondriac regions; there was some distention with dullness in both flanks. Frequent vomiting had occurred, and there was complete intestinal obstruction for 2 days. On operation the peritoneal cavity was found to contain a large quantity of dark-colored fluid, the intestines were deeply congested and bound down by 2 bands of adhesions, which were severed. The bowel was opened, and the opening stitched to the lower part of the skin-wound. The patient died the following morning. On postmortem the band which tightly bound the intestines was found to be the diverticulum, the free end of which had become adherent to the intestine, binding down several coils, and causing obstruction. The position of Meckel's diverticulum has been found to vary from 11 to 20 inches from the ileocolic opening. [J.W.M.]

20.—Dickson reports a case of **acute ascending paralysis**—that of a man who was admitted to the hospital complaining of loss of power of the lower extremities and of inability to pass urine. Examination revealed complete motor paralysis of the lower extremities. Sensation was perfect, or there was slight hyperesthesia. The superficial and deep reflexes were absent. Within 24 hours the trunk and upper extremities became involved, and same phenomena being present. There was then difficulty in articulation and paresis of the left facial nerve. The course of the disease was then very rapid, with evidence of labioglossolaryngeal paralysis, and finally paralysis of the phrenics. There was no necropsy. [A.O.J.K.]

21.—Babington reports a case of **coccygeal cyst of the buttock** in a man aged 35. It had existed since birth, was gradually increasing in size, pearshaped, with its apex above, at the coccyx, and its base below on a level with the tuberosity of the ischium. Near the apex were 3 sinus openings one of which was discharging a foul smelling, straw colored fluid. Areas of fluctuation separated by thick bands could be detected on palpation. On rectal examination a fluctuating tumor was found posteriorly. An elliptic incision was made in the long axis of the tumor including the sinus openings. The cyst sac was entirely removed, and the skin around closed with drainage. Recovery followed. The origin of these cysts according to Bland-Sutton is from Luschka's gland, a rudiment of the post-anal gut of the embryo. [J.W.M.]

The Lancet.

April 6, 1901. [No. 4049.]

1. Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. J. MITCHELL BRUCE.
2. Sclerotic Hyperplasia of the Pharynx and Nasopharynx. A. BROWN KELLY.
3. On the Existence of Immunity after Enteric Fever. BURTON A. NICOL.
4. The Pathology and Treatment of Rheumatoid Arthritis. P. W. LATHAM.
5. A Case in which a large Pyloric Tumor Disappeared after Gastroenterostomy: Postmortem Examination 11 years after Operation. FRED. BOWREMAN JESSETT.
6. The Influence Exerted by Air upon the Exhibition of Anesthetics. GEORGE FLUX.
7. Three Cases of Acute Ascending Paralysis. T. A. GREEN.
8. History of Renal Surgery. DAVID NEWMAN.
9. Laryngeal Diphtheria (?). A. DE WINTER BAKER.
10. Carcinoma of the Prolapsed Uterus. HERBERT SNOW.
11. A Modification of the Romanowski-Ruge Method of Staining the Plasmodium of Malaria and other Protozoa. W. HANNA.
12. Case of Fracture Dislocation of the Cervical Spine complicated by Fracture of the Skull. W. H. BENNETT.
13. A Case of Coma from the Application of Carbolic Compresses to the Unbroken Skin. D. DOUGLAS-CRAWFORD.

1.—See *British Medical Journal*, abstract No. 7.

2.—Kelly reports a case of **sclerotic hyperplasia of the pharynx** in a young man aged 34 years. For 3 years the patient

had the sensation of a foreign body in the pharynx, which excited fits of coughing by coming forward on the tongue or passing too far back. On examination the uvula was found to be greatly enlarged and thickened. On each side of the posterior pharyngeal wall was a broad, prominent band, extending into the nasopharynx above, and downward into the esophagus. They were of the consistence of muscle, greyish in color and smooth. The lumen of the nasopharynx was greatly lessened and the eustachian orifices were concealed. Removal of the greater portion of the uvula was followed by marked improvement. Microscopic examination of the tissue removed showed the condition to be a chronic hyperplasia of the interstitial tissue, nor was it considered to have any relation to syphilis, rhinoscleroma or other infective diseases. [J.W.M.]

3.—Nicol writing of the **existence of immunity after enteric fever** reports several cases that have come under his personal observation and that tend to show that immunity is more a fancy than a fact. The doubtful occurrence of a natural immunity after, an attack of the fever acquires also some importance in view of the suggested conferring of artificial immunity by the injection of antityphoid serums. As he had observed the occurrence of a second and even third attack of typhoid fever in the same patient; as under ordinary circumstances the cause of the disease is only occasionally present, and when it is present the predisposing circumstances favoring its development may be absent; and as a large number of persons though exposed to infection still escape the disease, Nicol believes that there is no proof of the presence of immunity after an attack of typhoid fever. [A.O.J.K.]

4.—Latham discussing the **pathology and treatment of rheumatoid arthritis**, refers to the distinctly neurotic character of the antecedents and accompaniments of the arthritic trouble, and concludes that it is not unreasonable to assume that the joint affections in rheumatoid illnesses are due to spinal congestion or chronic myelitis, affecting chiefly the ganglion cells of the anterior horns, but extending also, when the disease is associated with "glossy skin," to the ganglion cells in the posterior horns. He believes that in the earlier stages of the disease continuous counterirritation of the spine is of distinct service and that it may also be usefully employed in the acute polyarthritic variety. When, however, the disease is advanced, the ends of the bones enlarged, and the cartilages destroyed one cannot hope to restore these to the normal condition by counterirritation. Such a measure would only increase the patient's discomfort. Nevertheless in chronic cases, when there occur from time to time acute exacerbations of pain and swelling in the larger joints, the application of blisters to the spine is of use; these conditions being thereby quickly alleviated and further extension of the disease arrested. [A.O.J.K.]

5.—Jessett reports the **disappearance of a large pyloric tumor after gastroenterostomy**. The patient, a female, aged 56, had suffered from indigestion for several years. On admission to the hospital the symptoms were vomiting, acute pain, flatulence and constipation. A tumor which was increasing in size could be felt in the epigastric region, situated apparently at the pylorus and extending over the anterior wall of the stomach which was greatly dilated. On operation, the size and fixation of the growth, which was thought to be a scirrhus, did not permit of pylorotomy and a gastrojejunostomy was done. The patient enjoyed good health for 10 years afterwards and died of apoplexy. On postmortem examination it was found that the tumor had entirely disappeared leaving only a thickening of the pylorus. The stomach showed an hourglass constriction, the opening between the pouches admitting only one finger as did also the pyloric opening, while that between the distal pouch and the jejunum admitted 2 fingers and evidently formed the main opening for the passage of food from the stomach into the intestines. [J.W.M.]

6.—Flux in a paper on the **influence exerted by and upon the administration of anesthetics** states that the life of the patient as well as the degree of anesthesia depends on the air inhaled, as it is the medium by which the anesthetic is conveyed, and the careful adjustment of the 2 constant factors in every administration, viz., the air and the anesthetic is essen-

tial to reliable results. The amount of the anesthetic inhaled depends on the route the air has to take. If it passes over or under the evaporating surface, it will contain less vapor than if it passes through the evaporating substance, so that any change which occurs to the patient's air-supply will cause a corresponding change in the dose of the anesthetic. The effect should be regulated by the dose, and not the dose by the effect, as is so common. The essential point in the system is the regulation of the amount of fresh air which is permitted to take up fresh anesthetic vapor at each inspiration and the amount administered must vary in each case. [J.W.M.]

7.—Green gives the notes of 3 cases of acute ascending paralysis, hoping at some future time to discuss the condition in order to bring out some points he deems of interest. [A.O.J.K.]

9.—Baker reports a case thought possibly to have been laryngeal diphtheria, in which a speedy recovery followed injection of antidiphtheria serum. The use of the serum in doubtful cases is advocated. [A.O.J.K.]

10.—Snow reports a case of carcinoma of the prolapsed uterus occurring in a woman aged 73. The uterus had become precident at the climacteric period about 28 years before, and no pessary or other support than a napkin had been resorted to. Snow considers cancer of the prolapsed uterus as a very rare event, as neither he nor his medical friends had ever met one before. Presumably the rational explanation is that the existence of the disability induces a care of the exposed parts with concomitant cleanliness and health. Ordinarily, too, a pessary is worn. The disease in the case reported seems to have been the result of the neglect of all such precautions. [W.K.]

11.—Hanna details Berestneff's modification of the Romanowski-Ruge method of staining the plasmodium of malaria and other protozoa. For details reference must be had to the *British Medical Journal* or to the original report in the *Russian Archives of Pathology, Clinical Medicine and Bacteriology*, Vol. x, Part 4. [A.O.J.K.]

12.—A case is reported from St. George's Hospital of fracture dislocation of the cervical vertebra with fracture of the skull. The patient was a man, aged 25, who fell a distance of 30 feet. On admission immediately after he was conscious, there was fixation of the head with paralysis and loss of sensation of the body and arms. A diagnosis of dislocation of the sixth cervical vertebra was made and an effort was made to reduce it by traction. While this was being done a click was heard, followed by mobility of the head, and return of power and sensation in the arms. Later the abdomen became distended. This was relieved by enema and the rectal tube. About 18 hours after the injury he became comatose, his temperature rose, breathing became stertorous and he died. Post-mortem showed an extensive fracture of the vault and base of the skull, with a blood clot pressing on the left cerebral cortex. The body of the sixth vertebra was fractured and there was evidence of a recent dislocation. The cord and membranes were normal. [J.W.M.]

13.—Douglas-Crawford reports a case of coma from the application of carbolic acid to the unbroken skin occurring in a girl of 4. It having been proposed to perform MacEwen's osteotomy on both legs, lotions of carbolic acid (1 to 40) were applied. At the end of 4 hours, the child being as well as usual, the limbs were scrubbed with turpentine, and the compresses reapplied. At the end of 40 minutes the child was found in an unnatural deep sleep; at the end of 2 hours she was in marked collapse and coma. Upon removal of the compresses and active stimulation continued for a number of hours, the child recovered, and by the following day she was well, excepting for some pallor and rapidity of the pulse. [A.O.J.K.]

Journal American Medical Association.

April 20, 1901. [Vol. XXXVI, No. 16.]

1. Jules Lemaire. The First to Recognize the True Nature of Wound Infection and Inflammation, and the First to Use Carbolic Acid in Medicine and Surgery. HOWARD A. KELLY.
2. Tracheloplasty. HENRY PARKER NEWMAN.
3. The Physiologic Care of Colds. CHAS. H. SHEPARD.
4. Atrophy of the Mucous Membrane of the Stomach. FREEMAN F. WARD.

5. Some Notes on Two Cases of Voluntary Laryngeal Whistling. G. HUDSON MAKEN.
6. Some Anomalies of the Ear Due to Errors in Development. GEORGE C. STOUT.
7. Care and Use of Instruments. ALLEN DE VILBISS.
8. Surgical Diagnosis of Abdominal Tumors. W. H. EARLES.
9. A Contribution to the Study of Mountain Fever. R. HARVEY REED.
10. A Study in the Hematology of Neurasthenia. CHARLES HOWARD LODOR.
11. Intubation of the Larynx, with Personal Reminiscences. F. E. WAXHAM.
12. Some Points in the Diagnosis of Gallstones. JAMES B. HERRICK.
13. The Present Status of Spinal Surgery. SAMUEL LLOYD.

2.—In Newman's tracheloplasty the cervix is drawn down by a double tenaculum with reversed blades, the hooks directed from within outward into the tissue of the cervical canal. The posterior lip is now transfixed by a specially-devised knife with blade almost at a right angle with the handle, and a clean cut made from above downward. The anterior lip is transfixed from 1 to 1.5 em. in front of the other and cut in the same way. The tenaculum is changed to a lower position and the intervening plug of diseased tissue cut away. The flaps fall together and 3 sutures unite each to the shortened cervical canal, with 2 additional ones at each angle to prevent gaping. Silk-worm-gut is used and one end of each stitch is left long and the long ends are tied together in 4 groups to facilitate removal. An iodoform tampon is inserted in the canal after attachment to the gauze for packing the vagina, and remains until the second or third day and is not replaced, douches of 1 to 4,000 bichlorid being used subsequently. The sutures are removed in 2 weeks. [H.M.]

3.—The primary cause of colds is not exposure but imperfect elimination, due to depression from overwork or repletion from overeating. The impurities are discharged through the respiratory mucous membrane instead of the proper organs. Pure air and exercise are necessary for digestion and assimilation. In treatment alcohol and quinin are condemned. For radical cure is advised no food for 24 hours, flushing of inactive bowels with warm water, drinking freely of pure water, a brisk walk and then a Turkish bath, followed by an oil rub. All disease is due to some mistake in dietetic habits. [H.M.]

4.—Atrophy can be diagnosed only in complete absence of all normal constituents of gastric juice after repeated examinations. It is less rare than supposed. Under proper treatment apparently good health may be enjoyed. Treatment consists in general hygiene, a diet largely farinaceous, a diastatic ferment, a mild astringent for the diarrhea generally present, peptomangan of iron for the anemia, lavage and silver nitrate for an excess of mucus. Takadiastase is the best ferment, because it will act even in the presence of HCl.—[H.M.]

5.—In one case the fundamental tone is made by the "puckered up" aryepiglottic folds, the patient's mouth being open at the time. In the second case the man can produce 4 notes synchronously in the region of the larynx, but as the mouth is not opened the musculature cannot be studied by laryngoscopy. [H.M.]

6.—A review of normal embryonic development is given and a description of 6 cuts representing anomalies of the auricle.—[H.M.]

7.—Boiling cleans instruments best and does not dull them if distilled water is used. When honing a knife pull it from heel to point, the cutting edge leading at an angle of about 45°. When stropping the knife should be drawn from heel to point from the cutting edge. A saw for hard bone should have teeth no deeper but further apart than a fine one. Hard soap rubbed on a laryngeal mirror and cleaned off with a dry napkin will prevent condensation of moisture. [H.M.]

8.—Accurate diagnosis of abdominal tumors requires knowledge of the shape and boundary of the abdominal cavity, of the normal location, outlines and functions of its organs, of those tumors which frequently and infrequently affect these; familiarity with methods of examination, system and exactness

of procedure and coordination of mental and physical action on the part of the examiner. Attention should be given to the history of the case and general appearance of the patient. An anesthesia removes muscular resistance, but also the evidences from sensitiveness and pain of diseased organs. [H.M.]

9.—Widal's test gives a positive reaction in the majority of cases of typhoid, in mountain fever the majority of the tests are negative. The mortality is greater in typhoid, also the average duration of the disease. The rise and fall of temperature is more abrupt in "mountain fever," tympantitis and enteric hemorrhage are seldom present; the eruption covers almost the entire body, is raised, feels like shot and does not disappear on pressure. The pathology is not understood from lack of autopsies. The disease seems to affect the stomach and transverse colon and the nervous system, producing a condition that simulates paralysis agitans. Temperature charts illustrate the difference between it and typhoid. [H.M.]

10.—A large percentage of neurasthenics evidently anemic have a normal or supranormal blood count. Owing to poor vasomotor control, peripheral blood varies much in its character. Cold lowers the bulk of solids and increases the apparent quantity of red over white corpuscles, and allowance should be made in patients with clammy extremities. Warmth, massage and electricity raise the bulk of solids. When blood is centrifugated the heaviest corpuscles are thrown to the periphery. These show an increase of 20% in oxygen-carrying capacity over the layers near the center, and stain more deeply and quickly than any other layer. Blood drawn from animals previously bled has a higher oxygen capacity than that obtained before such bleeding, and stains more deeply. The conclusion is that the heavy cells are recently-formed cells. These are lenticular or biscuit-shaped. In old cells the cytoplasm is pushed to the periphery, giving a dumb-bell shape. In neurasthenics the erythrocyte has undergone this change. As a result the cells pack together closely and show a marked diminution in volume by the hematokrit. [H.M.]

11.—Previous to 1885 the mortality of diphtheritic croup was almost 100%. With tracheotomy it was reduced to 75% to 90%; with intubation to 60% to 75%, and with intubation supplemented with antitoxin to almost nothing. Any medical man who does not use antitoxin in diphtheric croup is guilty of malpractice. Intubation is still needed in cases in which treatment has not been begun early enough. [H.M.]

12.—Repeated attacks of colicky pain in the right hypochondrium with nausea and vomiting followed in a few hours by slight jaundice are characteristic. Calculi in the feces are pathognomonic of gallstones. The pain may be reflected to the right shoulder or even to the back or toward the genitalia or may be on the left of the medianline. Pain in the epigastrium frequently leads to a diagnosis of gastric neuralgia or acute indigestion. Icterus is frequently absent from stones dropping back into gallbladder or passing into the wider common duct before enough swelling has been produced to cause obstruction. Inflammation plays the important part in many cases. The bacteria producing it may be means of the inflammation primarily cause the formation of the stone or the movement of the stone may light up a dormant inflammation. Hepatic intermittent fever associated with stone may possibly be microbial, toxic or both. The paroxysms, accompanied by chill, sweating, pain, vomiting and increase of jaundice, are seemingly due to retention and absorption of some toxic material. In the adult and aged these symptoms may be due to carcinoma. Riedel's tongue-shaped process of the anterior border of the liver seen oftenest in the corset-liver and gallstone may be mistaken for a kidney or neoplasm of the intestine or omentum if it is crossed by adherent intestine. A history of typhoid a few months or years before adds probability to a diagnosis of cholelithiasis. The bacilli are formed in the bladder with great frequency and through their action furnish Naunyn's requirements for the production of calculi. They are found also in the nuclei of stones. Conditions sometimes emulating gallstones in addition to those mentioned in textbooks are tabes dorsalis, angina pectoris, senile pneumonia, local peritonitis, appendicitis, intestinal obstruction and hemorrhagic pancreatitis, etc. [H.M.]

13.—A table of growths which may involve the spine, with their region and frequency is given. With the probable existence of compression not amenable to medical treatment, surgical intervention should be the rule, even if, from the nature of the tumor, nothing can be hoped but relief from pressure symptoms. The history of 51 cases of operation is recorded. In fractures of the spine, neurology helps us to decide which cases are amenable to surgical treatment, but the rules cannot be absolutely applied. In the cervical region mortality is much greater and restoration of function much less than in the lower dorsal and lumbar regions. An indirect fracture with symptoms of complete separation or degeneration of the cord naturally contraindicates operation. Obliteration of the deep reflexes, especially kneejerks, while indicative as a rule of this condition, is not an absolute contraindication to operation, as several recorded cases, including one of Lloyd's, recovered after interference. When after recovery from shock, return of sensation, reaction, and deep reflexes show that the cord has not been destroyed operation may result in great benefit. Fracture dislocations may be followed by inflammatory softening and increasing paraplegia and anesthesia. Fracture of the arches without immediate injury to the cord may be followed later by paraplegia from pressure of callus or inflammatory exudation. We must decide whether complete degeneration or only compression exists. If the latter, in some cases Lloyd would operate at once, in others wait until shock was overcome or symptoms pointed to an extension of interference with the functions of the cord. In so-called concussion we must wait until it is evident there will be no spontaneous recovery. [H.M.]

Boston Medical and Surgical Journal.

April 18, 1901. [Vol. CXLIV, No. 16.]

1. The Opinion Evidence of Medical Experts. JOHN D. McLAUGHLIN.
2. The Umilian Murder. HERBERT B. PERRY.
3. Upon What Sort of Information Shall a Medical Examiner Hold a View? H. M. CULLS.
4. Leukocytosis and Typhoidal Perforation. From the Medical Clinics of the Montreal General and Royal Victoria Hospitals. COLIN K. RUSSELL.
5. Contusion of the Abdomen: No External Wound: Rupture of the Descending Colon; Fecal Abscess; Drainage: Suture of Ruptured Gut; Recovery. CHARLES L. SCUDDER.

1.—Many proposed schemes of reform affecting the position of the medical expert are impractical. Authorities are quoted as to the ability to obtain professional experts to testify to any theory however absurd. Lord Campbell's opinion that it is indispensable to the administration of justice that a witness should not be turned into an advocate is cited. To testify as an expert is becoming more and more repugnant to those physicians whose evidence would be of the most value. Contradictory testimony cannot be laid at the door of science, but is owing to defective methods of law. Under the Common Law of England, in vogue in most American States, in order to give an opinion as a medical expert a witness need not belong to any particular school of medicine; he may have acquired the knowledge by study alone or by practice alone; he need not have made the subject a specialty in his practice, and, except in Wisconsin, he need not be a graduate of a medical college, nor even be duly licensed; nor need he have met a similar case in the course of his reading or practice. The function of the medical experts is to judge facts and interpret them. For this reason in Germany they are called *judices facti*, as opposed to ordinary witnesses. In our law judges the two preeminent requisites are learning and disinterestedness. A mistake of law can be cured by appeal. A mistake in expert opinion is difficult to detect and generally impossible to revise. In Germany the expert is appointed by the court and his veracity cannot be impeached. The chief of staff of professional experts is the district physician, the statutory regulations requiring him to be skilled in medicine, surgery and obstetrics; while there is also an organized series of courts of professional experts to whose judgment the opinion of the medical men first employed may be referred. The legal apparatus is cumbrous but indubitably has its share in

the elevation of the practice of legal medicine in Prussia [H.M.]

3.—In the absence of definite instructions to medical examiners as to what shall constitute information of death by violence it is best to act on that which seems credible. We should act according to the dictates of common sense and for the best interests of the commonwealth, and in case of doubt err on the side of too much investigation. [H.M.]

4.—Russell gives the clinical notes of 6 cases of actual or simulated perforation in typhoid fever, with especial reference to the leukocytosis in each. He first states that 37 examinations of uncomplicated cases of typhoid fever showed a variation in the leukocytes of from 2,000 to 12,000, the average being about 6,500. He concludes (1) In perforation it is the general rule to have leukocytosis, but the degree may vary within wide limits; (2) leukocytosis, as a rule, appears early, but may not be marked until general peritonitis and collapse intervene; (3) there may be an utter absence of leukocytosis with marked perforation and peritonitis; (4) with typical signs of perforation and a definite leukocytosis, there may be no such complication present, and an operation may be performed unnecessarily; (5) with pain and tenderness in the abdomen, coming on suddenly during an attack of typhoid fever (and in the absence of evidences of other definite complication, as cholecystitis), and a distinct leukocytosis, even without other signs of perforation, an exploratory operation is justified, even advisable, thereby obviating the dangers of a fatal issue from too great a delay. [A.G.E.]

5.—Scudder reports the case of a man who was crushed. Rupture of the colon was not attended by the ordinary symptoms which would lead to the supposition that a serious injury had been received. A suppurating hematoma above the left iliac crest was opened the sixth day after the injury and revealed a fecal abscess. Scudder states that an important sign was misinterpreted. That was vomiting which occurred several times. He concludes that vomiting once of stomach contents, after an abdominal contusion, is of no special importance. Continuous, unexpected vomiting, without any apparent reason, is significant of an intestinal lesion. This is true in spite of the absence of other signs of involvement of the peritoneum. [A.G.E.]

Medical Record.

April 20, 1901. [Vol. 59, No. 16.]

1. The Toxemia of Pregnancy: Its Diagnosis and Treatment. S. MARX.
2. Faith Cures and the Law. JOHN B. HUBER.
3. Report of 3 Cases of Malignant Endocarditis; One following Measles, another Typhoid Fever in a Child and Simulating Splenic Lymphatic Leukemia, and another Terminating in Recovery. ALBERT E. ROUSSEL.
4. Strangulated Hernia in Infants: Description of a Hitherto Unrecognized Cause and Seat of Strangulation. ALEXIS V. MOSCHOWITZ.
5. Report of a Case of Malarial Hematuria. P. L. BELLINGER.
6. Malaria in a Child of 3 Weeks. J. C. JOSEPHSON.
7. The Treatment of Ascites. ARTHUR H. BIGG.
8. Simultaneous Extra- and Intra-Uterine Pregnancies. F. V. CANTWELL.
9. Suppurative Parotitis Complicating Croupous Pneumonia. ARTHUR STERN.
10. A New Local Treatment for Erysipelas. G. LENOX CURTIS.

1.—Marx discusses the subject of toxemia of pregnancy and reports 2 cases with his method of treatment. His conclusions are: (1) Toxemia of pregnancy is a complex condition depending on more than one factor; (2) many women go to term with albuminuria, without symptoms referable to toxemia; when such symptoms arise they are not caused by the albumin present but by faulty urea secretions; (3) in the most desperate and malignant cases there is found neither albumin nor casts; (4) urea is always found markedly diminished in the so-called true toxemias of pregnancy or urinemias; (5) finally he makes a strong plea for a regular and methodical course of urea esti-

mation in all cases of toxemia, or for the relegation to secondary importance of the time-honored examination for albumin; (6) progressive diminution of urea excretion, with or without albuminuria is the sole indication for the induction of premature labor, which is especially indicated when conscientious medical treatment fails. [W.K.]

3.—Measles as a cause of malignant endocarditis is rare. Cases have been noticed by Boulland, Stokes and Roger, but these are the only ones Roussel finds on record. The second case was remarkable as occurring in a boy of only 9 years of age, and which, except for the number and differential count of the white corpuscles, presented an almost typical picture of splenic-lymphatic leukemia. Facts in favor of a correct diagnosis in the case of recovery are a previous successful examination for life insurance, absence of compensatory hypertrophy, the positive nature of the symptoms and the continued existence of a valvular lesion. Four other cases of recovery have been reported. Authorities are quoted to show that the more modern view is that the difference between simple and malignant endocarditis depends upon the virulence of the microorganisms or their toxins. When bacteria have not been found they have either escaped detection or died. In the malignant form there is a difference of opinion as to the necessity for a previous lesion. [H.M.]

4.—Moschowitz reports 2 unusual cases of strangulated hernia in infants, with heretofore unrecognized origin and seat of strangulation. The first case, in an infant aged 4 months, about 2 hours before it came under observation, developed a small, painful, pear-shaped mass about the size of a small hen's egg extending from the region of the right inguinal canal into the scrotum. The child had vomited repeatedly and its bowels, regular until that day, had not moved. Gentle taxis was unsuccessful; and the child was then admitted to the hospital for operation. The same day, 7 hours after the strangulation was first noticed, Dr. Moschowitz operated on the child, finding a congenital hernia. As rapidly as possible the entire sac was liberated from the surrounding structures, when, without opening of the sac and without cutting or dilation at the neck, there was no trouble in reducing the hernial contents. The second case was that of a child, aged 3 months, of premature birth and weighing, a few days before admission to the hospital, a trifle less than 6 pounds. The child had cried continually for 3 days, and had vomited fecal matter. On the day of admission there was noticed for the first time in the left side of the scrotum a tense painful swelling about the size of an egg, and the skin covering it was red and edematous. Immediate operation was performed, and there was at first no trouble in reducing the greatest portion of the hernial contents, but one loop of small intestine resisted all attempts at reduction. The incision therefore was extended downward upon the scrotum, and, beyond a constricting ring within the hernial sac, a loop of strangulated small intestine about 4 inches in length, of a deep purplish color, with its peritoneum still glistening, was found. Under hot applications it rapidly regained its color. Later the child developed mastoiditis, and was transferred for operation with the herniotomy wound practically healed. While strangulated hernia in infants of 3 and 4 months is comparatively rare, there is sufficient justification for publishing these cases, in the previously unrecognized location of the constriction low down in the scrotum, and which curiously occurred in both these patients. Although there may be uncertainty as to the seat of the constriction, it is certain that in by far the greatest majority of observed cases the strangulation occurred at the external ring, the internal ring, or at some point between the two. It is therefore noteworthy that the strangulation in both cases reported occurred in the scrotum proper and some distance from the external inguinal ring. Moschowitz explains these occurrences of strangulation low down in the scrotum by quoting Lockwood, who says regarding the closure of the vaginal process: "There seems to be, as others have remarked, a strong tendency for it to close in 2 places, which are some distance apart; namely, just above the testicle and near the internal ring." [G.C.C.H.]

6.—The illness followed a maternal attack of malaria on the eighth day of the puerperium. Cyanosis and spasms occurred

daily at 3 or 4 o'clock. The infant was first seen on the twelfth day of the disease. Quinin, 4 grains daily, reduced to 2 later, worked a complete cure in 5 days. [H.M.]

7.—Biggs recommends elaterin, grains, $\frac{1}{15}$; strychnin sulfate, grains, $\frac{1}{30}$; glonoin, grains, $\frac{1}{30}$; extract of digitalis, grains, $\frac{1}{4}$; citrated caffeine, grains 1; powdered cloves, grains, 1; every 3 to 6 hours for the removal of ascitic fluid. Four to 6 copious evacuations a day should be maintained until permanent relief is secured. A weak heart, when supported by cardiac stimulants, is no contraindication to the use of elaterin. [H.M.]

8.—At the time of operation for the extrauterine pregnancy it was noted that the uterus was larger than usual. The next day a 3 months' fetus was expelled, and one day later the placenta, membranes, and decidua. The extrauterine fetus had but 2 or 3 weeks' development, and was much macerated. This was probably a twin pregnancy, and not superfetation. The uterine fetus probably passed through the tube first, causing a change in the lining, which arrested the advance of the second. The latter died early, probably from pressure. The tube was much thinned, but not ruptured, bleeding having occurred through the fimbriated extremity. [H.M.]

9.—This is very rare, having occurred in Vienna hospitals only 6 times in 5,738 cases. Symptoms of parotitis appeared the day after the crisis. The whole gland sloughed away. The diplococcus found in the pus was supposed to be *D. pneumoniae*. Its presence may be explained by migration through Steno's duct. Pneumococci were found by Kohn in the blood only in cases ending fatally, or complicated by severe pyemia or empyema. Metastasis was therefore improbable in this case. [H.M.]

10.—The parts affected with erysipelas are thoroughly cleansed, particularly of all greasy substances. A piece of gauze is laid on the skin, and this is covered with a thick poultice of sodium sulfate and cold distilled water. This is secured in place by another layer of gauze. The salt acts by depriving the germs of oxygen. Ice water is applied to the poultice to reduce inflammation and prevent incubation. From 6 to 8 hours is generally sufficient for the application. [H.M.]

New York Medical Journal.

April 13, 1901. [Vol. LXXIII, No. 15.]

1. German Textbooks Half a Century Ago: History and Reminiscences. A. JACOBI.
2. A Shielded Piston Syringe for Urethral and Vesical Irrigation. RILUS EASTMAN.
3. The Correction of the Deviations of the Nasal Septum, with Special Reference to the Use of the Author's Fenestrated Comminuting Forceps. JOHN O. ROE.
4. The Pathology of Intrauterine Death. NEIL MACPHATTER.
5. The Preponderance of Male Stammerers over Females. DAVID GREENE.
6. The Management of Gonorrhoea. BOLESŁAW LAPOWSKI.

1.—In a paper read at a reception given by Dr. Jacobi to his friends in the New York Academy of Medicine in commemoration of the fiftieth anniversary of his graduation, he gives a delightful sketch of his student life abroad and of the difficulties he had to contend with in the shape of the obscure and abstruse textbooks of that day. [H.H.C.]

2.—Eastman describes a new piston syringe for urethral and vesical irrigation. It is a metallic, 5-ounce syringe with detachable blunt nozzles and a movable shield which prevents soiling of the operator's apparel when using the syringe. It is claimed that by its use urethral and vesical irrigation can be accomplished much more satisfactorily than by the use of a fountain syringe. [J.W.M.]

3.—Roe describes in detail his method of correcting deviations of the nasal septum, and refers to the use of his fenestrated comminuting forceps which consists of a fenestrated or ring blade, and a single blade, both of which are attached to a handle by a curved stem long enough to pass around the fidemum of the nostril when the force of the blades is applied to the septum. It is made with blades of different sizes to suit different sized nasal passages, or septums, or deflec-

tions. By its use a deviated septum is straightened by introducing the single blade into the nostril on the convex side of the deflection and the ring into the other. By closing the blades the deflected portion of the septum is fractured. By its use also the bone just adjacent to the cartilage is fractured, and this is important in the retaining of the cartilage in its corrected position. [J.W.M.]

5.—As a result of examining 256 adult stammerers, 229 male and 27 female, Greene found that in 60% of the male and 11% of the female cases stammering was due to defective inspiration, while in 35% of the male and 88% of the female cases the trouble was caused by mismanagement of the voice. His explanation is that owing to the almost purely diaphragmatic breathing of the male the necessary amount of air for vocalization is not obtained until the ribs are expanded, and that, as it were, "the two mechanisms are out of gear"; while in the female, although the costal type of breathing supplies air enough, there is a futile attempt to vocalize by means of the muscles of the larynx in place of using the full respiratory current to produce vibratory motion of the vocal cords. [H.H.C.]

April 20, 1901. [Vol. LXXIII, No. 16.]

1. The Early Diagnosis of Ectopic Gestation. ANDREW F. CURRIER.
2. The Use of Hot-water Vaginal Injections. JAMES HAWLEY BURTONSHAW.
3. A Case of Cystinuria ending in Recovery. JOHN REID.
4. Acute Spinal Ataxia (Nontabetic), and Its Relation to Other Forms of Acute Ataxia. CHARLES L. DANA.
5. The Pathology of Intrauterine Death. NEIL MACPHATTER.
6. Grippe, Pneumonia, and Insanity. EMILE ARONSON.
7. Notes on the Treatment of Diphtheria, Based on the Methods of the New York City Hospitals. WILLIAM L. SOMERSET.

1.—According to Currier the symptoms which determine the diagnosis of tubal gestation may be divided into the ordinary, or those which belong to gestation under normal conditions, and the extraordinary, or those which are peculiar to this form of gestation. By all odds the most important of the extraordinary signs is hemorrhage. This is seldom external or manifest and is most likely to occur, and occur early, when the seat of gestation is the fimbriated end of the tube. In that situation the fetal sac seldom progresses to the end of the first month without rupture. As a diagnostic symptom, pain is next in importance to bleeding. It is usually paroxysmal, it is sharp and darting, and inclines the patient to relax the muscles of the thighs and flex the thighs on the abdomen. The third diagnostic point consists in the presence of a pelvic tumor. It is usually best determined by examination per rectum, the patient's thighs being flexed upon the abdomen. In most cases an anesthetic is essential to success in such an examination. By the bimanual palpation through the relaxed abdominal walls the dimensions and location of the tubal mass, and its relation to the uterus and other pelvic structures, can readily be outlined. Hemorrhage, pain, and tumor are the most important of the extraordinary symptoms and the most constant. The passing of decidual membrane by the vagina, hemorrhage from the uterus, pulsation of the vaginal arteries, and various other signs are all of minor importance. [W.K.]

2.—The principles underlying the rational application of the hot-water vaginal injection are very simple. The initial effect on the tissues of water at a temperature of from 105° to 120° F., is to dilate the contained bloodvessels and thus cause congestion, or to increase that which may already be present; the secondary effect is that of contraction and consequent lessening of the congestion, the excess of blood being driven out. When the therapeutic douche is indicated, Burtenshaw gives the following rules for its use: (1) Use a large-sized fountain syringe or douche can attached to a support 3 or 4 feet above the body; (2) always lie flat on the back when taking a douche, with the hips slightly elevated and the shoulders depressed; (3) always use at least 3 gallons of plain water, hot as can be borne (at a temperature of from 107° to 120° F.) for each douche; (4) take the injection twice daily, morning and evening, except on the 2 days preceding and the 2 days following the menstrual period, when it should be omitted; (5) rest for half an hour in

a recumbent position after taking each douche. Large hot-water vaginal irrigations should never be employed by a healthy pregnant woman, for the reason that they reduce the bactericidal power of the vaginal secretions. Reclus, of Paris, asserts that the use of hot enemias in pelvic inflammation is much preferable to the vaginal douche, since the hot water in this way comes into much closer contact with the organs which it is proposed to influence, and is correspondingly more beneficial in its action. Burtenshaw has used this method in a few cases, but not with very satisfactory results. The introduction of water at such a high temperature into the rectum produces great discomfort, and the patient can rarely accustom herself to its use. [W.K.]

3.—Reid reports a case of **cystinuria** occurring in a man of 32 who had for ever 6 years been suffering with painful micturition, and had been treated for gravel and muscular rheumatism by his family physician. Examination of the urethra revealed ulceration, and of the urine the presence of cystin. Acting on the theory that cystinuria is due to arrested metabolism, Reid started treatment with quinin, nitric acid, tolu, salicylic acid and rhubarb in a mixture, and later iron and strychnin, at the same time using mild lead astringent injections as a local application. Recovery was apparently complete, even after a year had passed, a circumstance all the more remarkable as no case of cure had ever been previously reported. [H.H.C.]

4.—Dana reports in detail one case of **acute bulbar ataxia** and 4 of **acute spinal ataxia** coming under his observation. In all of the latter cases "the ataxia was especially marked. The patients did not know the position of their limbs and could not stand or walk except in the characteristic ataxic manner. On the other hand, cutaneous sensations were not markedly involved in any case. There was always some tactile anesthesia, but no marked loss of pain or thermic sense. The kneejerks were abolished in 2 cases, but not in the third, in which case they were slightly exaggerated. There was some loss of motor strength, but the patient could always move the limbs freely in every direction and could stand with help. There was loss of cutaneous reflexes. The Babinski phenomenon was not tested for. There was no special wasting of the limbs or change in electrical reaction. There was weakness of the bladder, with some constipation, but these functions were not entirely in abeyance. The patient suffered no pain, either at the time of onset or later. There were no lightning pains, no crampings or jerking, no girdle pains, though there were some girdle sensations. The vascular and glandular functions of the limbs were not especially disturbed. There was in no cases any lesion of the cranial nerves, nor were the arms affected, except in one case, in which there was some paresthesia of the fingers for a time." Etiologically Dana concludes that these cases are due to senile arterial changes or to syphilitic lesion of the posterior blood-vessels of the spinal cord, causing either a blocking up, or hemorrhage, or both, with the usual reactive process. In all cases the patients rapidly improved. [H.H.C.]

5.—MacPhatter describes the **pathology of intrauterine death**. He believes that syphilis is one of the most potent influences in causing the destruction of the fetus. The effect of this disease upon the placenta varies according to its severity and has certain definite characteristics by which it can be recognized. When the syphilis is derived from the father the effects are chiefly centered in the fetal part of the placenta. When derived from the mother the maternal portion is primarily affected. These changes are carefully described. Various other causes of intrauterine death, such as fatty degeneration, edema, calcareous degeneration, myxoma fibrosa and cystic disease of the placenta are described and the treatment for complications of pregnancy detailed. When Caesarian section is indicated he prefers Porre's method, as the procedure leaves the woman's life free from further dangers from this source. [W.K.]

6.—Aronson reports an interesting case of **grip-pneumonia with cerebral involvement** taking the form of maniacal delirium followed by periods of stupor and coma, with general apathy and suicidal tendencies during the gradual convalescence. [H.H.C.]

7.—Semerslet concludes an interesting historic sketch of

diphtheria treatment with a valuable summary of the modern methods as used today in the New York City hospitals. He advises the injection of from 2,500 to 4,000 units of antitoxin and condemns the practice recommended from Boston, viz., of using 20,000 units daily for 3 or 4 successive days. Irrigations are recommended (preferably with salt water, a teaspoonful to the quart), and hot if intended for the relief of pain, even to 138° F. Medicated steam, if properly applied, is beneficial in some cases—especially to prevent the necessity of reintubation. A rapid and feeble, or worst of all, an intermittent pulse should be met with absolute rest (morphin), stimulation and every possible attention to the nourishment of the patient. Gavage is frequently indicated. Paralysis of the abductors of the vocal cords may necessitate intubation. Ventilation, air space (150 square feet of floor space with walls at least 10 feet high) proper room temperature (72°-76°), and frequent change of air without draughts, and freedom from the presence of pneumonic or septic patients, are the desiderata in all cases. In cases in which the pseudomembrane has extended below the larynx and in cases in which the nasopharynx is extensively involved, primary tracheotomy is indicated. In feeding, whenever possible the child should drink from its cup in the ordinary way. Internal medication should be reduced to a minimum. After intubation the stay of the tube should be as short as possible. When the tube is removed the first consideration is to avoid the necessity for its return. Morphin sulfate ($\frac{1}{16}$ to $\frac{1}{12}$ gr.) given 15 minutes before extubation is an excellent precaution. Should dyspnea recur, poultices, hot baths, narcotics and steaming are all important aids. [H.H.C.]

Medical News.

April 20, 1901. [Vol. LXXVIII, No. 16.]

1. An Historical Sketch of the Department of Medicine and Surgery of the University of Michigan.
2. Some Errors in the Examination of Urine. LOUIS HEITZMANN.
3. Acute Traumatic Malignancy. WILLIAM B. COLEY.
4. Epistaxis. CHARLES N. COX.

2.—Many make a diagnosis of nephritis from albumin in the urine without any microscopic examination. Others, after the latter, if they find no casts, call the case one of "functional albuminuria." Cold tests do not show small quantities of albumin, and other substances besides albumin give the same reaction. Nitric acid should not be used for differentiation in the heat test as no precipitation takes place if the amount of albumin is small. Use 2 or 3 drops of a 50% aqueous solution of glacial acetic acid, and compare the appearance with an unboiled sample. True casts are always from the kidney. Mucus cylinders are often mistaken for hyaline casts, and when partly covered with bacteria, for granular casts. Careful focusing prevents this error. It is a mistake to suppose waxy casts may have no special significance. They always indicate amyloid degeneration. [H.M.]

3.—Coley, in discussing the relation of traumatism to acute malignancy, states that after a careful clinical study of malignant tumors he is convinced that injury constitutes a more important factor in their causation than is generally recognized. Of a series of 270 cases under his own care, 31.8% gave a distinct history of trauma. The time which intervened between the occurrence of the injury and the development of the tumor varied from almost immediately after the injury to 4 years. The injury may be very slight and in those cases in which the tumor does not appear for months or years, may be forgotten. Butlin and other German surgeons believe that this etiological relationship is due to a constitutional predisposition on the part of the patient; Virchow claims that a special disposition for tumor development is produced by the injury; Löwenthal believes that injury may be considered as a direct etiologic factor. The writer regards the infectious theory as the most rational and states that evidence in its support is increasing. Reference is made to the similarity between sarcoma and tuberculous disease, osteomyelitis and periostitis in this respect and 29 cases in which sarcoma and 2 in which carcinoma followed injury are reported. [J.W.M.]

4.—Cox in discussing epistaxis states that the cause may

be systemic or local. Of the former, plethora, anemia, hemorrhagic diathesis, and organic heart, liver or kidney disease are mentioned. Of the latter, trauma, operative or accidental abrasions, varicose veins, angioma and intranasal growths as sarcoma and fibroma. The treatment consists in first locating if possible the bleeding point and applying pressure by means of a small tampon, or if the hemorrhage be profuse by plugging the nostril from before backward with sterile or iodoform gauze. It is seldom necessary to introduce posterior plugs. Rubber finger cots which are introduced into the nostril and then packed with cotton or gauze have been used, also sponges of compressed cotton which on absorbing moisture expand and thus exert pressure. Of local styptics silver nitrate solution 50%, chromic acid crystals, electrocautery, powdered suprarenal extract, alum, hydrogen-peroxid, antipyrin and ferropyrin 20% solution in water are mentioned. In some conditions fluid extract of ergot or gallic acid may be given internally. In recurrent nasal hemorrhage due to a local condition the cause should be removed. [J.W.M.]

Philadelphia Medical Journal.

April 20, 1901. [Vol. 7, No. 16.]

1. The Localization of Brain Tumors Especially with Reference to the Parietal and Prefrontal Regions. CHARLES K. MILLS.
2. Non-Surgical Treatment of Fibroid Tumors of the Uterus. AUGUSTIN H. GOELET.
3. Akromegaly, with Report of 2 Cases. W. G. SHALLCROSS.
4. A Clinical Note on Infantile Scorbutus. WILLIAM M. MASTIN.
5. Susceptibility to Disease and Physical Development in College Women. ARTHUR MACDONALD.
6. Operative Treatment for Prostatic Hypertrophy. RAMON GUIERAS.

1.—Mills reports 5 cases of brain tumor and 1 case of softening and degeneration. Symptoms are given in detail and conclusions regarding localization are drawn therefrom. CASE 1: Tumor of the superior parietal gyrus; localizing symptoms, impairment of cutaneous sensibility, loss of muscular sense, astereognosis, ataxia, paresis, and ultimately paralysis; operation, recovery. CASE 2: Tumor of the superior parietal and middle portions of the central gyre; localizing symptoms, impaired cutaneous sensibility, loss of muscular sense, astereognosis, ataxia and late paralysis; operation, death. CASE 3: Tumor of the superior parietal gyrus; localizing symptoms, impairment of muscular sense, astereognosis, ataxia, paresis; operation, recovery. CASE 4: Necrotic and degenerated area with focus at junction of inferior parietal and first gyre; localizing symptoms, astereognosis, diminution in pain and temperature senses, word deafness, etc. Recovery from operation, but symptoms remaining about the same. The 2 remaining cases will be published in full later by Drs. Mitchell and Sinkler. Mills states that the first 3 cases afford confirmation of the views long defended by him, namely, that the sensory and motor areas of the cerebrum are, for practical purposes, distinct. He concludes that the diagnosis of brain tumor can sometimes be made even in the absence of most of the general symptoms, such as optic neuritis, headache, vertigo and vomiting, chiefly by the close study of localizing and invasion symptoms. Tumors of the posteroparietal region, especially of the superior parietal lobule, give as their most important localizing symptoms, disorders of cutaneous and muscular sensibility, and especially astereognosis. Just as the centers of hearing, vision and speech are more highly differentiated in the left hemisphere, so it is probable that the stereognostic sense is more highly evolved in this hemisphere. A tumor strictly confined to the motor regions does not give objective, sensory phenomena of a persisting character. In tumors of the motor subcortex, tonic spasticity is usually a marked system. [A.G.E.]

2.—Goelet discusses the nonsurgical treatment of fibroid tumors of the uterus, and considers that electricity stands foremost among the nonsurgical measures, and that galvanic, faradic, and even static current, may be employed with benefit; and if proper aseptic precautions are used perituterine inflammations and adhesions will not result. The method of application, strength of current, apparatus required are described. He

has also secured remarkable results by the use of certain proprietary remedies. [W.K.]

3.—Shallcross reports in detail 2 typical cases of akromegaly which came under his observation in the Pennsylvania Training School for Feeble Minded Children. [H.H.C.]

4.—Mastin reports several cases occurring in his own practice tending to show that infantile scurvy is not such a rare disease as may be supposed. His cases "demonstrate that errors in the diagnosis of infantile scurvy are not confined alone to rheumatic affections, but may extend to the domain of surgical disorders—tuberculous bone lesions, sprains and contusions; to the nervous system—disease of the cord; and even include hereditary syphilis. They show also that scurvy may arise during the exhibition of several of the most popular artificial or prepared foods, and, in addition, what is of much consequence, that its occurrence under the use of sterilized milk must be undoubtedly conceded. Again, one of the cases suggests the possible intimacy, or, at least, association, of scurvy with a form of pernicious anemia. [H.H.C.]

6.—Guiéras, after mentioning the various methods of dealing with prostatic hypertrophy, considers what he designates the 2 great operative procedures—prostatotomy and prostatectomy. Of the former the Bottini operation is stated to be the sole surviving method which is used at the present day. The relative merits of the Bottini operation as compared with prostatectomy in general are then discussed. Guiéras says that the advocates of each are right when they say that the other operation is a blind one because both are blind operations and the operator has to be governed by the sense of touch. The Bottini, while not so dangerous, does not produce such good results, and enucleation, while more dangerous, produces better results if the patient survives, but the patient's life must never be endangered by the use of an operation considered more scientific. [A.G.E.]

Zeitschrift für Heilkunde.

1901 [Vol. XXII., Part I.]

1. Mixed Tumors of the Parotid Gland. KARL LANDSTEINER.
2. A Case of Influenza-Endocarditis of the Aortic Valves and Patulous Arterial Duct. FRIEDRICH SCHLAGENHAUFER.
3. The Morphology and Pathology of the Influenza Bacillus. H. ALBRECHT and A. GHON.
4. Elongation of the Tubes Associated with Ovarian and Parovarian Cysts. HARRY LEPMANN.

1.—Landsteiner reports several mixed tumors of the parotid gland and discusses their histology and histogenesis with special reference to the much disputed question of their derivation from epithelial or connective tissue elements. In contradistinction to the more recently accepted view of the sarcomatous or endotheliomatous nature of most of the growths, he believes them to be of epithelial origin and subject to the various metamorphoses common to epithelial tumors. [A.O.J.K.]

2.—Schlagenhafer reports a case of endocarditis of the aortic valves and patulous arterial duct, in a boy aged 13 years. Cover-slip preparations from the vegetations revealed a thin, small bacillus, but cultures were not conclusive. The organism, however, is thought to have been the influenza bacillus, and this opinion is strengthened by the detection of a similar bacillus in sections of the vegetations and in sections of the lung (in the purulent exudate in the bronchioles). The case is thought to be the fourth in which there is anatomic evidence that the endocarditis process was in all probability due to the influenza bacillus. The repeated occurrence of pulmonary infarction in the case, induces him to suggest that in cases of evident valvular disease of the left side of the heart, especially aortic disease, the development of so-called crossed embolism might lead the clinician to suspect the possibility of patulous arterial duct (or patulous foramen ovale or ventricular defect). [A.O.J.K.]

3.—Albrecht and Ghon make an interesting contribution to our knowledge of the morphology and pathology of the influenza bacillus and allied organisms. Of clinical interest is the occurrence in a child, aged 2½ years, of an extensive and

fatal phlegmonous inflammation of the right arm, with fatty degeneration of the heart-muscle, liver and kidneys, and septicaemia. From the phlegmonous inflammation of the arm the influenza bacillus only was recovered, and from this it is concluded that it is in the highest degree probable that the influenza bacillus alone is capable of engendering such inflammation. [A.O.J.K.]

The American Gynecological and Obstetrical Journal.

January, 1901. [Vol. XVIII, No. 1.]

1. Deep Imprints. WILLIAM H. HINGSTON.
2. Intra-Pelvic Operations for Relief of Posterior Uterine Displacements. WALTER B. CHASE.
3. A Case of Congenital Hypertrophy of the Cervix, complicated by Prolapsus and Bilateral Pyosalpinx, in a Girl 17 years old; Vaginal Hysterectomy. ABRAM BROTHERS.
4. Uterine Curetment. DOUGLAS C. MORIARTA.
5. A Solid Ovarian Tumor. JOHN G. EARNEST.
6. An Unique Case of Intrapelvic Hemorrhage due to a hitherto Undescribed New Growth. W. P. MANTON.

2.—Chase recapitulates his article as follows: (a) **Posterior deviations with fixation** from adhesions is usually a serious menace to health and often a barrier to childbearing; (b) this condition of affairs can best be treated by laparotomy; (c) after the adhesions have been severed the cure should be completed by maintaining the uterus in an anterior position: first by intraperitoneal shortening of the round ligaments; second, if this is insufficient, resort should be had to anterior abdominal suspension or fixation; (d) that experience, while not settling all points associated with this subject, nevertheless has demonstrated that efforts to maintain the uterus in an anterior position either by ventrosuspension or ventrofixation, are from the uncertainty of the degree and extent of the adhesion, not devoid of danger in the case of conception; (e) that ligation or resection of the Fallopian tube is a more rational procedure than ovariectomy, for the prevention of conception, where justifiable, as it does not unsex the woman, and saves her from the premature menopause and its unpleasant consequences—a physiologic reason of much weight—and (f) that the value of these methods of treatment of posterior deviations is amply demonstrated and their employment should be more generally adopted. [F.C.H.]

3.—After detailing the history of the patient, Brothers describes the specimen which was removed. It consists of the **uterus both tubes filled with pus, and the ovaries**. A portion of the vagina was dissected downward and removed with the uterus in order to guard against prolapsus of the vagina in the future. It is of interest to note that it was possible to remove all of these organs in one mass in an undersized girl of 17, and by the vagina. In order to render this easier of accomplishment the uterine wall anteriorly was submitted to a hemisection, ligatures were applied to the lower portion of the broad ligaments, and clamps to the uppermost portion; the latter were removed at the end of 48 hours. By actual measurement of the specimen, the distance from the fundus uteri to the internal os is 1 inch, and that between internal os and external os 2½ inches. There is no reason to suspect a gonorrhoeal origin as the uterus protruded from the vulva, the girl was a chronic invalid, and her home surroundings excluded such a suspicion. [F.C.H.]

4.—Moriarta considers only the **curetment of septic and sapremic conditions** which occur as puerperal complications. Early abortions affect the endometrium more markedly, the uterine walls and general system less. Marked symptoms may occur in these puerperal cases with no apparent gross local lesion when the peritoneum, pleura, or heart membranes are involved. Care should be exercised to empty the uterus, for during a second curetment fresh abrasions will be new foci for infection. [F.C.H.]

5.—Earnest reports a **solid ovarian tumor** which reached above the umbilicus. It was situated in the median line, perfectly symmetrical, smooth and hard; so firmly fixed that it could not be moved. The diagnosis of uterine fibroid was made. The tumor measured 20 centimeters in length, and

about 14 in breadth at its widest point. No microscopic examination was made. [F.C.H.]

6.—Manton reports this unique case, also of clinical and pathological interest and importance. Upon examining the patient, the parietes were thin, the abdomen slightly distended. The lower portion of the vagina was partially blocked by a swelling on the left side, which extended downward to within about an inch and a half of the introitus, the uterus was slightly enlarged, acutely anteflexed, and pushed to the right. The pelvic fossa was occupied by a soft mass, which could not be clearly outlined on account of the sensitiveness. The tube could be felt to the left of the uterus greatly enlarged, elongated, sausage-shaped, somewhat irregular and hard. Continuous with the tube was a yielding mass which completely filled this half of the lower pelvis. On opening the abdominal cavity both sides of the pelvis were seen to be symmetrically involved, the tubes were enlarged to the size of small bananas, and were attached to the pelvic wall and intestines. While enucleating the left tube it ruptured, and a quantity of dark fluid blood escaped. This tube was removed. The same experience was met in the right tube, while attempting its removal. More than a pint of liquid blood and clots were removed by hand and sponging from each broad ligament. The pathological examination was made by Heneage Gibbes. The growth resembled forms of recurrent fibroids which he has examined. There is no doubt that the aneurysmal dilations on both sides had the same cause. Bilateral occurrence would negative the idea of a malignant neoplasm. One characteristic of the growth, and the one that has brought about the condition in this case demanding operative interference, is its action on the bloodvessels. All through the sections the same condition is found, varying from a small hemorrhage to a large extravasation, the rupture of some vessel and the filling of the spaces in the surrounding tissues with blood corpuscles. **The aneurysmal dilations in both broad ligaments** have, in all probability, been formed by the occlusion of large vessels by the degeneration of their wall owing to the growth of a fibroid material, as is well shown in the walls of the large and small arteries, and more especially in the valves and walls of the large veins. By the complete removal of the parts in which the pathologic process was in active progress the disease was checked, and the patient now after a period of three years remains in very good health. (F.C.H.)

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine Hospital-Service, during the week ended April 20, 1901:

SMALLPOX—UNITED STATES.			Cases	Deaths
California:	San Francisco.....	Mar. 30-Apr. 13...	5	
Dist. of Columbia:	Washington.....	Apr. 6-13.....	1	
Florida:	Jacksonville.....	Apr. 6-13.....	14	
Illinois:	Chicago.....	Apr. 6-13.....	10	
Iowa:	Clinton.....	Apr. 6-13.....	1	
Kentucky:	Lexington.....	Apr. 6-13.....	7	
	Louisville.....	Apr. 5.....	1	
Louisiana:	New Orleans.....	Apr. 6-13.....	12	2
Maryland:	Baltimore.....	Apr. 6-16.....	1	
Massachusetts:	Fitchburg.....	Apr. 6-13.....	1	1
Michigan:	Detroit.....	Apr. 6-13.....	3	
	Smallpox present at 104 places.....	Apr. 6-13.....		
Minnesota:	Minneapolis.....	Apr. 6-13.....	8	
	Winona.....	Apr. 6-13.....	1	
Nebraska:	Nebraska City.....	Mar. 30-13.....	18	
New Hampshire:	Manchester.....	Apr. 6-13.....	3	
New Jersey:	Jersey City.....	Mar. 31-Apr. 7.....	7	
	Newark.....	Apr. 6-13.....	1	1
New York:	New York.....	Apr. 6-13.....	44	11
Ohio:	Cincinnati.....	Apr. 5-12.....	1	
	Youngstown.....	Apr. 6-13.....	1	
Pennsylvania:	Lebanon.....	Apr. 6-13.....	1	
	Pittsburg.....	Apr. 6-13.....	4	1
	Steelton.....	Apr. 6-13.....	1	
South Carolina:	Charleston.....	April 8.....	1	
Tennessee:	Memphis.....	Apr. 6-13.....	5	
	Nashville.....	Apr. 6-13.....	16	
Utah:	Salt Lake City.....	Apr. 6-13.....	25	
West Virginia:	Huntington.....	Mar. 29-Apr. 13.....	62	
	Wheeling.....	Apr. 6-13.....	1	
Wisconsin:	Mitwaukee.....	Apr. 6-13.....	1	

SMALLPOX—FOREIGN AND INSULAR.

Belgium:	Antwerp.....	Mar 23-30.....	6	3
Brazil:	Rio de Janeiro.....	Mar. 1-15.....		13
China:	Hongkong.....	Mar. 2-9.....	2	1
France:	Paris.....	Mar. 23-30.....		12
Gibraltar:	.....	Mar. 23-30.....	1	
Great Britain:	Scotland, Dundee.....	Mar. 23-30.....	1	
	Glasgow.....	Mar. 29-Apr. 5.....		10
India:	Bombay.....	Mar. 12-19.....		10
	Calcutta.....	Mar. 8-16.....		151
	Karachi.....	Mar. 10-17.....	14	5
	Madras.....	Mar. 9-15.....		11
Italy:	Messina.....	Mar. 23-30.....	1	
	Naples.....	Mar. 23-30.....	Present	
Mexico:	Mexico.....	Mar. 23-31.....		1
	Vera Cruz.....	Apr. 6-13.....		1
Russia:	Moscow.....	Mar. 16-23.....	8	
	Odessa.....	Mar. 23-30.....	5	1
	St. Petersburg.....	Mar. 16-30.....	30	4
	Warsaw.....	Mar. 16-23.....		7
Porto Rico:	Ponce.....	Mar 30-Apr. 1.....	4	

YELLOW FEVER.

Brazil:	Rio de Janeiro.....	Mar. 1-15.....	36	28
Colombia:	Panama.....	Apr. 1-8.....	7	1
Costa Rica:	Port Limon.....	Apr. 5.....	1	

CHOLERA.

India:	Bombay.....	Mar. 12-19.....		3
	Calcutta.....	Mar. 2-16.....		43
	Madras.....	Mar. 8-16.....		3

PLAGUE—UNITED STATES.

California:	San Francisco.....	Apr. 6-13.....	2	2
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PLAGUE—FOREIGN.

Africa:	Cape Town.....	To Mar. 9.....	100	27
Brazil:	Rio de Janeiro.....	Mar. 1-15.....		1
China:	Hongkong.....	Mar. 2-9.....		15
India:	Bombay.....	Mar. 12-19.....		1,203
	Calcutta.....	Mar. 8-16.....		819
	Karachi.....	Mar. 13-17.....	153	126
	Madras.....	Mar 9-15.....	1	

Appointments, Promotions, Retirements, Transfers, etc., of Medical Commissioned Officers, U. S. Army, Recorded in the Adjutant General's Office, between March 15 and April 15, 1901:

Volunteers.—HONORABLY DISCHARGED.

- BEESON, Captain EDWARD G., assistant surgeon, 39th Inf., March 31, 1901.
- FOXWORTHY, Captain FRANK W., assistant surgeon, 34th Inf., February 28, 1901.
- ANDREWS, First Lieutenant ROBERT W., assistant surgeon, 46th inf., March 17, 1901.
- WINTER, Major FRANCIS A., surgeon, 37th Inf., February 20, 1901.
- ANDERSON, Captain THOMAS B., assistant surgeon, 37th Inf., February 20, 1901.
- RAFFERTY, Major OGDEN, surgeon, 27th Inf., April 1, 1901.

COMMISSIONS VACATED BY NEW APPOINTMENT.

- EDIE, Major GUY L., surgeon, by promotion to major and surgeon, U. S. Army, February 2, 1901.
- IVES, Major FRANCIS J., surgeon, by promotion to major and surgeon, U. S. Army, February 2, 1901.
- KENDALL, Major WILLIAM P., surgeon, by promotion to major and surgeon, U. S. Army, February 2, 1901.
- HARRIS, Major HENRY S. T., surgeon, by promotion to major and surgeon, U. S. Army, February 4, 1901.
- KEAN, Major JEFFERSON R., surgeon, by promotion to major and surgeon, U. S. Army, February 4, 1901.
- EWING, Major CHARLES B., surgeon, by promotion to major and surgeon, U. S. Army, February 2, 1901.
- KNEEDLER, Major WILLIAM L., surgeon, by promotion to major and surgeon, U. S. Army, February 2, 1901.
- GRANDY, Major LUTHER B., surgeon, 35th infantry, by appointment as major and surgeon, U. S. volunteers, March 26, 1901.
- CHALMERS, Major THOMAS C., surgeon, 28th Infantry, by appointment as major and surgeon, U. S. volunteers, March 26, 1901.
- MCDILL, Major JOHN R., surgeon, 30th Infantry, by appointment as major and surgeon, U. S. volunteers, March 22, 1901.
- HEREFORD, Major JOHN R., surgeon, 32d Infantry, by appointment as major and surgeon, U. S. volunteers, March 21, 1901.
- NORMAN, Major SEATON, surgeon, 39th Infantry, by appointment as major and surgeon, U. S. volunteers, March 22, 1901.
- HENRY, Major JOSEPH N., surgeon, 31st Infantry, by appointment as major and surgeon, U. S. volunteers, April 6, 1901.
- ERWIN, Captain JAMES J., assistant surgeon, 30th infantry, by appointment as captain and assistant surgeon, U. S. volunteers, March 1, 1901.
- BREWER, Captain ISAAC W., assistant surgeon, 36th Infantry, by

- appointment as captain and assistant surgeon, U. S. volunteers, March 11, 1901.
- METZGER, Captain JOHN A., assistant surgeon, 35th infantry, by appointment as major and surgeon, U. S. volunteers, March 26, 1901.
- BOWEN, Captain WILLIAM, assistant surgeon, 27th Infantry by appointment as major and surgeon, U. S. volunteers, March 23, 1901.
- HADRA, Captain FREDERICK, assistant surgeon, 33d Infantry, by appointment as major and surgeon, U. S. volunteers, March 30, 1901.
- MINOR, Captain JAMES C., assistant surgeon, 29th Infantry, by appointment as major and surgeon, U. S. volunteers, March 21, 1901.
- ROBINS, Captain ROBERT P., assistant surgeon, 47th Infantry by appointment as major and surgeon, U. S. volunteers, March 23, 1901.
- COOK, Captain WILLIAM H., assistant surgeon, 32d Infantry, by appointment as major and surgeon, U. S. volunteers, March 21, 1901.
- PEED, First Lieutenant GEORGE P., assistant surgeon, 33th Infantry, by appointment as captain and assistant surgeon, U. S. volunteers, March 24, 1901.
- CARLING, First Lieutenant JOHN, assistant surgeon, 35th Infantry, by appointment as captain and assistant surgeon, U. S. volunteers, March 23, 1901.
- DUDLEY, First Lieutenant FRANK W., assistant surgeon, 32d Infantry, by appointment as captain and assistant surgeon, U. S. volunteers, March 21, 1901.
- WALLACE, First Lieutenant GEORGE S., assistant surgeon, 42d Infantry, by appointment as captain and assistant surgeon, U. S. volunteers, March 22, 1901.

Changes in the Medical Corps of the U. S. Navy, for the week ended April 20, 1901:

- URIE, J. F., surgeon, detached from the Dolphin, April 20, and ordered to the marine recruiting rendezvous, Boston, Mass., April 22, as relief of Surgeon J. E. Gardner.
 - STONE, E. P., surgeon, detached from the naval dispensary, Washington, D. C., April 19, and ordered to the Dolphin, April 20, as relief of Surgeon J. F. Urie.
 - ANDERSON, F., surgeon, ordered to the naval dispensary, Washington, D. C., April 19, as relief of Surgeon E. Stone.
 - GARDNER, J. E., surgeon, detached from the marine recruiting rendezvous, Boston, Mass., April 22, and ordered to the naval hospital, Cavite, P. I., for duty, via steamer sailing from San Francisco, Cal., May 11.
 - SMITH, C. G., assistant surgeon, appointed assistant surgeon from April 12, 1901.
 - ARNOLD, W. F., surgeon, detached from the New Orleans and ordered to duty at Olongapo, P. I.
 - ALFRED, A., passed assistant surgeon, ordered to duty with the marine brigade, Cavite, P. I.
 - GROW, E. H. J., assistant surgeon, detached from the Glacier and from duty at the Cavite Naval Station and ordered to the Isla de Luzon.
 - STEEP, J., assistant surgeon, detached from duty with the 1st regiment of marines, Cavite, P. I., and ordered to the Castine.
 - CURL, H. C., assistant surgeon, detached from the Castine and ordered to the Cavite Naval Station.
 - ROSE, W. V. H., passed assistant surgeon, detached from the Monterey and ordered to the Newark.
 - BLACKWOOD, N. J., passed assistant surgeon, detached from duty at the naval hospital, Philadelphia, Pa., April 17, and ordered to duty in connection with fitting out the Alliance, April 20, and to that vessel, when placed in commission.
 - MORRIS, L., passed assistant surgeon, detached from the Naval Academy and ordered to the naval hospital, Philadelphia, Pa., April 17, as relief of Passed Assistant Surgeon N. J. Blackwood.
 - SMITH, W. S., assistant surgeon, retired, detached from the Cavite Naval Station and ordered to the Oregon.
 - PECK, R. E., assistant surgeon, ordered to the Pensacola, April 25.
- Changes in the U. S. Marine Hospital Service for the 14 days ended April 18, 1901:**
- BANKS, G. E., surgeon, granted leave of absence for 6 days from April 15-April 11.
 - KINYOUN, J. J., surgeon, relieved from duty at San Francisco quarantine, and directed to proceed to Detroit, Mich., and assume command of the service—April 6. Granted leave of absence for 15 days—April 11.
 - PERRY, T. B., surgeon, department letter of March 2, granting Surgeon Perry leave of absence for 30 days, amended so that said leave shall be for 20 days—April 15.
 - GREENE, J. B., passed assistant surgeon, relieved from duty at Berlin, Germany, and directed to proceed to Washington, D. C.—April 5.
 - COFER, L. E., passed assistant surgeon, designated as chief quarantine officer of the Territory of Hawaii, relieving Surgeon D. A. Carinichael—April 6.
 - HASTINGS, HILL, assistant surgeon, to proceed to Santa Barbara, Cal., for special temporary duty—April 6.
 - GRUBBS, S. B., assistant surgeon, granted leave of absence for 7 days—April 10. Upon expiration of leave, proceed to Washington, D. C., and report at bureau for duty—April 10.
 - LAVINDER, G. H., assistant surgeon, bureau, telegram, granting Assis-

ant Surgeon Lavinder leave of absence for 10 days, amended so that said leave shall begin April 1 instead of March 27—April 5.

LUMSDEN, L. L., assistant surgeon, upon departure of Surgeon J. J. Klynon, to assume temporary command of San Francisco quarantine station—April 6.

FRANCIS, EDWARD, assistant surgeon, to proceed to New York and report to medical officer in command, immigration depot, for duty—April 8.

ALFRED, G. H., acting assistant surgeon, granted leave of absence for 4 days from April 10—April 6.

GAHN, HENRY, hospital steward and chemist, to assume temporary charge of purveying depot during absence of medical purveyor—April 8.

BROWN, F. L., hospital steward, relieved of duty at Boston, Mass., and directed to proceed to Cape Charles quarantine station and report to medical officer in command for duty and assignment to quarters—April 10.

PECK, F. H., hospital steward, to proceed to San Francisco, Cal., for special temporary duty—April 5.

MATHEWSON, H. S., assistant surgeon, promoted and appointed passed assistant surgeon to rank as such from April 7—April 6.

MONCURE, J. A., reinstated and appointed acting assistant surgeon, U. S. Marine Hospital Service, for duty at the Gulf quarantine station—March 29.

VAUGHAN, G. T., surgeon, reassigned to duty in Marine Hospital bureau—April 13.

GEDDINGS, H. D., passed assistant surgeon, directed to proceed to Buffalo, N. Y., for special temporary duty in connection with the installation of the Marine-Hospital Service exhibit at the Pan-American Exposition—April 18.

BLUE, RUPERT, passed assistant surgeon, directed to proceed to San Francisco, Cal., and report to Surgeon J. H. White for special temporary duty—April 16.

PARKER, H. B., assistant surgeon, directed to proceed to San Francisco, Cal., and report to Surgeon J. H. White for special temporary duty—April 15.

FOSTER, M. H., assistant surgeon, 2 days of the leave of absence granted Assistant Surgeon Foster by bureau letter of March 11, revoked—April 18.

CORPUT, G. M., assistant surgeon, directed to proceed to San Francisco, Cal., and report to Surgeon J. H. White for special temporary duty—April 15.

MOORE, DUNLOP, assistant surgeon, relieved from duty at Port Townsend quarantine, and directed to proceed to San Francisco, Cal., and report to Surgeon J. H. White for special temporary duty—April 18.

BERRY, T. D., assistant surgeon, granted leave of absence for 30 days from May 2—April 13.

BALLARD, J. C., acting assistant surgeon, leave of absence granted Acting Assistant Surgeon Ballard by bureau letter of February 4, amended to read, 6 days from April 23—April 16.

GOLDSBOROUGH, B. W., acting assistant surgeon, granted leave of absence for 7 days—April 13.

MCGINNIS, R. H., acting assistant surgeon, directed to proceed to St. Augustine, Fla., for special temporary duty—April 12.

RICHARDSON, S. W., hospital steward, directed to proceed to Buffalo, N. Y., and report to Passed Assistant Surgeon H. D. Geddings, for special temporary duty—April 17.

HALL, L. P., hospital steward, directed to proceed to Boston, Mass., and report to medical officer in command for duty and assignment to quarters—April 13.

HALL, LOUIS P., of New York, appointed junior hospital steward in the U. S. Marine-Hospital Service—April 12.

Changes in the Medical Corps of the U. S. Army for the week ended April 20, 1901:

BLOCK, WILLIAM H., acting assistant surgeon, is granted leave for 1 month, with permission to go beyond the limits of the department of Cuba.

BUFORD, OLIVER H., acting assistant surgeon, granted leave for 7 days, is extended 12 days.

SUMMERALL, Captain WILLIAM B., assistant surgeon, recently appointed, is relieved from duty in the department of Cuba, to take effect when his services can be spared by the commanding general of that department, and will then proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

BOWEN, Major WILLIAM, surgeon, is granted leave of absence until April 28.

HADRA, Major FREDERICK, surgeon, is granted leave for 1 month.

ANDERSON, Captain CHARLES, assistant surgeon, is assigned to temporary duty with troops on the army transport Ohio, to sail for the Philippine Islands. Upon the arrival of the transport at Manila, Captain Anderson will report for assignment to duty.

LEPERE, Captain MATTHEW, assistant surgeon, is assigned to temporary duty with troops on the army transport Ohio, to sail for the Philippine Islands. Upon arrival of the transport at Manila, Captain Lepere will report for assignment to duty.

BEASLEY, Major CHADWORTH O., surgeon, is assigned to temporary duty with troops on the army transport Logan, to sail for the Philippine Islands. Upon arrival of the transport at Manila, Major Beasley will report for assignment to duty.

MEARNS, Major EDGAR A., surgeon, granted leave on surgeon's certificate, is extended 6 months.

KILBOURNE, Major HENRY S., surgeon, is detailed as a member of the board of officers appointed to meet at the U. S. General Hospital, Presidio, for the examination of candidates for admission to the medical corps of the Army, vice Lieut. Col. Benjamin F. Pope, D. S. G., relieved.

EBER, Captain ALBERT H., assistant surgeon, upon the expiration of the leave granted him April 11, will proceed from St. Clair, Mich.,

to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

MADARA, Captain JAMES W., assistant surgeon, recently appointed, will proceed from Lexington, Ky., to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

ADOLPH K. BERNERS, ERNEST A. BOECKH, ROBERT CONARD EDWARD M. CHERVENKA, HARRY G. CIAMRERS, CHARLES S. ELLIOT, OTTO F. FRESE, CARL GRANER, JAMES W. GORIN, WILLIAM C. JONES, ANGUS MCLEOD, CLIFFORD H. PERRY, ALBERT A. ROBY, HARRY A. SAGER, EMIL STRAND, GEORGE C. VAN SICKLE and WILLIAM VOGT, hospital stewards, (appointed April 15, from acting hospital stewards, hospital corps), now at Manila, P. I., are assigned to duty in the division of the Philippines.

MAX ARENDT, LAFAYETTE JOSEPH and GEORGE E. VASS, hospital stewards, (appointed April 15, from privates of the hospital corps), now at Manila, P. I., are assigned to duty in the division of the Philippines.

The retirement from active service, April 13, 1901 of Col. Alfred A. Woodhull, A. S. G., by operation of law, under the provisions of the act of Congress approved June 30, 1882, is announced. Col. Woodhull will proceed to his home.

APPEL, Major AARON H., surgeon, leave for three months is granted, to take effect upon his being relieved from duty in the department of the East.

POINDEXTER, Captain JEFFERSON D., assistant surgeon, having been examined for promotion by a board of officers and found physically disqualified for the duties of a major and surgeon, by reason of disability incident to the service, his retirement from active service as a major, under the provisions of the act of Congress approved October 1, 1890, is announced, to date from April 13, 1901, the date he would have been promoted to that grade by reason of seniority if found qualified. He will proceed to his home.

COMBE, JOSEPH K., acting assistant surgeon, leave for 30 days is granted. The following named contract dental surgeons, will proceed from the places designated to San Francisco, Cal., and report for transportation to Manila, P. I., where they will report for assignment to duty: S. DAVIS BOAK, from Martinsburg, W. Va.; CLARENCE E. LAUDERDALE, from Naples, N. Y.

AMES, ROGER POST, acting assistant surgeon, leave for two months, with permission to go beyond sea, is granted.

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Hospital Service as a Prerequisite of Admission to Practice, has been recommended. It is already the law in Germany that one year of residence in a hospital is necessary before receiving the degree of M.D. It is said that this is still more necessary in the United States because only the best students obtain hospital positions, and the worst, those needing such practical instruction more, go directly into practice. In reply it may be urged, (1) that there are not hospitals enough in the country to furnish a year's residence to all the graduates that are required by a rapidly growing nation; and (2) that the true remedy consists in a demand upon the schools that they make thorough and needed clinical and practical instruction a part of undergraduate work. Lengthen the course of study if necessary; but the college should not give the degree unless the graduate possesses what his piece of parchment certifies—the ability to practise medicine.

Crime Against Criminals is criminal, although the work of civilized peoples. Indeed many of our prisons seem designed to prevent all possibility of reform, and to increase the viciousness and criminality of the inmates. Conditions in the Virginia penitentiary, for instance, as described by Dr. Charles V. Carrington, the surgeon at the institution, are fully as bad as those which required legislative correction in Georgia, Florida and other states. Both body and soul are ruined in the Virginia prison. The faulty, antiquated construction of the buildings and their crowded condition make impossible the provision of ordinary means for the preservation of health. In the prison for men an average number of 1,200 convicts are confined in 192 cells, and pure air is, of course, unknown. There is no sewerage system except in the hospital. The food is of poor quality, and the manner of its distribution makes it worse. Only the fact that criminals are generally young, vigorous and accustomed to privations prevents the annual death rate from rising above 40 per thousand. By the congregate plan in vogue, hardened criminals are thrown together with young offenders. Lessons in crime are the result, and vice for which the cities of Sodom and Gomorrah were destroyed.

Women's Clubs and Sanitary Effort.—The enlistment of every active intellectual element of the community in measures for the betterment of sanitary conditions should not be neglected. Many sanitary measures fail

of full acceptance by the people, and consequently of the best results, simply because of lack of comprehension of the true principles involved. It has been the experience of many sanitarians that the active cooperation of intelligent women is a most potent element of successful administration of sanitary regulations. In these days it is happily an easy matter to secure a hearing upon such subjects before representative bodies of women in the women's clubs that abound throughout the whole country. Not only by personal appearances and explanatory talks can the active health officer promote hygienic reforms, but he can enlist the aid of bright, public spirited women of culture, who in discussion and debate will uphold and advance scientific reforms. Women physicians are of the greatest help in such movements and will usually be found most ready to cooperate with the health authorities in presenting every subject of legitimate interest to the women's organizations in which they have membership. By nature and necessity woman has been the hygienist of the household; let us enlarge this function to civic and even national uses.

Premature Presbyopia or Accommodation Paresis, we believe, is more frequent and more often the cause of severe eye-strain, reflex neuroses, etc., than is generally suspected. In private practice several cases have illustrated this fact, and explained the inability to do near-work with any glasses given, until the suspicion as to the parietic or paralytic condition of the accommodative apparatus dawned upon the physician's mind. That such cases had passed through the offices of other most reputable oculists, or had long been unsuspected in old patients, demonstrates the lack of attention to the explanation. Into the question of etiology it is unnecessary to go at this time. When the accommodation is normally active and powerful the mistake of over-correction or of not waiting for real presbyopia is a bad one, though not so great as that of not recognizing premature presbyopia or chronic weakness of the ciliary muscle.

The old Professor in our medical colleges—what shall be done with him when for any reason he has outlived his usefulness? Of all the questions a Board of Trustees has to solve, this is the most difficult and perplexing. At several classical colleges—Harvard, Yale, Columbia—a pension system has been adopted, but so long as our rich men think that ignorance of Latin and

Greek are more important than disease and death, so long will our unendowed medical schools be incapable of establishing the pension system. Flattering the retired or resigning Professor with an "Emeritus" in return for the continued use of his name is another plan, but it is one open to grave objections. There are many reasons why, with growing age or under changed conditions, a teacher should discontinue his work. Medical education and science are both rapidly changing methods and even objects, the college itself may also suddenly become revolutionized, and the teacher who carries on the ways of ten years ago cannot meet the rivalry of other institutions and the demands of the modern practitioner. In all things the good of the many must be preferred to that of the one, and when for any reason the occupant of a chair fails to meet the requirements of our progressive profession, sympathy with the individual must yield to the requirement of the common good. Whether his own fault or not, when another can do the work much better, his resignation should be accepted. But it should be certain that an overpushing ambition and medical politics have not artificially created a desired condition.

The Man Who Never Makes Mistakes in diagnosis, or commits an error of judgment in treatment, is sometimes a member of our medical societies. He never has any unpleasant complications in his surgical manipulations and his cases are particularly free from unfavorable sequels; uniformly good results and phenomenal success invariably crown his efforts. He is a self-satisfied, complacent gentleman, extremely optimistic when reviewing his own handiwork, but coldly impartial and, perhaps, slightly hypercritical when surveying that of his conferees. He becomes particularly impressive when some younger man details the history of an unfortunate and unavoidable accident, or when some conscientious colleague makes a frank and truthful recital of his experiences. Then he manifests his surprise and, by his comments in the discussion, indicates his calm superiority, and advertises his personal ability. He knows full well that society reports are often perused by credulous readers with more receptive minds than the actual auditors, and hence he looks carefully after the stenographer. However, few are deceived except himself and an occasional neophyte. Fortunately such men are but a small minority of contributors, and the papers and clinical reports are usually provocative of veracious and beneficial discussions.

The Prevention and Cure of Insanity has too long been neglected by the profession, and we are glad to see that the Eighth Annual Report of the State Charities Aid Association, of New York, has determined to take up the work in a systematic manner. The report should be read by every one interested in the subject. It sets forth the reasons why insanity should not be considered an incurable disease, that it is not necessarily a disease of the brain alone, etc., and thus states the purpose it has formed:

The plan we would advocate is the erection, in several of our largest cities, of comparatively small Reception Hospitals, or Psychopathic Hospitals, as branches of existing State Hospitals

and governed by the same boards of managers. These hospitals, designed for the reception and temporary treatment of insane patients, should be organized on the same general plan as are the New York, Presbyterian, St. Luke's, St. Vincent's, Roosevelt, and Mount Sinai hospitals of this city, and other well managed hospitals elsewhere; with a superintendent and nursing staff, resident physicians, and attending and consulting physicians who should be alienists and neurologists.

An out-door department is recommended; the establishment also of pay and gratuitous treatment, and a department for clinical teaching. The Pathological Institute (already established) should also become a part of the general system. This most praiseworthy plan is not new, except in America, and for several years has been urged by Dr. Frederick Peterson of New York City.

Pelvic Inflammatory Diseases in Women.—Except cancer of the uterus there is no subject of such vital importance to the gynecologist as pelvic inflammatory disease. In this group of cases those of puerperal origin command the greatest attention; for, excepting cancer, probably no one class of gynecologic disease results in such a high percentage of deaths.

If the gynecologist is alive to these facts and always on the alert, deaths from this cause may be largely averted. He should remember that a large proportion of puerperal infections are due to the streptococcus; and that, of those severe infections at labor which go on to persistent inflammatory disease and drive the woman to the gynecologist for relief, a very large majority are of streptococcal origin. Bearing this in mind the gynecologist will generally make a correct diagnosis from the patient's history alone.

Knowing that these puerperal infections are usually of the subperitoneal connective tissues and localized on one side of, or anterior or posterior to, the uterus, the physician is enabled by his local examination to strengthen or weaken his probable diagnosis made from the history. A diagnosis of streptococcus infection being made, the problem is to reach and drain the mass without entering the peritoneal cavity. This can generally be accomplished by the vaginal incision or by the extraperitoneal inguinal incision of Bardenheuer. If it be found necessary to enter the peritoneal cavity, the intestines, during the operation, should be packed away with the utmost care; a dry technique should be followed, and if pus escapes, the contaminated region should finally be well covered by gauze carried out vaginally, abdominally, or by both routes. The purpose of this gauze is not that of drainage; it is used to keep the intestines from the infected region until protective granulations are formed.

Those who must Sleep in the Day are seldom thought of by the noise-makers. Indeed, how few have ever considered the fact that in every city there are thousands whose occupation compels them to sleep during the day. The sick, and all those of sensitive natures know the great influence of noise, at least during the night, in retarding convalescence, in lessening the resisting power of the organism, and in keeping up a high death-rate. How much worse the fate of those who are compelled to work all night and are prevented

by noise from securing normal sleep during the day. The hygienic value of quiet is one we are too slow in recognizing.

A Bureau for the Engagement of Clinical Assistants.—Cooperation of all sorts is now the rule in most systematized lines of activity. The medical profession is still much hampered by its unfortunately antiquated methods. The nursing profession has adopted, in most communities, registration of its members, preserving records of the character of education, the training, experience and preferences for lines of work, along with references to physicians who have practical knowledge of the person thus registered. Why not adopt the same plan in the securing of clinical assistants? When a clinical assistant is needed it usually happens that one can be found, but the process is largely accidental, like the old methods of securing a nurse, and as a rule it is only possible to accept the first willing person who offers himself. It often occurs that a physician would much prefer to exercise a larger choice in the matter, selecting one whose credentials are more varied or satisfactory. This is seldom possible, at least for the rank and file of hospital workers, because changes in the department occur seldom, and the attention of qualified or willing young medical men is not directed that way. Again, how is a young man seeking clinical opportunities to know of possibilities or openings which he may greatly desire, except again, by accident? Then too often he may suddenly learn of, and accept work, which though desirable, at least is not what he would prefer, but only what he can get. Hence the choice is forced upon him, not made with judgment and care.

If now, a systematic record, card-index, could be kept at some central point, on which shall appear his name, address, collegiate degree or evidences of education, medical degrees, experience, clinical and practical, and above all his preferences, there can be found by the one seeking an opening, opportunity for choice. It will afford important opportunities, too, for inquiries from the sources of information referred to. It would seem that such a center for obtaining this much needed knowledge would not only facilitate the securing of clinical helpers, but greatly encourage medical students and young practitioners to seek for such.

Recent Studies of the Etiology of Diabetes.—For some time it has been well known that certain forms of diabetes frequently follow injury of the pancreas or occur during the course of diseases affecting that organ. In a limited number of cases in which partial operative removal of the pancreas has been undertaken in man diabetes has followed. Experiments by several observers have shown that total removal or nearly total removal of the pancreas in animals is always followed by diabetes. But that the entire pancreas is not concerned in producing such forms of pancreatic diabetes has seemed probable from the fact that diabetes occasionally, but not always, is present in diseases affecting that organ. Exactly where the lesion has been located which has produced the trouble in those cases of pancreatic disease in which diabetes has been present has been a matter for

much speculation and considerable study. Certain peculiar groups of cells in the pancreas which were first described by Langerhans (*Beitrage zur mikroskopischen Anatomie der Bauchspeicheldruse, Inaugural Dissertation, Berlin, 1869*) and are usually known as the islands of Langerhans, have been mentioned as possibly the part affected, but in the past there has been no very definite evidence in support of this theory.

The islands of Langerhans have been thoroughly studied by Dr. Eugene L. Opie, recently, with a view to determining their origin and their importance as a causative factor in diabetes. His first paper on the histology of the islands of Langerhans appeared in the *Johns Hopkins Bulletin*, September, 1900. Later papers in the *Journal of Experimental Medicine*, January 15, and March 25, 1901, report the results of a study of the relations of chronic interstitial pancreatitis and of hyaline degeneration of the islands of Langerhans to diabetes. He distinguishes two types of inflammation affecting the developed pancreas: Interlobular pancreatitis, affecting chiefly the periphery of the lobules, and interacinar pancreatitis, invading the islands of Langerhans as is not the case with the first named variety unless the sclerotic process has reached a very advanced grade. In one of eleven cases of interlobular pancreatitis, diabetes of a mild variety occurred. Advanced sclerosis, following obstruction of the ducts by calculi, affected the islands of Langerhans in this case. In two of three cases of interacinar pancreatitis diabetes was present. In a fourth case of diabetes, hyaline deposit between the capillaries and the parenchymatous cells had so completely altered the islands of Langerhans that they were no longer recognizable. But a case reported in Dr. Opie's last paper is the most interesting and remarkable of the series. In this case the hyaline metamorphosis was limited strictly to the islands of Langerhaus, the glandular acini remaining intact.

Limited space forbids even mention of the features of these extremely interesting cases, or of the methods employed in their study. The importance of the results obtained in the case last mentioned will be readily appreciated, however, by those interested in the question of the etiology of this form of diabetes, and they seem to demonstrate very positively that the islands of Langerhans are parts responsible for the disturbance of carbohydrate metabolism present in this disease.

The Association of Convict Insane With Other Patients in Hospitals is justly criticized by Dr. B. D. Evans, and by the Board of Managers of the New Jersey State Hospital at Morris Plains, in their reports for the year 1900. In many States (*e. g.*, New York, Illinois, Michigan) the segregation of convicts who have become insane during imprisonment has been provided for in special institutions. But in others the old method of association in the State hospitals is still in vogue. And it is a great wrong, first to the innocent insane or convalescent to whom the association must be repugnant, or who learn crime of the old convicts; secondly to the hospital officers, who are tormented to prevent this, to keep the prisoners from escaping, etc.; and lastly to the State, which by the association really increases the num-

ber of criminals and the public cost of crime. Numerous illustrations are cited in the Report, nor does the evil always end with the discharge of the convicts, as it is said of some that "after their discharge from the hospital and from the State prison they succeeded in luring away certain previously moral patients who had been forced into their society by the transfer of the convicts to the State hospital.

Nostrum Mania.—The nostrum vendors and the newspapers and the United States copyright laws are responsible for a new type of disease. In his professional experience almost every physician must have learned of people afflicted with a genuine mania for taking so-called patent medicines. Many a man is made poor and kept so by this strange insanity. The most typical case of the disease is one cited by the *Practical Druggist* in which a Philadelphian was arrested by his wife for failure to support his family. For several years he had followed the newspaper advertisements and imagined himself the victim of all the diseases described by the enterprising advertisers. Apparently both poverty and pathology increased. A partial list of the takings is appended, "washed down with 2 gallons of lithia water each week:

48 bottles	Swamp Root.
24 bottles	Celery Compound.
60 bottles	Expectorant.
80 bottles	Vermifuge.
75 bottles	Kidney Cure.
60 bottles	Peruna.
36 bottles	Swayne's Specific.
57 bottles	Omega Oil.
75 bottles	Catarrh Remedy.
30 bottles	Munyon's Remedies.
50 bottles	Nervura.
24 boxes	Skin Ointment.
60 boxes	Magnetic Ointment.
36 boxes	Cough and Catarrh Root.
15 bottles	Glycerine Tonic.
37 boxes	Tar Tablets.
25 boxes	Cold Cure Pills.

And yet,—he died!

The Patient's Mental Condition is often quite as important a matter in the proper treatment of disease, as is his physical status. Failure to realize this fact has doubtless been in the past a professional sin, for which we are duly and justly punished by Unchristian Unscience, Faith-cure, and the rest. Our textbooks on therapeutics and materia medica tell us about hundreds of drugs; some of them will allude with too vague indifference to hygienic methods of treatment, but how many of them recognize and advise as to the highly important conditions of the patient's will, disposition, etc.? Every physician of discernment knows that the mental attitude of the patient governs, often entirely, always to some extent, the morbid processes and the nutritional reactions. The cheerfulness and friendliness of the old time general practitioner was perhaps needed to neutralize his bad medicines, and they were certainly powerful therapeutic agents. Choate found the dying Lowell reading "Rob Roy," whereby, the poet said, he forgot his bodily pains. Two items universally omitted from the books on Therapeutics and Treatment should be henceforth important constituent parts—music and

books. Above all things nurses should be good readers, and, if possible, good musicians. Physicians should advise about what books to be read, as much as about what drugs to be given and what food to be eaten. The best nurses' training schools should have teachers of music and of literature, as well as professors of surgery, obstetrics, etc., etc.

The Complications of Diphtheria.—One of the most important sections of the monograph on diphtheria by Councilman, Mallory and Pearce, to which reference has already been made, is that which records the results of the bacteriologic investigations and the study of certain complications. Probably the most interesting and instructive result of the bacteriologic study was the demonstration of the fact that general infection with the diphtheria bacillus is much more frequent than is generally supposed. It is not so frequent, however, as is general infection with the streptococcus. Infection with either or both of these organisms is most common in the so-called "septic" or malignant cases. In the production of bronchopneumonia which was present in 131 of the cases, the pus cocci and the pneumococcus appear to be important etiologic agents; the diphtheria bacillus alone, however, may give rise to the bronchopneumonia as well as to abscess and necrosis of the lung. These latter facts have an extremely important practical bearing, especially with regard to treatment and the mortality statistics of cases treated with antitoxin. Naturally it can hardly be expected that the diphtheria-antitoxin can influence an infection due to pus cocci, and a fatal termination in such cases should hardly be ascribed to failure of the antitoxin. It would seem logical also in view of the possible dependence of bronchopneumonia upon infection of the lung with diphtheria bacilli to increase largely the dose of the antitoxin in the event of the development of such complication. If it were possible to settle upon the streptococcus as the cause of the bronchopneumonia in a given case, it would also seem the part of wisdom to consider seriously the desirability of administering some antistreptococcal serum. Of great interest and practical importance are the results of the examinations of the accessory sinuses of the nose. In 39 of 63 cases investigated they were found the seat of inflammation, and from most of these cases diphtheria bacilli, generally in association with pus cocci, were recovered. Another interesting result of the investigation was the detection of complicating tuberculosis in 16% of the cases. This the authors are disposed to consider the expression of an old infection to which diphtheria may have predisposed. All of these questions have extremely important practical bearings, and not the least important, certainly one of the most interesting, is that with reference to the accessory sinuses of the nose. The authors believe that these inflammatory conditions do not subside quickly, and they consider that the persistence of diphtheria bacilli in cultures from the throat and nose after all symptoms of diphtheria have subsided, may be attributed to gradual drainage of these sinuses. If this view is confirmed, it would seem that more energetic treatment should be directed to the local conditions in the nose and throat during what might

be termed the convalescence than is generally the case. Certainly the question merits further consideration.

A Proposed National Bureau of Materia Medica.

—In the *Journal of the American Medical Association* for April 20, 1901, Dr. F. E. Stewart proposes a National Bureau of Materia Medica to furnish the medical and pharmaceutical professions with accurate information concerning the commercial materia medica; to protect the public from those who exploit the sick by misleading advertisements, adulterations, sophistications and fraudulent substitutions; to promote fair competition in trade; to aid pharmacists and manufacturers by providing a place where they can standardize their products and preparations and keep them under chemical and pharmacodynamic observation; to aid the professions of medicine and pharmacy in the cooperative introduction of new products and preparations to science; to aid pharmacists and manufacturers in the introduction of new brands to commerce; and to appeal to physicians to support manufacturing houses which conform to proper scientific and professional requirements by specifying their products when prescribing, and to discriminate in favor of pharmacists who carry standard and standardized preparations for dispensing in physicians' prescriptions. The method by which the author hopes to accomplish these objects is given in a prospectus which forms part of his paper. On account of the great importance of the subject and the impossibility of doing justice either to the subject or the paper in the limits of an abstract we must refer our readers to the original text for detailed information. Reprints may be had by addressing the author, at 67 Prospect Street, East Orange, N. J.

Learning Nursing by Correspondence, reminds one of the daughter who should learn to swim without going near the water; and yet there lie before us circulars, Applications for Enrollment, Why-I-should-take-this-Scientific-Course-of-Training, Rates-of-Tuition, etc., explicitly setting forth the scheme. The English and Latin by which the girl in the store or "factory" is induced to remit, are outdone only by the ethicality and religiosity of the arguments. An abstract cannot quite equal quotation:—

WHY SHOULD I TAKE THIS SCIENTIFIC COURSE OF TRAINING?

First.—Because the Trained Nurse is now compelled to register, and very soon it will be a law that all nurses must be graduates of some first class Training School, or undergo an examination, before they can nurse in serious cases, and get the fees of the Trained Nurse. If I matriculate, or register as a student in the American Correspondence School of Nursing, I will not be affected by any law which may be made hereafter, compelling women to be examined before entering into practice.

Second.—Because in taking the training of the Nurse in the American Correspondence School of Nursing, I do not consume much time, nor need I leave my home, nor am I prevented from nursing, or from being in the store or factory—in short, I can study my lessons at night, and in 13 months I can have a diploma which will entitle me to high wages if I want to nurse, and if I do not, then I have acquired knowledge of how to take care of myself, and the family I belong to, and I will in this way escape from many a disease and much suffering all my life.

Third.—Because in this course I learn all about myself, and when I get sick I can tell whether the proper thing is done for me. In fact, it will possibly save myself and my family many a doctor's bill.

I am also, in the Primary and Normal courses, taught to be a Masseuse, and if I do not wish to nurse, I can give Massage Treatments, and get the regular \$2 fee, which is everywhere paid for these treatments.

1. Every pupil is accepted, no matter how little she knows.
2. If I cannot read nor write I will be taught.
3. The work is simple and easy to learn.
4. I need not go away from home, nor give but one hour a day.
5. The expenses are very reasonable.
6. I like this school best, because the graduates are now taking the highest rank as Nurses.
7. If I do not get my lessons readily the Professors help me.
8. Everyone knows this is the only Correspondence School for Nurses, and the course of study is unsurpassed.

TO THE UNEDUCATED A SURE HOPE.

PREPARATORY EDUCATION FURNISHED.

The management of this modern training school have appreciated the fact, in taking up training school work among the non-graduate nurses, that many will be found who have shared absolutely no educational advantages and are deficient in the common English branches of reading, writing and arithmetic, and yet, notwithstanding this obvious disadvantage, they have served as nurses and are now regarded as essentially "good" nurses.

We desire a literary fitness and general scholarship, as well as a distinct technical education.

Let every pupil nurse who enrolls with us cultivate lofty aspirations and a broad scholarship, and realize that the calling of the nurse is a little less than divine, as will be shown some day when all other aims, save the aims and objects of the human healer, will have proven by comparison to be impractical, visionary and unsuccessful.

What a way to make money! And the poor girls!

Where Are Your Clothes Made?—asks the *College Settlement* of Philadelphia citizens, and answers by saying that it is not only the ready-made clothing that is made in the unhealthy sweatshops and crowded back alleys. The following advice is urged as to the finest tailor-made clothing:

If you are a good customer and deal at a first-class house, demand of your tailor that he give you an assurance that your clothing will be made on the premises or in sanitary workrooms suitable for the purpose. Your tailor has, even under the present system of home work, a room in connection with his store used for bnsheing and altering. He can meet your demand, if it is the first, without increasing his rent, by calling in one of his journeymen to do your work in his repair shop. If ten or more of his customers make such a demand he will be forced to consider seriously the subject of workrooms on his own premises and under his own supervision.

That fine champion of sound science and christianity, Dr. J. M. Buckley, challenged the Unchristian Unscientist Mr. Carol Norton to a debate. At the last moment, "after deep and prayerful consideration," Mr. Norton concluded not to appear, and wrote instead:

A further examination of his (Dr. Buckley's) recent utterances on Christian Science and a fuller analysis of his attitude, based on a line of opposition over a period of years, leads me to feel that the best interests of Christian Science will not be served by my speaking. . . . The statements necessary of correction which Dr. Buckley could make in forty minutes could not be decently made by me in ten times that amount of time. . . . A forty-minute address on Christian Science can hardly touch even the hem of the garment.

A noteworthy advance in Penology is the isolation of its consumptive convicts by the State of Texas. The patients receive treatment as in the best sanatoriums. The experiment has proved successful, and financially the farm has yielded the State a net profit of about \$2,500. A similar segregation has been ordered by Alabama. If the sick convict can be cured and also made profitable, why are the penitentiaries for the healthy so burdensome to the taxpayers? Because of "politics."

The physician is not compelled to practise, nor compelled to answer calls, is the decision of the Indiana Supreme Court. He is not, the Court holds, in the position of a railway company which has certain public duties by virtue of its office and charter. When no contract exists, the physician should not legally be compelled to respond to every call that may be made upon him any more than a lawyer should be compelled to take the case of every client that may come for advice.

Sir William MacDonald, of Montreal, Canada, proposes the endowment of a crematory whereby the poor may have incinerations made for a very small fee or gratis. The object is to lessen the lavish funeral expenses of the foolish poor. In Cleveland, Ohio, the ostentatious hearse and long string of carriages are considered necessary by them, while persons of means use the funeral car on the street railroads at a cost of only \$10.00.

Weltmerism has at last been taught a lesson, and the Nevada, Mo., postoffice, raised by its influence from a fourth-class to a first-class office, may have to return to its former humble status. The President and the Secretary of the "Institute of Magnetic Healing" have pleaded guilty to indictments charging them with using the mails to defraud. "All diseases known to man or woman" were cured by "absent treatment."

The Board of Education of Philadelphia has decided to try the experiment of abolishing the examination of pupils in the public schools, the teachers and principals, from the record of the term work, determining whether the pupils are to be promoted or not. The strain and danger to the health, of the examinations, will thus be avoided. This is a most commendable movement.

"It sickens one not a little to hear a beneficent millionaire spoken of as the 'largest-hearted person in the universe,' when perhaps in the next street there lies dying a doctor who has sucked the poison from a patient with diphtheria; but that is the fault of the praiser, not of the praised."—[*The Spectator*.]

The gunmakers and powder manufacturers sent their agents to Albany, and their lobby was so powerful and successful that the proposed law against dove-shooting or pigeon-shooting under the name of sport, failed of passage. Where were the antivivisectionists?

Ten blind physicians, it is said, are active practitioners in the United States.

AMERICAN NEWS AND NOTES

GENERAL.

Right to Quarantine.—The United States Supreme Court has affirmed in a late decision the right of one State to quarantine against another in case of contagious disease.

Contract Surgeons.—At the request of the Surgeon General of the Army, the Secretary of War has directed that on all official orders and records of the War Department and of the army, doctors serving under contract with the army shall be designated as "contract surgeons," in lieu of "acting assistant surgeons," as heretofore.

The National Association for the study of epilepsy and the care and treatment of epileptics will meet in Washington, D. C., on the afternoons of May 14 and 15, 1901. It has for its aim the welfare of epileptics, the stimulation of causes and cure of the disease and the advocacy of treating this class in institutions. Wm. Pryor Letchworth, Portage, N. Y., is president, and Dr. Wm. P. Spratling, superintendent; Craig Colony, Sonyea, N. Y., secretary.

The National Sanitarium at Fort Stanton for the treatment of tuberculosis, though exclusively for the use of patients sent from the Marine Hospital, is expected to help materially in the international fight against this dread disease. Surgeon-General Wyman will detail one of his most experienced men to attend the Medical Congress, which will be held in London on July 22 to discuss the extermination of tuberculosis. Fort Stanton is situated in a peculiarly adapted climate 6,126 feet above the sea. The purpose of the sanitarium is threefold: To save the consumptive sailor; to prevent contagion at the Marine Hospital; to prevent contagion on shipboard. The treatment followed is largely one of diet and exposure to the open air. The Medical Bureau of the Army has established a similar hospital at Fort Bayard, New Mexico.

Obituary.—FREDERICK J. BROCKWAY of New York, at Brattleborough, Vt., April 21, aged 41. JAMES H. WOODBURN of Indianapolis, Ind., April 23. FREDERICK A. LARKIN of Chicago, in Philadelphia, April 23, aged 40. EDWARD F. MORRIS of Birmingham, Ala., April 23, aged 36. HENRY BYRON McKELLOPS of St. Louis, April 23, aged 78. PERCY M. GRAHAM of Philadelphia, April 23, aged 40. HORACIO GUZMAN of Washington, April 23, aged 55. RICHARD C. BAKER at Otego, N. Y., April 24, aged 47. ROY INGLIS of Jersey City, at Denver Col., April 23. J. A. McINTOSH of Nashville, Tenn., April 23, aged 60. W. H. DRAPER of New York, April 27, aged 71. WILLIAM BOVIE of Augusta, Mich., April 25, aged 73. T. H. LITTLE of Toronto, April 25, aged 40. THOMAS RITCHIE ALMON of Halifax, N. S., April 25, aged 65. F. B. R. YOUNG at Dallas, Texas, April 24. WILLIAM H. BURR of Madison, Ga., April 24, aged 85. GEORGE DALE of Iola, Wis., April 24. M. B. BALDWIN of Wardencliffe, L. I., April 27. ALBERT HARE of McKeesport, Pa., April 26. E. CONKEY of Indianapolis, April 24. OLIVER H. SULLIVAN of Alexandria, Ind., April 12. WYLLIS F. WOOD of Rensselaer, N. Y., April 11, aged 50. ANNER E. GORE of Paris, Mo., aged 78. JOHN B. O. LANDRUM of Campobello, April 13, aged 70.

Smallpox.—In Philadelphia a few cases were reported last week in the northwestern part of the city and in New York City 9 new cases were reported April 24; the total number since November 1, 1900, in that city is 599; the deaths from smallpox have been about 20% of cases whereas in other epidemic years it has ranged from 23% to 28%. New cases are reported from Albany, N. Y. In Pittsburgh, Pa., there has been a wholesale vaccination of the Italian population, who were opposed to it, and 20 health officers and the police were required for this compulsory measure. At Cohoes, Pa., 12 cases of smallpox have been discovered and it is reported as prevailing at Cumberland, Md., and as critical in Barbour and Randolph counties, W. Va., 30 new cases having been discovered at Weaver, 10 at Moore, and 6 at Bellington, though only 3 deaths have occurred. On April 1, there were 491 cases in Tennessee, 49 counties being infected. At present the disease is to be found in only 28 counties. It has been of a mild type. At Guthrie, Ky., the smallpox is nearly stamped out. In Jacksonville, Fla., there are 24 cases—mainly among the negroes. The colored people of the South make light of the smallpox and avoid vaccination as far as possible. At Brockton, Ill., a member of the State Board of Health diagnosed April 24 as smallpox an epidemic which had prevailed there for 3 weeks and the local physicians had not recognized the disease. There are 65 cases in Brockton and as many more at Garland, a village 6 miles east of that place. In Cleveland, Ohio, 22 cases have been found by the Health Board through tips received from informants and Gilbert School has been closed because of the disease in that locality. At Hudson, Ohio, the local health officers have been powerless to enforce the quarantine against the students of the Western Reserve Academy in which smallpox had developed, and a number of them took the train for their homes. From Brantford, Ont., an outbreak of smallpox is reported among the Indians on the Six Nations reserve and the situation is regarded

as serious. In Great Falls, Mont., 200 cases are reported and it is said to have a foothold among the Kootenay towns and the Crow's Nest Pass. The smallpox epidemic is reported as likely to become general among the Indians of Southeastern Alaska, 80 cases in the Sitka Indian village and the Indians stampeding and carrying the infection. The transport Kilpatrick arrived at Honolulu from San Francisco with 2 cases of smallpox on board and several cases of mumps and measles.

EASTERN STATES.

Antivivisection a Failure.—On April 22, the Massachusetts Senate accepted the adverse report on the bill in further restriction of vivisection.

The Instructive District Nursing Association in Boston and vicinity recently issued its fifteenth annual report. The records show that the Association's nurses had 6,235 patients and made 61,665 visits. The object of this institution is to provide trained nurses to care for the sick poor in their homes, and to instruct the patients and their families in simple nursing and wholesome living.

Physiology in Public Schools.—On April 1 it was decided to take all textbooks on physiology out of the public schools of Somerville, Mass. As a reason for this movement School Committeeman Sanborn says it is claimed that the books now in use are undesirable and the matter they contain unfit for the perusal of young children. Hereafter the necessary instruction will be given orally by the teacher, said instruction to be limited to the care of the teeth, proper clothing and care of the body.

An Appendicitis Club.—Station Agent Fernald, at Old Orchard, Me., underwent a very successful operation for appendicitis in 1898 and since then has been an enthusiastic student of this affection and keeps a map of the human frame, showing in cross section the development of the disease, and has collected literature on the subject and the names of those who have been operated upon for it. He is now interested in the formation of an appendicitis club, in which only those who have been operated upon are eligible to membership.

River Pollution.—An outgrowth of the numerous complaints about the pollution of the Passaic River which is thought responsible for the recent typhoid cases, will be the establishment by the Government of a gauging station at some suitable point on the river far enough above any particular dam so that the full flow of the water will not be checked, and above any of the pumping stations, as the flow below them would be less than the regular river capacity. The exact current past the station will be measured and daily readings of the height of the river will be made. Two Bridges, 3 miles above Little Falls, has been decided upon as the best location.

Shooting of Human Beings by Hunters.—The Legislature of Maine has passed a law recently fixing a penalty of imprisonment not exceeding 10 years or a fine not exceeding \$1,000 for the wounding and killing of human beings in mistake for wild game. The duty of investigating violations of this law and prosecuting the offenders is incumbent upon the county attorney and sheriff and in case of failure to do so they lay themselves liable to a fine of \$1,000. Mistakes of this kind have been of such frequent occurrence in the State of Maine during the past few years that many people have feared to go into the woods and this law has been passed in response to popular demand.

NEW YORK.

Protection of Eyesight.—The public health committee of the assembly have reported favorably upon the bill giving the New York State Board of Health power to regulate the type and leading of books, newspapers and serial literature.

Insanity Increasing in New York.—The Commission on Lunacy, of New York, reports 23,000 insane patients in the various institutions throughout the State. Dr. T. J. Currie, assistant physician of the Willard State Hospital, states that the number of people who become insane is increasing each year. He attributes this increase to hereditary causes, to intemperance, alcoholic drugs and other excesses. The "strenuous life" is also responsible for many cases. He reports the Willard asylum as having 2,300 patients, 1,800 of whom are incurable. These chronically demented ones farm the estate of 1,200 acres which belongs to the institution.

A New Disease of Cattle is reported from Wood Stock, New York, in the herd of Henry Miller. It has caused the death of 6 cows in a week by rupturing the bloodvessels, the animal bleeding to death internally a few hours after it is attacked. Prof. Law, of Cornell University, to whom the case was submitted, found in the blood-clot a red-shaped organism which is being cultivated for identification. Prof. Law injected into the necks of 2 other cows which showed symptoms of disease, and all the other cows of the herd, serum made from the sterilized blood of some of the dead animals previously sent him—and this seemed to arrest the disease at once.

PHILADELPHIA, PENNSYLVANIA, ETC.

Dr. C. A. Veasey has been appointed Ophthalmic Surgeon to the Methodist Episcopal Hospital of Philadelphia.

The Ptolemy Society for the dissemination of medical science and social intercourse has had its charter approved.

The Alleghany General Hospital will have erected in its stead a new institution costing \$350,000. The State is expected to give \$100,000 of this.

Homes for Tuberculous Patients.—The Legislature of Pennsylvania has been asked for an appropriation of \$60,000 for the founding of free homes for tuberculous patients in the mountains near White Haven. The present plan provides for the erection of 10 cottages.

Philadelphia Almshouse.—A resolution was adopted at a recent meeting of the medical staff of the Philadelphia Hospital petitioning the Board of Charities and Correction, the Mayor and the City Councils to remove the Almshouse from the grounds of the Philadelphia Hospital.

Dr. Aloysius O. J. Kelly, instructor in clinical medicine in the University of Pennsylvania, recently was elected professor of the theory and practice of medicine in the University of Vermont. He leaves Philadelphia shortly for Burlington to begin his duties, but will return to Philadelphia in the early fall.

Medical Director Walter K. Scofield has been placed on the retired list. His rank is that of Rear Admiral and he retains the title of medical director. Medical Director W. G. Farrel succeeds Dr. Scofield in the work of the recruiting district. Dr. Clement Biddle takes Dr. Farrel's place at League Island Navy Yard.

The Polyclinic Hospital with a record of 213,181 patients treated in 18 years, asks of its friends a donation of \$100,000 as a special Twentieth Century Fund to put it on a sound financial basis, as the number of its patients steadily increases. In addition, special donations are asked for an electric light plant, a power laundry, a nurses' home, an isolating ward, a new dispensary building and laboratory endowment. Endowments for free beds are also greatly needed.

Fangotherapy, the treatment of disease by clay from small lakes near Battaglia, Italy, has been tested as to its efficacy in the last 2 years by Dr. W. C. Hollopeter, of Philadelphia, who recently reported his experiments with some which a patient of his brought from Italy. It is a greyish-brown, smooth mud, rich in iron, argillaceous herbs, lime and alkalies united to phosphates, sulphuric acid and carbonic acid gas. He has found fango useful in articular rheumatism, gout, localized neuralgias, sciatica, etc. It is applied warm in layers on the affected surfaces and retains its artificial heat for a long time.

SOUTHERN STATES.

Selling Cocain.—Three negroes have been fined \$100 and cost each for peddling cocain in the streets of Atlanta, Ga.

Insanity a Cause for Divorce.—A bill has been passed by the Florida Legislature declaring that incurable insanity shall be legal cause for divorce. It provides that the husband shall support the wife after getting a divorce for that cause, and shall put her in an asylum and pay all expenses. It is asserted that this bill was not enacted because of public demand, but in the interest of one person, who wished to dispose of the property of an insane wife.

A Change in Quarantine Regulations is about to be made which will benefit Norfolk and Portsmouth, Va. Dr. Gregory, of the United States Marine-Hospital Service, will establish a quarantine station at Tampico, Mexico, of which he will have charge. Vessels bound from this port to the United States will be inspected prior to sailing, and if necessary, will be fumigated. Upon arrival at their destination, they will, provided no disease has developed on board, be allowed to land without detention. The action of the Surgeon-General in thus preventing vessels being held at quarantine will be of great advantage to Norfolk and Portsmouth, between which and Tampico a great and growing trade exists.

The Antispitting Law.—Great interest is expressed in New Orleans over the recent passage of an antispitting ordinance by the City Councils. Dr. Scheppegrell, chairman of the Orleans Parish Medical Society, which proposed and recommended the law, says that expectoration can be banished effectually from all public places by law, and that the health of the community will be benefited greatly thereby. On the other hand a great number of persons oppose the law on the ground that though the law is a good one if properly enforced its execution is practically impossible on account of the inadequate police force. Therefore it is claimed that the City Councils made a mistake in enacting a law which in a short time would be disregarded and thereby a distinct tendency added to the volume of lawlessness that now exists through neglected ordinances.

WESTERN STATES.

Dr. Reuben Peterson, of Chicago has been appointed to the Bates professorship of the diseases of women in Michigan University, to succeed Dr. J. N. Martin.

Excision of Stomach.—At the hospital of the Illinois Medical College, Dr. B. B. Eads successfully removed the stomach of a patient suffering from carcinoma.

No Quarantine Law exists in Multnomah county, Washington, and the authorities are powerless to act in contagious diseases. There is also no law to protect cattle from contagion.

St. Peter's Hospital in Helena, Mont., destroyed recently by fire has had a donation of \$15,000 from an unknown New York woman. This, with the \$60,000 bequest of Felix R. Brunot, of Pittsburg, will restore the building.

A Blind Student.—George S. Dobbins has graduated with honor from the Chicago Homeopathic Medical College. Owing to his refined sense of hearing he will devote his professional efforts to diseases of the respiratory organs.

Typhoid Fever.—The chemist of the health department of Merton, Wisconsin, has shown that the typhoid fever epidemic has its rise from milk infected by poisoned well water or from river and country ice. It is asked that the authorities of the city compel owners of dairies to conform to sanitary regulations and submit to periodical inspection. The harvesting of the city's ice on Lake Michigan is suggested as a means of obtaining a pure supply, as the waters of the river and country lakes will grow worse as the population increases.

Baby Farm Ordinance.—An ordinance designed to provide for the licensing, inspection and regulation of all foundling homes in Chicago, was introduced in the Council of that city on April 22. It is proposed to place all private parties who have the control of more than 3 children not their own in charge of the proper authorities. All State, county and incorporated charities which are at present inspected by the County Visiting Committee, and such institutions that do not retain the children for more than 24 hours consecutively, will be excepted.

CANADA.

An Amalgamation of Trinity Medical College, Toronto, and the Toronto Medical College is under way.

Smallpox.—The city of Toronto has spent more than \$1,400 during 1901 in the care of its smallpox patients.

Dr. J. H. King has been appointed provincial health officer for the district between Kootenay Lake and Mielhel.

Examination of Immigrants.—An office has been opened in Montreal by the Immigration Department of the United States Government for the examination of all foreigners destined for the United States.

Medical Legislation.—A bill is before the Canadian House of Commons which provides for the establishment of medical qualifications which shall be valid for the whole of Canada. At present each province confers medical qualifications which are only recognizable in the Province in which they were granted.

Barber-Shop Sanitation is carried out in the Province of Quebec, where the existing law compels barbers to take out a license or abandon business and customers affected with any skin disease are obliged to furnish their own razors, soap, brushes, etc., which are kept in a specially constructed cabinet approved by the Provincial Board of Health.

Cremation Forbidden.—The Archbishop of Montreal, in a pastoral letter dated April 3, strongly opposes cremation, and regrets that the Quebec Legislature has made it legal. He says that cremation is formally prohibited for all the children of the Roman Catholic Church. None of them may encourage it, or take any part whatever in it.

Increase of Insanity.—The annual report of the Protestant Hospital for the Insane, Verdun, Quebec, shows an increased number of patients in that institution. During the year 1900 there were 497 patients treated; 265 males and 232 females. During the year 93 patients were discharged, 52 of whom were recovered, 28 improved; 13 unimproved; a discharge rate of 66.90% and a recovery rate of 37.41%.

Guarding Against Plague.—The Canadian Director of Public Health, Dr. Montzambert, is taking active measures to prevent the introduction of plague and smallpox into Canada. All Orientals entering by way of the Pacific are compelled to undergo a bath at the quarantine station, and their clothing and effects are disinfected. To guard against smallpox 40 officers have been detailed to watch the main avenues of access from the United States, and all suspected cases are ordered into quarantine.

FOREIGN NEWS AND NOTES

GENERAL.

Obituary.—WILLIAM FORBES of Gippsland, Victoria, April 5, aged 69. GIULIO BIZZOZERO of Turin, April 8, aged 55. IVOR A. LEWIS of Cymmer, Porth, April 8, aged 53. DR. MENKE, leader of a German scientific expedition in the South Sea Islands, murdered by natives of Mac Quari Island.

The Record of Vital Statistics for Great Britain has just been issued. They show a total of 262,334 marriages and 353 divorces for the entire year. The births number 928,646, and the deaths 581,799. These figures show that the population of the United Kingdom is steadily increasing; the immigration from the continent almost offsets the emigration to the United States and other countries. Not a single death from hydrophobia was reported which would indicate that the English are more particular with their dogs than we are.

GREAT BRITAIN.

An Outbreak of Typhoid in Lamberth, England, amounting to 41 cases in 24 hours in a limited area is reported.

Misadventure and the advice that the doctor be cautioned was the verdict returned by the jury in the case of Marion Davies, a school girl who died from the poison given to her in mistake for medicine by Dr. Smith, of Aston, Birmingham.

The Jacksonian Prize has been awarded to Mr. McAdam Eccles, M. S., for his dissertation on The Pathology, Diagnosis and Treatment of the Diseases caused by and connected with Imperfect Descent of the Testicle, by the Royal College of Surgeons of England.

Marine Biological Station, founded by the late Dr. David Robertson at Millport, Scotland, will hold a course of lectures on zoology and botany with practical demonstrations on Saturdays from April 27 to June 15, to encourage the practical study of natural history among the teachers and among science students in the University of Glasgow.

The British Congress on Tuberculosis will convene in Queen's Hall, London, from July 22 to July 26, 1901, under the patronage of Edward VII and connected with it are the names of the best known physicians and surgeons of the empire. All of England's colonies are invited to send delegates and foreign nations are requested to send representative men of science who will be classed as Honorary Members of the Congress. The provisional program provides for the consideration of all subjects bearing directly or indirectly upon the disease and modes of treatment—infection and prophylaxis. The languages of the Congress will be English, German and French.

CONTINENTAL EUROPE.

Mosquitos in Paris have increased to such a degree that the Academy of Medicine has debated on measures to reduce the pests. Dr. Debove attributes this increase to stagnant water in public and private gardens.

Foot and Mouth Disease Serum.—Prof. Loeffler and Dr. Ulenruth, Austrian scientists, announce their discovery of a serum to protect animals against the foot and mouth disease, which will be placed at the disposal of the public as soon as the government authorizes them to do so.

Malaria in Italy.—A consular report illustrates what has already been accomplished in Italy in allaying the ravages of malaria there. The Mediterranean Railway Company has equipped all stations and employees' houses in malarial districts with mosquito-proof screens, and those who are obliged to be out after night are provided with mosquito-proof clothing. By this means the railway company has secured complete immunity for its servants and their families even in the worst localities as Battipaglia and San Nicola. Formerly an appointment to these districts meant little less than a death sentence and no man could hope to have his family with him. The families have been perfectly healthy in these protected houses.

Training of the Blind.—Director Keller, of the Institute for the Blind, at Vienna, exhibited before the Physicians' Society, a 7-year-old boy, born blind, but with perfectly formed eyes, whom he taught in 14 months to discern colors, forms and objects; also to read. His method is first to put the child in a dark room, and by means of a movable disk of light teach him to distinguish light from darkness. Then objects are placed on the light disk and the child given their names; colored glass placed before a lamp teaches him colors; then geometric figures are shown on the disk, slowly leading to the formation of letters, and finally reading is taught. Next the disk is removed and objects shown in the dark room with the light rays full on them, and from this point the sight is gradually accustomed to the daylight.

SOCIETY REPORTS

XXX CONGRESS OF THE GERMAN SURGICAL ASSOCIATION.*

HELD AT BERLIN, APRIL 10, 11 AND 12, 1901.

The Congress was formally opened for the presentation of scientific papers by PROF. CZERNY of Heidelberg with an address in which the president expressed the hope that the value of the Association's work in the century upon which they were entering would be even greater than that of the past. Among the important questions which concern the surgeon equally as much as the physician are: The origin of many of the infectious diseases, a more thorough knowledge of tuberculosis, a better understanding of the means by which nature combats disease, and the cause of carcinoma. In order that advances be made in the study of carcinoma new methods of investigation are needed. Russia has set the world a good example in the establishment of a hospital for incurable cases of carcinoma, which is in charge of Prof. Lewschin and in connection with the medical clinic of the University of Moscow. Teachers in the universities should give their students encouragement in original work and give them opportunities for such investigation, for in this way they are best prepared to meet the difficulties of practice.

Czerny, like most members of the German profession, is opposed to admitting graduates of the Real gymnasiums (the higher German schools in which the classics are not taught) to medical study in the universities, as has been suggested the past year. The members of the Association who had died, and their works, were mentioned, a special tribute of honor being given to Professor Ollier of Lyons, France. The president reported the affairs of the association to be in unusually favorable condition both financially and as regards the membership. The number of members is now about 1,050, of whom 665 were registered in attendance at this session. The following papers were then presented:

Renal Surgery in the 19th Century: KÜSTER (Marburg). The speaker first gave a historical sketch of the development of the surgery of the kidney. This branch of modern surgery has been put on a recognized basis almost entirely as the result of the efforts of one generation of surgeons. Simon was credited with being its founder and from Germany came the stimulus for its beginnings. Anglo-Saxon surgeons, particularly Morris, and somewhat later the French surgeons, LeDentu and Guyon, added noteworthy contributions. During the past 3 decades renal surgery has passed through 3 stages of development: first a cautious experimental stage, then a period of somewhat indiscriminate operating and now the subject seems established on a thoroughly scientific basis. As is well known Simon's work was not the first; in 1868 an American (E. B. Woleott of Milwaukee) performed a nephrectomy without having made a definite diagnosis as to the conditions present; following him Spencer Wells also performed the operation and then followed Simon's operation, the first operation to be undertaken with a full knowledge of the conditions present. [Küster is evidently not fully informed as to the literature of this subject as Peaslee and others also operated before Simon.] After Simon's operation in 1875 very few nephrectomies were performed for several years and not until after his death did renal surgery begin to develop rapidly.

The first statistics of the operation showed a mortality of 44.6%, later statistics only 25% and in the last 10 years the percentage of mortality has fallen to 16%. The favorable results of the past 10 years may be assigned as much to more exact methods of diagnosis and a more thorough pathologic knowledge as to improved operative technic and after-treatment. Even when pain, the urine and a tumor indicated a diseased kidney, we were formerly sometimes in doubt as to whether one or both kidneys were involved until the cystoscope and catheterization of the ureters cleared up these doubtful cases. The x-rays often give valuable information in cases of renal calculus. The phloridzin test and the determination of the freezing point have given us other important means of definitely determining the functional capacity of the kidney. Küster then took up the chief pathologic conditions of the kidney and their surgical treatment. Movable kidney is much more common in women than men but Küster does not attribute as much importance to the difference in the clothing of men and women in the causation of floating kidney as is usual. Nephrectomy, which was performed by Simon for the relief of this condition, is no longer necessary since Hahn has introduced nephropexy. Küster finds the results of this operation very good, recurrences being seldom seen. In the treatment of injuries of the kidney when accompanied by profuse hemorrhage surgical intervention is indicated. Nephrectomy was also performed in the treatment of these cases by Simon but unless the organ is much lacerated, suture and the use of the tampon are all that is necessary.

*Reported specially for AMERICAN MEDICINE by Martin B. Tinker, M.D., University of Berlin, member of the German Surgical Association, with grateful acknowledgment of the aid of Dr. Wohlgemuth, authorized reporter for the German Medical Press, and the members of the Association who kindly furnished abstracts.

The term **empyema of the kidney** is suggested for cases of pyelonephrosis having their origin primarily in the pelvis of the kidney and cystonephrosis would be an appropriate term with which to designate the abscesses in the renal parenchyma which may later convert the kidney into a pus sac (Sacnière or pyonephrosis). Küster recalled the time when Albert of Vienna stated that nephrectomy for tuberculosis of the kidney was a waste of time. That renal tuberculosis is ever primary is extremely doubtful, but in spite of this the results of nephrectomy for this condition are at present good. Perfect recovery may even follow in cases in which the ureter and bladder are affected. The x-rays give valuable information in the diagnosis of renal calculus, particularly with phosphatic stones, which may then be removed by nephrotomy or pyelotomy. Stone in the ureter often necessitates extensive operations, particularly if the stone be located low down near the bladder. In these cases resection of the sacrum or colotomy must be performed. Hydronephrosis is either congenital or acquired and is frequently caused by movable kidney. In such cases nephropexy gives very satisfactory results.

In the **treatment of newgrowths of the kidney** resection may often be substituted for nephrectomy with very satisfactory results. Abdominal incision is preferable to lumbar incision in the treatment of tumors in many cases; but in other conditions lumbar incision is usually preferable.

Progress in Renal Surgery.—CASPER (Berlin), reporting investigations with P. FR. RICHTER. Bad results frequently follow operations on the kidneys which are the natural result of imperfect diagnosis. It matters not so much whether the remaining kidney is absolutely healthy, for a man can live with a diseased kidney, but whether the kidney has sufficient functional capacity. The determination of the percentage of sugar and nitrogenous products and the freezing point give valuable information in this connection. The freezing point of the blood and urine approximates that of distilled water the more closely, the better the kidney's functional capacity. The sugar content of the urine is determined by phloridzin injection. The speaker explained by means of tables for demonstration the different relations of these factors with diseased and with healthy kidneys and reported 14 cases in which he had determined the functional capacity of the kidney by such methods. Caspar believes that in this way we can discover the functional capacity of the kidney when by the usual chemical and microscopic tests nothing could be determined.

Practical Experience in the Diagnosis and Treatment of Renal Disease: KÜMMELL (Hamburg). Since his report on this at last year's congress, Kümmell has continued his experiments in the determination of the freezing-point of the blood and the urine as a means of diagnosis in renal disease, and he gave the results of his experience in over 100 cases. He considers this one of our most important means of diagnosis. The normal freezing point of the blood is 0.56; 0.55 or 0.57 is fairly good, but if the freezing point is 0.58 or more, operation is inadvisable. The determination of the freezing-point, the estimation of urea and the phloridzin test are among the most necessary diagnostic tests.

Kümmell first determines the freezing-point of a mixed specimen of urine; if this is normal it is certain that at least one kidney is functionally sound; then both ureters are catheterized and the freezing point is tested to determine the functional capacity of each kidney. By this method operation under dangerous conditions is avoided, for example in cases of stone in the kidney or tumor in which it seems likely from the clinical symptoms that there is full functional capacity. However, there are operative cases in which the freezing point is relatively low. Kümmell mentioned a case of tumor with this condition in which the freezing point became normal after removal of the newgrowth. The technic of determining the freezing point was demonstrated with apparatus. Kümmell also demonstrated a transverse section of a kidney which showed that the incision behind the usual median section incision as proposed by Zondeek does not always divide less bloodvessels, but may divide more as was true in this case. Examination of the kidney at operation in 27 cases has demonstrated to Kümmell the value of the phloridzin, freezing-point and urea tests when used together, and in the other cases in which he has refused to operate because of the information thus obtained he has frequently found by pathologic examination that the tests are reliable.

A Contribution to Renal Surgery: BRAATZ (Königsberg) described the changes which result in the kidney after incisions. In a case in which he had previously made a median incision he was obliged to perform nephrectomy some time after healing had occurred. He found decided contraction and an excessive connective tissue formation, and he believes that such changes usually follow extensive incisions into the kidney substance.

A Demonstration of Skiagraphs of Renal Calculi: ALBERT SCHÖNBERG (Hamburg). Renal and biliary calculi are not readily demonstrable in skiagrams because of their low atomic weight. From their atomic weight it would seem that the phosphatic stones should be specially readily photographed, but their specific gravity is too low. Hence the relative ease with which calculi are skiagraphed is in the following order: first, the oxalate, then phosphatic and uric acid stones. The cystin and xanthin stones cannot be skiagraphed. The chief

reason why it is so difficult to get skiagrams of calculi is because the rays are diffused in the human body. To prevent such diffusion Schönberg suggests the use of a thin lead envelope for the tube. By this means he believes that the leads are forced to take a direct course and they maintain their intensity. Photographs of large areas necessitate the taking of many plates by this method. A plate taken by this method, on which very minute calculi were shown.

An Unusual Renal Anomaly: STEINER (Berlin) presented a patient upon whom he had operated, who had been taken ill with severe abdominal pain, distention, bloody urine in which there were casts, red blood-cells and a large percentage of albumin. In the region of the right kidney was a very tender mass. Urine was obtained on catheterization of the ureter only when the pelvis of the kidney was reached. At the operation congenital absence of the left kidney was found, while the right kidney was divided into an upper and lower kidney. There was a large tumor of the upper kidney, which was removed, and the patient made a good recovery. The patient had a twin brother who was very like him in appearance, and it is probable that the twins developed from the same ovum.

A Contribution to the Treatment of Prostatic Hypertrophy: GOLDMANN (Freiburg) has been struck by the fact that in suprapubic cystostomy tension on the anterior wall of the bladder makes catheterization easier and favors the outflow of urine. He first tried a series of experiments on the cadaver, in which he drew the bladder forward and stitched it to the abdominal wall. After this experimental work he performed this operation on a patient who had been suffering from retention from prostatic hypertrophy and whose bladder had been emptied by a suprapubic aspiration. The patient lived 2 years after the operation, and after death he obtained a necropsy, at which he found the bladder wall adherent to the abdominal wall over an extensive surface, and this produced a considerable tension on that region of the bladder about the internal opening of the urethra. During life the patient had never again suffered from any difficulty in urination after the operation. Goldmann recommends this method of cystopexy in certain cases of prostatic hypertrophy.

In Discussion, RYDQIER (Lemberg) stated that a former assistant of his had recommended this method of cystopexy years ago.

The Treatment of Tumors of the Bladder: LOWENHARDT (Breslau) reports a number of cases in which he has performed intravesical operation for tumors of the bladder. Before operating he practised this method with the cystoscope on a mannikin. His results by this method were excellent. The discomfort of the patient is slight, since the apparatus is so arranged that no change is necessary in using the snare canter or irrigator. This new method is so simple that colpocystostomy, which was formerly practised for tumors of the trigone, has been abandoned. Kelly's method of dilation of the urethra also has its disadvantages, and should be superseded by this method. The possibility of operating without a general anesthetic, and the small amount of blood lost often makes it possible to operate without confining the patient to bed afterwards. The large size of the instrument renders local anesthesia with cocaine necessary when operating upon the male, and urethral fever and cystitis have sometimes followed. The operation is usually sufficiently thorough. In one case no recurrence has followed a removal of a malignant papilloma.

The Disinfection of Infected Wounds with Pure Carbolic Acid: v. BRUNS (Tübingen). While our means and methods of treating aseptic wounds are now approximately perfect, there is much to be wished for in the treatment of infected wounds. Flooding wounds with antiseptic solutions as was formerly the custom is not without danger of poisoning the patient, and for some time most surgeons have felt that it is impossible by disinfectants to make a septic wound aseptic; hence our chief reliance has been placed in the use of free incisions, flushing out the secretions and providing for free drainage by the use of moist dressings frequently changed. Burns has felt the necessity for some chemical disinfectant to use in connection with these means of treatment, which should kill germs and not work harm to the tissues. With this end in view he has recently been testing various measures, among others the disinfection with pure carbolic acid. Many have feared to use this disinfectant, remembering the numerous cases of eczema, intoxication, and gangrene which followed its use in the early days of Listerism.

Recently the use of the pure drug by Lewis in the treatment of hydrocele, and by Phelps in the treatment of tuberculous joint-diseases, has shown that there need be no danger of poisoning, slight reaction, and absolutely no pain. Before using this method, v. Bruns had a series of experiments carried out by his assistant, Dr. Honsall, which showed that concentrated solutions of carbolic acid have a less harmful effect than weak solutions, and that the bactericidal action, when we are dealing with tissues containing albumin, is greater than that of mercuric chloride. Since these experiments, pure carbolic acid has been used in the treatment of more than 80 infected wounds at the Tübingen clinic. After adequate incisions have been made, curetting or excision if necessary, and protection of the skin, covering it with gauze pads saturated in absolute alcohol,

the wound is thoroughly swabbed with pure carbolic acid and immediately afterward washed with absolute alcohol. The caustic action is not specially painful, and many times anesthesia is unnecessary. The wound secretion is usually slight, and frequently it is unnecessary to change the dressings for from 2 to 4 days instead of every 12 to 24 hours, as was formerly necessary.

Wounds treated in this way have progressed well; there has never been any local damage, never a trace of poisoning. The favorable results are due to the fact that this antiseptic is one of the few which have a bactericidal action which is uninfluenced by the body's secretions. The bacteria of the superficial parts of the wound are certainly destroyed, and when cauterized surface cleans off, a beneficial reaction is produced. V. Bruns highly recommends that this method be used in connection with our other means of treating infected wounds.

The Treatment of Wounds after Operation for Local Tuberculosis: FRÄNKEL (Vienna) believes that even the smallest tuberculous foci are not usually removed at operation and he recommends therefore the after-treatment with iodiform, which tends to prevent recurrence by producing inflammation and overgrowth of connective tissue.

Discussion. KÜSTER (Marburg) recommends the treatment of infected wounds with the thermocautery, as was formerly much practised. He distrusts the efficacy of carbolic acid.

KÖNIG (Berlin) does not believe that our results in the treatment of septic wounds need necessarily be bad. He advises free incisions, and in cases in which Küster would use the thermocautery he applies zinc chloride. In the treatment of tuberculosis we will obtain better results if we extirpate the entire disease and have a clean wound to deal with.

SECOND SESSION.

A Report of the Second Thousand of Extirpations of Goiter: The Operation for Intrathoracic Struma: The Nonoperative Treatment of Goiter. KOCHER (Bern) emphasized the fact that he has nearly always practised excision, and only in exceptional cases enucleation. In operating, the muscles are never divided transversely. For compression of the isthmus he has devised a forceps which makes firm pressure but is not an angistrife. It is designed only to make the ligature smaller. Altogether he has had 4% mortality. Infection is no longer a matter of importance. He uses no antiseptic in the wound except as it is introduced through the silk, which is antiseptically prepared. In the prophylactic treatment he has often used thyroid treatment in cases of diffuse struma which has existed for some time. General narcosis is never, or at least very seldom, used. By cocaine anesthesia, hemorrhage and after-nausea and vomiting are avoided.

As a result of struma profunda, Kocher has seen emphysema and bronchitis, as well as tachycardia, etc., and he believes that the lungs may be affected, as well as the heart, in cases of struma.

Mediastinal struma often gives rise to extensive stasis, accompanied by exophthalmos, and the condition may be confused with Graves' disease. In intrathoracic struma it is a question of great importance whether the tumor is movable or not; the more movable the struma the better the chances of operative success. In the diagnosis the Röntgen rays may be used in connection with percussion to good advantage. Skiagrams were demonstrated. At the operation all vessels should be tied and the isthmus divided before an attempt is made to free the tumor from below, for at this part of the operation rapid work is frequently necessary. A forceps and spoon were shown, which were devised to facilitate these operations. Packing to arrest hemorrhage in these cases is out of the question because of the danger of suffocation; moreover, it is an uncertain way of arresting hemorrhage. Of 22 cases of intrathoracic struma, Kocher has not lost a single case. Iodin has always been considered the most important medicament in the non-operative treatment of these cases, but of late Kocher's son Albert has been testing the value of sodium phosphate. The fact that the inhabitants of regions where struma is common use foods poor in phosphates chiefly led to these experiments. On the contrary, in England, where meats are the most important part of the diet of the inhabitants, struma is very rarely seen. It may be found that the question of food has an important influence in the origin of struma.

The Treatment of Thyroid Struma with a Report of the Operations at the Clinic at Freiburg: KRASKE (Freiburg i. B.) reported 425 operations for struma, 12 malignant, of which 3 were in men. In 220 cases the operation was on one side; some of the earlier operations were total extirpations, the remainder enucleations or resections. Nodular tumors were most frequently met, simple hypertrophies seldom; there were 10 cases of malignant struma; in one case a metastatic nodule was successfully removed from the sternum; in 2 cases there were accessory strumas, one of the tongue, one in the supraclavicular fossa. Like Kocher he avoids general anesthesia. There were but 2 deaths in the entire series, one from heart disease, unfavorably influenced perhaps by pushing previous thyroid treatment too far; one from tetanus following extirpation from both sides. Hemorrhage followed in some cases after enucleation, but since giving up this enucleation and general anesthesia no important hemorrhage has occurred. The even-

ing after operation there is usually a rise of temperature which is attributed to absorption of glandular material. Thyroid therapy in these cases is considered of little value.

Discussion. GOLDMANN (Freiburg i. B.) mentioned an operation for the removal of an intrathoracic struma which was found to be tuberculous on pathologic examination. RIEDEL (Jena) has operated upon 500 cases of struma, many of them large tumors, several intrathoracic. He finds that the intrathoracic form is more common on the left side while extensive development in the upper part of the neck is more frequent on the right side. Any special instruments for facilitating removal he considers unnecessary. He finds that Kocher's incision does not give sufficient room, and he advocates a curved incision with its convexity just over the suprasternal notch and its ends extending upward to the ears on each side. He operates without general anesthesia, and finds the veins a more important source of hemorrhage than the arteries.

REHN (Frankfurt a. M.) mentioned a case that was considered too extensive for operation in which the entire tumor disappeared under iodine therapy.

KÖNIG (Berlin) believes that struma may be frequently seen in low lying level countries. He has operated in 70 or 80 cases in Berlin, more than half of whom were born in that city, and developed the tumor while living there. He usually leaves $\frac{1}{2}$ of 1 side of the tumor. KOCHER (Bern) has frequently seen a struma extending high into the neck on the right and intrathoracic on the left side, as mentioned by Riedel. In case both sides of the thyroid are diseased he believes that it is sufficient to prevent syptoms if $\frac{1}{2}$ of 1 side is left.

Twenty-seven Intraeranian Operations for Trigeminal Neuralgia, of which 25 were Extractions of the Gasserian Ganglion: FEDOR KRAUSE (Berlin). The reaction of the branches of the trigeminus intracranially is not followed by certain cure, hence Kranse advises removal of the gasserian ganglion in cases of severe trigeminal neuralgia. He has always employed the method by temporal route, which he described in 1892. He has had 3 deaths following the operation. A woman of 58, apparently healthy and strong, died of collapse. A man of 72 recovered from the operation without elevation of temperature and his wound healed by first intention, but death occurred 6 days after the operation from heart failure, associated with sclerosis of the coronary arteries; a woman of 60 died 21 days after operation with a perfectly healed wound. Six of his patients are living from 5 to 8 $\frac{1}{2}$ years after operation: 8 $\frac{1}{2}$ years, a man, age 63; 8 years, woman of 76; 6 $\frac{1}{2}$ years, woman age 77 and 51; 5 $\frac{1}{2}$ years, a woman of 43; 5 years, a woman of 51. All patients who have recovered have been completely relieved of their pain, and the suffering is often so intense before operation that an operation which promises such certain relief seems perfectly justifiable.

Extirpation of Brain Tumors: HEIDENHAIN (Worms) reported 4 cases of brain tumors, of which 3 were operable. In the first case a man was taken ill with paralysis in one leg, Jacksonian epilepsy, optic neuritis and paranoia, with delusions of persecution. At the operation the diagnosis of brain tumor in the region of the leg center was proved correct, and a solitary tubercle the size of a walnut was removed. The after disturbances were attacks of cramps with loss of consciousness, cramps in the arms without loss of consciousness, and incomplete paralysis of the leg.

In the second case there was headache, paresthesia and anesthesia of the right side, choked disc, but no vomiting. A diagnosis of tumor in the right arm center was made. At the operation a sarcoma the size of a hen's egg was removed, which made necessary the removal of a portion of the cortex the size of a dollar. The severe headache and choked disc disappeared, and there remained only disturbance of sensation and slight disturbance of motion in the right hand.

In a third case a laborer was taken ill with severe symptoms of intracranial pressure and double optic neuritis. At the operation a melanotic sarcoma was found, which necessitated the extirpation of the entire lower portion of the right temporal lobe. It is interesting to note that no disturbance of hearing followed.

The patient died some time later of apoplexy, and at the necropsy many small tumors were found in the brain.

In the fourth case, occurring in a boy of 12, the entire occipital bone was removed, but no tumor was discovered. At the necropsy a large median sarcoma was discovered.

The Operative Treatment of Purulent Meningitis: BARTH (Danzig). A young man received a stab wound in the back at the ninth dorsal vertebra. Seven days later a rise of temperature occurred followed by meningitis. Lumbar puncture showed the presence of numerous staphylococci. Laminectomy was performed and a pus cavity evacuated and the wound tamponed with gauze. Headache was relieved but the temperature rose still higher. Another lumbar puncture showed the presence of pus. A second laminectomy was performed at the region of the second and third lumbar vertebrae, and after the incision of the dura a large quantity of pus escaped. The dura was drained, the gauze being removed 7 days later. There was temporary paralysis of both legs, rectum and bladder, but complete recovery followed. In spite of the fact that a corset was worn a decided gibbosity developed in the regions of the operations. There is still some weakness in the legs, pares-

thesia and some areas of anesthesia and some weakness of the bladder.

THIRD SESSION.

ZONDECK (Berlin) in a verbal communication defended his method of incision of the kidney at a plane behind the usual autopsy incision, answering the criticisms which Kümmell had made. He demonstrated preparations which showed the importance and value of this incision in avoiding the great vessels.

KÜMMELL (Hamburg) defended the position he had formerly taken that in certain cases more vessels would be injured and presented photographs of his cases.

The Scientific Basis of the Carbolic Acid Treatment of Infected Wounds: HONSELL (Tübingen). By experiment he has proved that pure carbolic is harmless if properly used in the treatment of wounds. Fatal poisoning in man results from doses of 8 grams or more of the pure drug, while diluted solution of 2 or 3 grams are fatal. He has injected from 1 to 6 grams of carbolic acid into hydroceles without bad effects, and he takes 6 grams as the maximum amount which should be employed on the surface of wounds. Of this amount probably 4 grams is removed by the gauze. Poisoning has followed in no case. The deep tissues are affected only when the acid is in contact for a long time. The time of application is one minute. The wound is then washed out with absolute alcohol as has been suggested by American writers as an antidote for carbolic acid. It does not prevent the formation of a slough, but it removes more of the carbolic acid from the tissues than water. The permanent results of the treatment are much greater than those of mercuric chlorid.

Suppurations Around Ligatures: HAEGLER (Basel). Drawings of microscopic sections of tissues from which ligatures have worked out by suppuration were shown. There were also drawings of sections through silk which had been sterilized by steam but which gave rise to growth of germs 48 hours later.

With catgut there was growth of germs only on the surface. Haegler is of the opinion that where suppuration occurs about catgut the wound is infected. It is always preferable to silk but for buried sutures silk wormgut is the best material, its only objection is that it is so brittle. The impregnated materials such as celluloid thread are not better than others. The best of such preparations are paraffin and wax.

Experimental Investigations with Mercuric Ethyldiamin in Solid Form as a Means of Disinfection for the Hands and Skin: BLUMBERG (Berlin). The well known disadvantages of disinfection by mercuric chlorid are the irritation of the skin and the slight depth affected. Blumberg has undertaken investigations with several mercury preparations in an effort to find a preparation not possessing these disadvantages. In mercuric citrate with ethyldiamin in a 2-3% solution he has found an effectual disinfectant. This can be used only in solution, while on the contrary mercuric sulfate with ethyldiamin may be obtained in solid form. Experiments with the micrococcus tetragenus have given entirely satisfactory results.

A Contribution to Brain Surgery: KRÖNLEIN (Zürich) has demonstrated a beautiful preparation of brain tumor the size of a hen's egg which he was able to diagnose correctly but did not find on operation.

Encephalitis of the Temporal Lobe and Other Complications After Otitis: MERKENS (Berlin). Encephalitis of the temporal lobe is more uncommon than abscess and may be mistaken for it as happened in a case occurring in the Moabite Hospital, the clinical history of which was read. In another case following otitis adhesions between the dura and the brain were found at resection of the temporal region.

Gunshot Injuries with Modern Firearms: SCHJERNING (Berlin). By means of numerous skiagraphs, tables, and diagrams the effects of modern weapons were graphically presented and an idea was given of the effect of modern firearms as compared with those used in previous wars. The speaker also gave the results of his personal experience as a surgeon in the South African war. [His observations confirm those made by American surgeons in the Spanish war and those of the English surgeons in the South African campaign almost completely.] The best results in gunshot wounds of the abdomen are obtained by nonoperative treatment. Injuries of the joints frequently demand resection. Injuries of the chest and brain are among the most fatal but as a whole the mortality is greatly reduced as compared with that of previous wars: the result of improved hospital service and modern antiseptics and the more humane modern weapons.

Paired Projectiles: KRÖNLEIN (Zürich) showed some bullets from an English target-practice field.

Krönlein's Gunshot Wound of the Skull: REGER (Danzig) believes that there is a decided difference in the effect on the skull of an individual when the brain is functioning and filled with blood than on the skull of a cadaver which is frequently taken for experimental purposes.

Personal Experience with Gunshot Wounds in the South African Campaign: RINGEL (Hamburg). From his experience with gunshot wounds in South Africa, Ringel believes that all such wounds should be treated as aseptic

wounds; that compound fractures should be treated as simple fractures, unless the injury be extensive; that we should not abstain from operation in all cases of gunshot wounds of the abdomen, but should treat cases according to the indications present. He reported performing celiotomy for a gunshot wound of the abdomen in which the intestine had been perforated but was sealed by adhesions but the hemorrhage was great enough to indicate intervention.

The After-Treatment of Invalid Soldiers at Baths and Health Resorts: ZIEMSEN (Wiesbaden) believes that the general treatment which patients receive at health resorts would be as beneficial to invalid soldiers as the treatment of their wounds. Such treatment is specially valuable in certain neuroses.

TILLMANN (Greifswald) gave the results of his study of 5,000 fractures in the Army Museum at Washington, D. C., very briefly.

Castration for Tuberculosis of the Testicle: v. BRUNS (Tübingen). Many surgeons question whether castration for tuberculosis of the testicle is a justifiable operation, for the reason that they believe that other organs are usually simultaneously affected with tuberculosis. The advisability of double castration has been considered specially questionable. From his experience v. Bruns has been led to believe that the disease is not infrequently primary in the testicle, and to obtain some idea as to this question he has studied the records of the Tübingen clinic during the past 50 years. Altogether 105 castrations for tuberculosis have been made, and of this number 33 were double. The epididymis is almost invariably first affected, but within 6 months the disease has extended beyond it; early diagnosis is difficult, often impossible, hence resection of the epididymis should not be considered. Clinical evidence and the experiments of his assistant, Dr. Baumgarten, have shown the tendency for the disease to travel up the vas, hence the importance of early castration to avoid spread of the disease to other organs.

v. Bruns believes that in more than $\frac{1}{2}$ of all cases a cure may be obtained by early castration, though about 15% die later of pulmonary tuberculosis. In his series of cases 46% were permanently cured by castration on one side. Of the cases of double castration about 44% are permanently cured. The patients considered cured have lived from 3 to 34 years after the operations. The deaths in cases not cured are from tuberculosis of other organs, many of them from urogenital tuberculosis. The statistics of early castration are much more favorable than is generally believed and the operation does not deserve the condemnation it has generally received.

Experimental Studies with Tuberculosis of the Testicle: v. BAUMGARTEN (Tübingen). The speaker demonstrated by means of diagrams the results of a series of experiments on rabbits to determine the way in which tuberculosis of the urogenital tract spreads. In his first experiments he tried the effect of inoculating the anterior urethra and the prostate, but he found that the disease never spread from thence to the bladder and ureters or to the vasa and testicles. If the disease were introduced into the testicle, however, it spread up the vas, involving the seminal vesicles and prostate of the same side but never spreading to the opposite side. The disease did not spread up the ureter to the kidney or into the urethra. v. Baumgarten believes that the infection is spread by the blood and lymph streams, for experimentally it never extends in a direction opposite to these currents. The spread of the disease was gradual in the experiments, so that early castration would have avoided the spread of the disease to the vas, and in some cases the testicle remained the only organ affected. The results of this experiment agree entirely with those of clinical and pathologic study, and indicate that early castration should be a curative operation.

The Treatment of Tuberculosis of the Male Generative Organs: v. BUNGER (Hanan). By experiments on the cadaver, v. Bunger found that by steadily pulling on the vas through an inguinal incision $\frac{1}{2}$ of it could be drawn out before it gave way. From clinical and operative experience we know that tuberculosis first affects the epididymis, then travels up the vas, finally involving the seminal vesicles. Hence the necessity for removing as much of the vas as is possible, even early in the disease. It has been suggested that in pulling out the vas in the way he suggests in order to remove as much of it high up as possible that there is danger of hemorrhage and of infecting the peritoneum at the site of rupture, but he has never had any accidents of this kind.

In extensive disease the removal of the seminal vesicles, with prostate, vas and testicles seems the only method of cure, but the patients are often in too low a condition to permit such an extensive operation. If removal is possible Bunger advocates the operation by the sacral route, and reports 2 recoveries following such operations, in which the indications are that the cure will be permanent. One of the patients is apparently in perfect health and about at his usual work. In cases in which the disease has extended far and the patient is too reduced in strength to permit an extensive operation the injection of iodoform oil is advised. In experiments on the cadaver Bunger found it possible to inject a solution of Berlin blue into the vas at the inguinal ring and have it reach the seminal vesicles regularly, and he believes that the iodoform oil could be forced up

equally readily. He has used the injection in 1 case with apparent benefit.

Tuberculosis of the Testicle: SIMON (Heidelberg) gave a brief report of the results of castration for tuberculosis of the testicle at the Heidelberg clinic. His results agree with those of v. Bruns entirely as to the possibility of cure. From 107 castrations he was able to obtain a late report as to the condition of the patient in 92 cases, and the percentage of recoveries was 66. Out of 29 cases of double castration 8 died and 21 remained well, some of them over 20 years. There was psychic disturbance in 1 case. Castration can be recommended in such cases.

The Operation for Tuberculosis of the Testicle and Epididymis: KÖNIG (Altona): Two preparations were demonstrated in which the testicle and the vasa as far as the epigastric vessels had been removed. In these cases König operated by inguinal incision, working down beside the bladder and pushing the peritoneum up and the ureters to the side. In a third case he removed the seminal vesicles and prostate as well. In this operation he divided the sacrum and turned it downward with a flap as was suggested by Schlange in operations for carcinoma of the rectum.

Discussion. KÖNIG (Berlin) believes that tuberculosis may, but not of necessity must, be primary in the testicle. How does it happen the tubercle bacilli travel only in the direction of the lymph current while other bacteria may travel by direct extension; for example, there can be no question but what gonorrhoeal infection extends from the urethra to the testicle. Baumgarten did not state whether he found his tubercle bacilli in the bloodvessels or intracanalicular. Again, are the conditions the same in an animal in which the structures are very minute as in man? From his experience in the past 10 years he had gained the impression that tuberculosis frequently extended down the vas from the prostate and seminal vesicles. He has tried iodoform injections but without success though he only injected into the epididymis.

GUSSENBAUER (Vienna) doubts whether tuberculosis of the testicle is so frequently primary. At the necropsy we usually find it associated with disease of other organs. He has seen recovery in cases which had even gone to the formation of fistula without operation, the tuberculous area becoming calcified.

CRÄMER (Cannstadt) thinks that the results of Baumgarten's experiments agree with what we learn by operative experience. Tuberculosis of the seminal vesicles and prostate may improve after castration which would not probably be the case if the disease were not primary in the testicle.

HENLE (Breslau) said that the results of injection of iodoform at the Breslau clinic had not been very satisfactory.

BIER (Kiel) recommends sea bathing in the treatment of tuberculosis. He doubts whether the results of double castration justify its use.

SCHLANGE (Hanover) gives the history of a case in which spontaneous recovery had occurred.

Wednesday evening was devoted to the demonstration of skiagraphs by several members of the Association.

FIFTH SESSION.

Resection of the Lung: HEIDENHAIN (Worms). A patient was presented upon whom resection of the lung had been performed for the removal of carcinoma. Bronchiectasis resulted, and to evacuate the pus longitudinal incisions were made in the bronchial tubes. The large cavity which resulted is now completely lined with mucous membrane.

Conservative Operations on the Testicle and Epididymis: PAYR (Graz), reported a severe case of orchitis, which followed an attack of acute gonorrhoea and which was accompanied by severe pain, high fever and a bad general condition. An incision was made through the tunica albuginea and an abscess was evacuated. In spite of this gangrene followed and castration was necessary. The testicle had been converted into a perfect pus sac. Recovery was very slow, and was hardly complete when 2 years later orchitis of the other side developed, with a chill and rise of temperature to 41° C. The cavity of the tunica vaginalis testis was opened, and before incising the albuginea catgut sutures were inserted, for at the previous operation the glandular substance had bulged after incision, so as to endanger its integrity. After evacuation of the pus, which was in the testicle, the tunica albuginea was sutured, as was also the external wound; drainage was inserted. The wound healed well, and the patient, who was a physician, found spermatozoa in his semen several months later, indicating that perfect recovery had taken place.

Plastic Operations for Complete Loss of the Skin of the Penis and Scrotum: BESSEL-HAGEN (Charlottenburg). In the case of a man who had lost the skin of the penis and scrotum as the result of a severe phlegmonous process, the speaker had made a foreskin from the skin of the abdominal wall (method much similar to that suggested by Semm).

The Methods of Anesthesia and Their Indications: v. MIKULICZ (Breslau). From his studies of this subject, Mikulicz has come to the conclusion that the most important question is not which is the safer anesthetic, chloroform or ether, but which is the safer anesthetic in the particular case under observation. At the present time it is something of a

question whether general anesthesia should be used at all in most cases, so much has been accomplished with local anesthesia. A historic sketch of the various methods was given, in which the early work of Halsted and Corning was mentioned; first came local anesthesia by freezing; then by cocaine injection; then Schleich's infiltration anesthesia (and to Schleich belongs the greatest credit for the introduction of local anesthesia); the Oberst method of injecting into nerve trunks and finally by injections into the spinal canal. Mikulicz has used the spinal anesthesia in 40 cases with satisfactory results, and he predicts that this will be one of the most important methods of anesthesia in the future. As yet the spinal injection is imperfectly understood; he has had no deaths following its use, but there were some very disagreeable after-effects. From a study of the statistics of general and local anesthesia it is readily seen that the value of local anesthesia is far too little appreciated, and general anesthesia is much too commonly used. Very many cases are not suitable for local anesthesia, such as: many celiotomies, breast operations, operations on bones, etc. In other cases it is doubtful whether local anesthesia should be used; operations on the stomach and intestines, hernia, and the excision of strumas.

Deaths after local anesthesia are by no means uncommon. By a series of diagrams Mikulicz showed very graphically the comparative mortality of various operations with local and general anesthesia. Patients suffering from heart or lung affections would better be operated upon by local than by general anesthesia, but, as was shown by his statistics, the number of postoperative pneumonias following anesthetics with Schleich's solution is very great. The relations are considerably changed by infiltration often making the identification of anatomic structures quite difficult. There are the greatest differences in susceptibility to pain: some patients are quite unable to undergo even a trifling operation; in other cases the suffering, even in extensive operations, is apparently slight.

As an example of the latter class of patients, Mikulicz mentioned the case of a butcher who was specially anxious to see his own stomach, and who, by means of a mirror, witnessed a gastrostomy which was performed upon him, apparently without the slightest discomfort. Pain alone may be an important cause of shock, and in many operations the shock from this cause would be greater than from general anesthesia. Formerly Mikulicz used chloroform exclusively, but at present, since having learned better methods of administering ether, he uses more ether. The skill of the anesthetist is a matter of great importance and the administration of a general anesthetic is a fine art.

Spinal Anesthesia: BIER (Griefswald) has been able to collect records of 1,200 operations which have been performed under spinal anesthesia since its introduction. There are the greatest individual differences as to the amount of solution required to produce anesthesia but as a rule after the injection of from 1 to 3 cgm. of cocaine the sensations disappear. The sense of pain is first benumbed, then that of heat and cold finally the sphincters are affected and the anesthesia extends upward so that in some cases operations such as excision of the breast and resection of ribs have been performed. In many cases symptoms of cocaine poisoning develop such as headache, dizziness, nausea, vomiting, chills, rise of temperature, disturbances of circulation, paresis, and in rare cases even collapse and death have followed.

To determine the best way of avoiding such symptoms Bier has carried out numerous investigations. He first tried substituting other drugs and other derivatives of cocaine for cocaine: Tropacocain, eucain, weak solutions of carbolic acid and numerous other drugs were tried but the results were not as satisfactory as those obtained by using Schleich's solution. It is interesting to note that normal salt solution when injected into the spinal canal of cats readily produces anesthesia but this result is not obtained when the solution is used in man. Most of the cocaine derivatives produced anesthesia which was not permanent enough or complete enough for practical purposes. Tropacocain for example produces partial anesthesia which extends far up, but is never complete. The sensations of touch and of heat and cold are always retained. Bier considers it very important not to change the pressure of cerebrospinal fluid and to avoid this the same quantity of fluid as is to be injected should always be withdrawn before making the injection. He also suggests the use of a very tight bandage about the neck to cyanosis as a means of preventing absorption of the cocaine. (It is difficult to see in what way such a result will be produced.) Bier considers this method of anesthesia still in process of development and still unsuited for general use.

Mixed Anesthesia: BRAUN (Leipzig) demonstrated an apparatus for using chloroform and ether combined. A rubber bulb connected by a Y-tube both with a flask containing ether and a flask containing chloroform, forces air through the anesthetics: these flasks are connected directly with the mask. The amount of vapor from each flask may be accurately regulated by a valve.

A New Chloroform and Oxygen Apparatus: WOLFGEMUTH (Berlin) demonstrated an apparatus consisting of a cylinder containing compressed oxygen, an automatic apparatus for dropping chloroform and a mask provided with a valve, permitting of the escape of gases only during expiration. The oxygen is conducted through a chamber in which it is thor-

oughly mixed with the chloroform vapor, and from the chamber to the mask with rubber tubing. Wohlgenuth claims that with this apparatus anesthesia can be produced very rapidly, with almost no disturbance of pulse or respiration, without any disagreeable after-effects and with a minimum amount of chloroform. The apparatus has been introduced in the clinics of v. Bergmann and Israel and has been used with great satisfaction in over 180 cases.

A Study of Intracranial Pressure: TILLMANN'S (Greifswald) reported 2 cases of injury of the skull accompanied by intradural hemorrhage, in which the patients both retained consciousness while in the upright position but sank into coma on lying down. This suggested to him a series of experiments on dogs to determine the cause of these peculiar conditions. He concludes that in injuries of the skull accompanied by intradural hemorrhage that the cause of loss of consciousness is not only the increased intracranial pressure caused by the lessening of space inside the skull by blood-clot, but also by the downward pressure as a weight when the patient is in the upright posture.

Resection of the Cervical Sympathetic for Epilepsy: BRAUN (Göttingen) reports his experience with 9 cases in which he removed the cervical ganglion of the sympathetic for the cure of epilepsy as was suggested by Jonnesco of Bucharest. He finds it impossible to remove all 3 ganglion because of anatomic difficulties. He considers the incision posterior to the sternal mastoid best adapted for removal of the ganglion, but he demonstrated by photographs that the upper ganglion is difficult and the lower ganglion impossible to locate. Because of the difficulties and danger, the lower ganglion was not removed. After removal of the superior ganglion there was always ptosis, contraction of the pupil and dilation of the vessels, but no change in the heart's action, pulse or respiration. The contraction of the pupil disappeared gradually; the dilation of the vessels disappeared after 24 hours. There were 2 deaths following the 9 operations: 1 patient died during a convulsion after extirpation of the ganglion on both sides; 5 of the patients were improved, perhaps as a result of the operation. Braun does not consider the operation a dangerous one but it is of very doubtful value.

The Operative Treatment of Carcinoma of the Uterus: JORDAN (Heidelberg) mentioned the tendency among many surgeons, specially the French to readopt the abdominal route for hysterectomy. The possibility of thorough extirpation of the lymph glands is only present with the abdominal method, but examination of the statistics of the Heidelberg clinic shows very satisfactory results as to mortality and recurrences from the vaginal method. Moreover the lymphatic glands are by no means constantly affected, and according to Jordan's experience, usually late. In any case it is impossible to entirely remove all the glands of that region. He considers the abdominal method more dangerous and believes that it should be chosen only in exceptional cases. Carcinomatous invasion of intestine or bladder was not considered a contraindication to the vaginal operation. He uses Schuchardt's paravaginal incision.

The Paravaginal Method of Hysterectomy and its Results: SCHUCHARDT (Stettin) states that with his incision the entire parametrium can be removed, hence by its use many cases usually considered inoperable can be treated. The incision always heals per primam. His mortality is 12% for all operations. Out of 60 operations counting cases living 5 years after operation he claims 40% of permanent recoveries, 4 times as great a rate as the best statistics shown by all other operators.

Vaginal Laparotomy Compared with Ventral Laparotomy: Results of 874 Operations; DÜRRSEN (Berlin). Since his introduction of the incision through the anterior vaginal wall Dürrsen has found abdominal operations almost unnecessary. The technic of operation was demonstrated by means of numerous instantaneous photographs. The advantages of the vaginal operation are: The lessened mortality (2% in 874 cases, many of them quite difficult), more rapid recovery, the avoidance of an abdominal scar with all its disadvantages. Dürrsen has operated 700 times for retroflexion of the uterus, and in most of the cases there was also present disease of the adnexa or chronic peritonitis. In such cases the adhesions come directly into view with the vaginal incision, they can be readily separated and recurrence avoided by careful suture of the peritoneum over raw surfaces. There is no difficulty in childbirth after vaginal fixation, as may be seen from 37 normal labors which have followed. Inflammations or newgrowths of the ovaries or oviducts were present in 300 cases. An ovary or portion of an ovary was always left in these cases in order that the menopause with its disturbances might be avoided.

Even the largest ovarian tumors may be removed by this route and their pedicles securely tied. Conservative operations on the adnexa were undertaken in 200 cases; resections of the tubes, salpingostomy, for severe inflammatory affections of the tubes; ligipuncture or resection of cystic ovaries were frequently followed by pregnancy. Conservative operations on the uterus itself were undertaken in 74 cases. Most of these were enucleations of myomas. In 6 cases of intractable hemorrhage, excision of the entire mucous membrane of the uterus was performed instead of total extirpation. The mortality of these operations was greater than that of operations on the adnexa in spite of the fact that the technic was easier. In the removal of pus tubes a lateral incision was joined with the anterior vaginal incision.

A New Method of Total Vaginal Extirpation: DÖDERLEIN (Tübingen) believes that the vaginal method should neither be too highly lauded nor entirely condemned. He prefers the incision through the posterior vaginal wall and demonstrated preparations showing what extensive operations are possible by this method. Döderlein's procedure is as follows: The vaginal cervix is seized and drawn well upward, and an incision is made into the cervix through the posterior vaginal wall. The uterus is then drawn out and the splitting process is continued through the body of the uterus to the wall of the cervix. The cervix is split forward from within out and the halves of the uterus are each extirpated. In the process of splitting the incision is into the retrovesical space and the bladder is not injured.

Carcinoma of the Uterus: OLSHAUSEN (Berlin) agreed with Jordan in most of his statements. He has always been of the opinion that there is no chance of success if the growth has extended beyond the uterus. He never considered extirpation of the lymphatic glands justifiable, though he has extended the indications for operation somewhat of late. Recurrences appear even after 4 to 5 years; he has seen 38.9% after 5 years. He also considers abdominal operation only justifiable when vaginal operation is impossible for some reason. Schuchardt's incision he admits is necessary in certain cases, but at the most in not over 3 to 4% of all cases. Hemorrhage and infection are by no means out of the question with this incision. We have learned to avoid infections for the most part but there is special danger in carcinoma operations. For this reason he considers Döderlein's method only adapted to beginning carcinoma.

Discussion. MARTIN (Greifswald) has not usually found glands which were removed carcinomatous and an attempt to remove renders the operation unnecessarily difficult. He had severe hemorrhage in one case while operating with Schuchardt's incision, but believes it has its advantages. There are great differences as to the extent of the attachment between the bladder and anterior vaginal which might make Döderlein's method difficult in some cases. Whether the anterior or posterior vault of the vagina be incised will depend on the individual operator.

WERTHEIM (Vienna) operates chiefly by the abdominal route, and removes the glands and surrounding tissue in all cases. Investigation has shown that the glands were diseased in 18 out of 50 of his last cases, even when the disease was apparently not far advanced. The removal of the surrounding tissues was considered more important than the removal of the glands even, and this is impossible by any route, except the abdominal one. His results were at first bad—11 deaths in 33 cases—but at that time he undertook the operation in too extensive cases. In the last 20 cases he has had but 3 deaths, in one of which there was metastasis in the liver. He believes that in the future the abdominal operation will be generally adopted.

DÜRRESSEN emphasized the fact that the paravaginal incision had been advocated in obstetrics in difficult labors as early as 1887.

KÜMMELL (Hamburg) mentioned 2 advanced cases in which he felt obliged to operate in spite of their hopelessness because of the involvement of both ureters. He transplanted the ureters into the bladder in these cases.

FREUND (Strassburg) considers vaginal hysterectomy palliative, and suitable for use only in cases in which there is no prospect of permanent success. The abdominal method is indicated in all early cases.

The Structure, Growth, and Histogenesis of Carcinoma: PETERSEN (Heidelberg) has tried the method of study by reconstructing in wax sheets from serial sections, introduced by Born and Strasser in embryology, in the study of carcinoma. He demonstrated 4 models of skin carcinoma, with corresponding drawings and photographs. These models, he believes, will be very useful in teaching, and will help to settle doubtful questions.

The Origin of Carcinoma of the Ovary: KOSSMANN (Berlin) demonstrated sections of microphotographs of an ovary in which both cylindrical-celled and flat-epithelial carcinoma was present and he questioned whether, if carcinoma were of parasite origin, both forms would be present.

Killing Remnants of Tumors in Wounds with Hot Water: EHRARDT (Königsberg) recommends the pouring of boiling water into wounds made by the removal of malignant growths instead of the use of the Paquelin cautery.

HOLLÄNDER (Berlin) showed a patient upon whom he had operated for carcinoma of the nose, and repaired the defect by a rhinoplastic operation. At present the patient has multiple carcinomatous nodules over her entire body.

Should Anesthesia be Used in Resection of the Upper Jaw: KRÖNLEIN (Zürich) presented a tabulation of resections of the lower jaw which seemed to show that the results of the surgeons in the past were better than those at the present. The introduction of asepsis and antiseptics should have given better statistics and the only factor to which Krönlein can attribute the less favorable results is anesthesia, which is used at present but not in the past. The great danger is the inspiration of blood causing bronchopneumonia. In the experience of Küster and König, half their patients died from this cause. The danger is not avoided by half anesthesia and to avoid it Krönlein usually operates without any anesthesia. Of his 35 patients only 1 died and the cause of death was meningitis.

The Disappearance of the Poisonous Properties of Cocain in the Animal Body: KOHLHARDT (Halle) after determining that 0.2 gm. cocain is an absolutely fatal dose for a rabbit, bound a piece of rubber tubing about one extremity and injected this amount of cocain. The band was loosened 30 minutes later and though symptoms of poisoning developed the animal readily recovered. Repeating the experiment and leaving the band for an hour there were no symptoms or only very slight symptoms. This seems reasonably convincing proof that cocain loses its poisonous properties if allowed to remain in the animal (gradual absorption?).

Discussion. BLAU (Breslau) in discussing anesthesia showed 2 blood pressure curves, showing that with ether blood-pressure rises, while with chloroform it falls.

RYDYGIER (Lemberg) and RIEDEL (Jena) in discussing resection of the sympathetic, both reported bad results from preliminary tracheotomy and the use of the tampon camula. Riedel still uses anesthesia, but operates with head of the patient hanging over the end of the table.

KADER (Breslau) has had favorable results with spinal anesthesia. He removes 1½ times as much cerebrospinal fluid as he injects cocain, and immediately elevates the pelvis of the patient. One or 2 days before the anesthesia he begins to administer digitalis, and if there is any change in the pulse rate during operation he administers camphor.

GUSSENBAUR (Vienna) usually operates in resection of the upper jaw with the head bent far forward, and he uses complete anesthesia. Twice he has found tracheotomy necessary, because of the inspiration of blood. The blood was immediately sponged out of the patient's mouth and recovery followed.

Antitoxin in Diphtheria Cases.—Drs. Matas and Landfried, of New Orleans, take exception to the statement of Dr. Girdner, of New York, in his paper to the *Junior Munnsey* that: "The antitoxin treatment of diphtheria has not proved entirely satisfactory, either as a curative or preventive remedy; it is still under judgment." Both physicians stated that their experience has shown that for prophylactic and curative purposes antitoxin, when used in cases of diphtheria, has proved highly successful; the serum is so efficacious that the probability of death is reduced to a minimum, and if a patient is treated within 3 days after the germs of the disease have begun to work, there is absolutely no danger. The mortality from diphtheria in New Orleans is only ¼ of what it was 10 years ago; this is attributed to the extensive use of the serum.

Pasteur Treatment of Rabies.—The Department for the Preventive Treatment of Rabies of the Baltimore College of Physicians and Surgeons report 209 cases successfully treated, of which 85% were from the rural districts. Of those treated 159 were males, 50 females, 70 children, none of whom were over 10 years of age. The wounds were inflicted by dogs in 188 cases, in 13 cases by cats, in 1 by a calf, and in 1 by a pig. Those who came to receive treatment during the first week after being bitten numbered 147, those in the second week 27, those in the third week 11, those in the fourth week 7, those in the fifth week 11, and 4 and 2 came in the sixth and eighth week respectively. There were 5 abscesses in 6,270 injections. There was but 1 death from any cause. This death was caused by rabies. A lad, 8 years old, bitten February 2, 1900, was admitted February 4. He received only 1 treatment, consisting of 2 hypodermic injections. He was removed from the institution and treatment discontinued on February 5 against the advice of the physicians. After the inoculated rabbits and a cow bitten by the same dog developed rabies, the child was brought back on February 25. He developed rabies March 14, and died March 17. A case of this character cannot be attributed to failure of the treatment, but to delay in resorting to treatment.

The State Charities Aid Association has issued its eighth annual report to the State Commission of Lunacy, and urges that reception hospitals for the insane shall be established in New York and other cities of the State, as there is no existing place in the borough except the insane pavilion at Bellevue Hospital to which a patient seized with sudden mania can be removed for early and preventive treatment. The report states that there are now 22,000 dependent insane patients in the State, and statistics show an increase out of proportion to the increase in population; for several years past the annual increase has been over 700. This means additional accommodations to be provided for during the next 3 years for over 2,100 patients. Insanity might in many cases be speedily cured if the patients could have the benefit of the best medical skill such as is given in hospitals for patients suffering from other diseases. The report advises that these small reception hospitals, or psychopathic hospitals, as branches of the existing State institutions and under the same management, should be organized on the same plan as any well-managed hospital and should receive not only the destitute but those able to pay, that all may receive the best neurologic and alienist skill that New York City can provide. Such hospitals have long been established in German, Austrian and other European cities. The report further states that several eminent alienists have expressed their willingness to serve as consulting or attending physicians to reception hospitals in accessible localities.

ORIGINAL ARTICLES

AN ANALYSIS OF MY VAGINAL ABLATIONS IN 181 CASES OF PELVIC INFLAMMATION AND UTERINE FIBROID DEGENERATION.*

BY

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[Concluded from page 153.]

In my practice I have been unable to divorce the fibroid from the inflammatory cases. I have so often found pus cases associated with fibroid growths, and fibroid tumors complicated by inflammatory lesions, that I could not exclude these from my paper without being unjust to both classes. I have therefore included all the vaginal ablations for inflammatory and fibroid lesions.

In reviewing such an amount of material it is incumbent upon me to give my reasons for performing the radical operation upon these women and to demonstrate the advantages of the method of operating which I have selected.

Indications for the Radical Operation.—My position in this regard is very much at variance with that of most gynecologists, and it is just as well that I state my views, leaving it to you to express yours in the general discussion. In the first place I do not consider the presence of pus an invariable indication for the removal of the pus-sac. Young women who develop large pus-foci in first attacks of gonorrhoea can very safely be subjected to the operation of broad incision into these, for they still have remaining much repair-power in the pelvic organs. At least, in view of the disagreeable effects of a too early and too precipitate menopause, the surgeon is warranted in attempting palliative work, particularly if he explains to the patient the certainty of a relapse if reinfection takes place. I, therefore, rarely perform the radical operation in young women with first attacks of inflammation but content myself with the palliative procedure of evacuation. But in those who have suffered from repeated attacks, such as old prostitutes, the radical operation is preferable. It is a significant fact that where I have adhered to this rule of palliative procedures in first attacks not one case has returned for the radical operation, though a few may have fallen into other hands later. When I find ectopic gestation of one side associated with inflamed adnexa of the other, I invariably perform ablation; for to remove the ectopic sac and leave a damaged tube is to invite the formation of another ectopic sac, or a pus focus. If a patient has had a very general septic peritonitis, not due to salpingitis, which leaves many adhesions and occluded tubes, I do not consider her a fit subject for ablation; but if I find such lesions associated with a history of and evidences of salpingitis apart from the peritonitic involvement, I prefer to perform ablation.

When hydrosalpinx of both sides is found associated with many adhesions, I practise conservatism or radicalism as the extraneous circumstances and local lesions demand. For instance, I will again take the case of a very young woman who is loth to be sterilized surgically. Inasmuch as she has no pus focus present, it is eminently proper to open the euldesac, incise the tubes and sever adhesions. The surgeon's judgment must often give way to the sentiments, and very proper ones they are, too, of the patient.

The indications for operation in the cases of genital sclerosis are always for the radical operation. Either let these women alone or cure them.

In brief, I may state that for 10 years I have felt that when the adnexa of both sides were so damaged as to require removal, the uterus was thereby rendered not only a useless organ but remained a mischievous one.

The recent advocacy of conservative and complicated operations upon pus foci, necessitating as they do the use of much ligature and suture material, finds no response in me. I have never been able to lose sight of that fundamental principle: Suppuration in a preformed sac is surely cured by removal of the sac only. And whereas we can evacuate these, we yet leave them, and do so wittingly, as damaged organs which we never expect to be restored to a normal condition.

Furthermore, I go so far as to protest against the removal of one pyosalpinx and leaving the other tube, although apparently normal. Too many of such cases furnish a pus-tube on the other side. It may be answered that one tube was normal. You can point to about enough of such cases which have conceived subsequent to a unilateral salpingo-oophorectomy to prove exceptions to the rule and that my position is correct. I have never met one. Lawson Tait never saw one. Henrotin tells me he has had just one. Surgical rules are not based upon exceptional occurrences. I may remind these gentlemen that conception has been known to follow a mere evacuating operation without section of the body or removal of any structure. I maintain that when an infectious process has passed through the uterus and has been severe enough to cause one tube to become a purulent cyst of retention, it has also damaged the other tube. And when such a unilateral pus-tube is found the indication is not for its removal alone, but for either a merely palliative evacuation or for a total extirpation. Both of these procedures are best applied through the vagina.

The indications for ablation in the cases of genital sclerosis are found in the subjective symptoms which these women suffer rather than in the physical signs. Many of these women have more severe and continuous pain than do the pus cases. The radical operation in them is infinitely more difficult than in pus cases owing to the inelasticity of the tissues. In my fibroid cases I operate only for symptoms, either pressure, pain, hemorrhage or inflammation in the pelvis.

I am outspoken in my opposition to myomectomy except in rare instances. A clean curettage supplemented by the administration of mummy extract is devoid of risk and causes greater reduction in the size of the uterus than myomectomy. If I operate for fibroids I prefer the

* Read before the Medical Society of Tennessee, April 10, 1901.

radical operation. But I never operate unless disagreeable symptoms are present. Still, here again the inclinations of the patient must be consulted. The mere presence of a fibroid is not an indication for operation. I have stated the indications for my operations and it but remains for me to tell why I prefer the vaginal route.

Why I Prefer the Vaginal Route.—I might point to the results of my work as sufficient answer, but such an act would be unfair. There are certain cases of pus and fibroid which I never approach through the vagina. If I find symptoms of appendicitis present I invariably operate through the abdomen.

Again, cases of puerperal sepsis in which the uterus is broken down demand laparotomy. There are also very large fibroids which cannot be removed through the vagina, but must be approached through the abdomen. These excepted cases are the very ones which furnish mortality to the confirmed laparotomist and really render a strict comparison between the two methods unfair to both.

How frequently these excepted cases occur in proportion to those which can be treated through the vagina, I know not. I can only state my own experience. I find that in all my fibroid and pus cases I have been able to relieve my patients by the vaginal route in 83% of cases.

In reference to the pus cases, I find that when the complications are distinctively abdominal, such as appendicular and cecal, the operation must proceed through the abdomen, while if they be pelvic, they can be operated upon through the vagina.

No such distinction can be made in cases of fibroid and fibrocystic growths. A very large, firm, fibroid uterus can be removed through the vagina, while a much smaller markedly cystic growth must be approached through the abdomen.

The firmness of structure and character of the vaginal canal have much to do with the facility of operating through the vagina in fibroid cases.

The vaginal method is particularly applicable in intraligamentous and retroperitoneal fibroids, and in fibroids associated with pus. Thus we find that those fibroids which are with difficulty and some risk to the patient approached through the abdomen are readily removed by the vagina.

COMPLICATIONS AND ACCIDENTS.

Appendicitis, with some operators, constitutes a great objection to the vaginal method. But one case in all my vaginal ablations required a secondary section for appendicitis while in my care. Many operators consider all adherent appendixes diseased. I do not, any more than adherent knuckles of other parts of the gut. Perfectly normal appendixes are often adherent to the diseased right adnexa. I have no difficulty in freeing them through the vagina. Intestinal adhesions are likewise loosened without damage to the walls of the gut.

I have never wounded a ureter nor had one injured in convalescence. Such accidents are not infrequent in laparotomy.

Three times I have wounded the bladder. In 1 case

only was it necessary to secondarily suture the wound, the other 2 closing spontaneously. I have found 4 fecal fistulas at the time of operating and 1 found after a patient went home, caused by her carelessness. Three closed without operation, 1 by operation, and 1 has failed to close after operation the patient being syphilitic. This is not a large proportion of fistulas, for in the first report of suprapubic operations made by me of 85 cases I found 5 fistulas. *Interintestinal* adhesions do not result from vaginal ablation although frequently found to cause chronic constipation after laparotomy. *Hernia* through the vaginal scar is not seen, though hernia through the abdominal incision is found in at least 5% of abdominal sections. *Secondary hemorrhage* has occurred 4 times. When it does occur it can always be controlled by the vagina, though before I found this out I twice did a secondary laparotomy, in a fibroid case once, in a pus case once. In fact, these 2 unnecessary secondary operations taught me much regarding the distribution of the pelvic contents after vaginal ablation.

Kelly found that 44% of his laparotomies had secondary hemorrhage requiring supplemental abdominal sections. I find that in my 180 cases of vaginal ablation I have had 2 secondary hemorrhages requiring supplemental abdominal section, or 1%.

I have lost no case from *postoperative pneumonia* or from *nephritis*. Slight *iodoform intoxication* has occurred 3 times, but soon passed off without deleterious effects. I have had no case of *sudden death* due to cerebral lesions. With one exception the convalescence of the cases has been smooth and I have seen no evidence of that "late infection" which gives the European surgeons a considerable mortality.

Ségond has reported several cases of *acute decubitus*, but so far I have not encountered it. *Mild phlebitis* has occurred 3 times only, a small percentage when we consider the gravity of many of the cases and the frequency of this complication after abdominal hysterectomy. In 1 case in which I operated late after a puerperal infection in which a left broad-ligament abscess has formed, I was compelled to open a secondary abscess above Poupert's ligament. Not the least attractive feature of this operation is its simplicity and the rapidity with which it can be performed under an incomplete narcosis. It is not necessary to secure that absolute muscular relaxation which is an essential of laparotomy. But 1 patient operated upon failed to leave my service cured, and she died during convalescence from typhoid fever. She reacted to the Widal test and the autopsy showed typhoid perforations, so the death cannot be charged against the operation.

In not a few cases of laparotomy which have been drained an abdominal fistula will form which resists all attempts at closure. I have found that these tracts lead down to a pocket in the pelvis. Sometimes there will be found a small opening into the rectum, or the bottom of the sinus will be occupied by an infected ligature or only by a mass of infected granulation-tissue. I have in a number of such cases effected a prompt cure by removing below the uterus and thoroughly cleansing the bottom of the sinus and its track. In this way I secure

drainage from the lowest point and readily close the fistula above. So the vaginal method not only produces few complications but relieves many of those caused by abdominal section.

The longest operation (a large fibroid in a virgin) occupied 1½ hours, and the shortest 4 minutes. The average time in bed is about 3 weeks, and most patients return home within 4 weeks. I never seek to make a record in this respect, but try to so conduct the convalescence as to put the least tax upon the patient.

Altogether I am exceedingly pleased with this method of operation, and while not germane to this paper, I may say that I treat all my ectopic cases and small ovarian cysts through the vagina. In other words, as dexterity in operating comes to me I am disposed to extend the application of the method. Not only do I advocate the application of this method because of the absence of risk, but because I am convinced that the convalescence after it is more smooth and free from complications than after laparotomy.

There is one phase of the question which must be touched on only because a certain element in the profession considers it important: I have found no shortening of the vagina after vaginal ablation. We have measured the distance from the urethra to the vaginal scar in a number of cases and find it more often over than under 3 inches. I have heard no complaint of dyspareunia.

INGUINAL HERNIA.*

BY

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Many methods for treating the same pathologic lesion indicate vacillation and doubt on the part of operators. They indicate also that a satisfactory method has not been devised.

It is worthy of note that ¾ of all cases of hernia are inguinal. In the Civil War (1861-65) 82% of all hernia of soldiers was inguinal; and generally the hernia was found on the right side.

Malgaigne's statistics show that 1 out of 13 males had hernia, and in females 1 in 52; the average for France, both male and female, being 1 in 20, the laboring class suffering most frequently.

Krassnow found on examining recruits in Russia that there were 5 times as many cases of hernia among Jews as among Christians. This fact would no doubt be substantiated in America and England.

Many of the methods thus far adopted have been of great benefit to those afflicted, and have also done much toward the discovery of a procedure that, meeting all the requirements, will therefore be ideal.

The injection of astringents and massage have proven efficacious in a small percentage of a certain class of cases. But injection should not be employed, because of the danger and uncertainty. Although injection and massage have failed to prevent recurrences (so have operations), the latter has proven to be a great remedial agent in certain

forms of hernia, especially in children. There will be a demand by the laity, in certain cases, for the continued use of injection and massage until their futility is seen.

Many terms are used in a wrong sense or improperly applied. This is true regarding many words peculiar to the science of medicine. There is no advantage in having technical terms if they are not properly applied. It is supposed that technical words, to justify their existence, will promote economy in the use of words. Now we have the term inguinal canal. Canal is improperly used in this connection.

Canal:—(1) A canal is a tube or duct for carrying the fluids of the body; (2) a hollow instrument used as a splint.

Channel:—(French, chanel—canal).

Annulus:—A ring, circular or rounded opening; a circular or rounded margin; in biology, an encircling band, *e. g.*, annulus abdominalis, external and internal abdominal rings; annulus abdominis, the inguinal ring.

A ring is a circular opening or aperture; the structure surrounding a circular opening. (Gould's Dictionary of Medicine, etc., fifth edition, Philadelphia, 1900.)

"The author has expressly stated that the inguinal and femoral canals are not properly canals. . . . In a normal state they are simply flattened passages." "Hernia," by Joseph Warren, M.D., second edition, p. 6.)

The inguinal ring (annulus abdominis) is a rounded or oval passage formed by the aponeurosis of the external oblique, the internal oblique, transversalis fascia, subperitoneal fat and the peritoneum. In a normal state its average length is from 1 to 2 inches. Through it passes the spermatic cord, vas deferens and ilioinguinal nerve.

The internal abdominal ring (annulus abdominalis) is situated in the transversalis fascia, midway between the anterior superior spine of the ilium and the symphysis pubis, and about ½ inch above Poupart's ligament. It is oval in form, and the extremities of the oval are directed upward and downward. The size varies. It is larger in the male.

The peritoneal surface opposite the internal ring (annulus abdominalis) forms a pouch for the cord and testes. This is called the infundibulum processus peritonei. Dr. Marcy says that this appellation is wrong; that normally there is no funnel-shaped depression. It is only formed by traction on the cord. He says the ideas usually held concerning this structure are due to the erroneous conclusions of Cloquet's work, published in 1835. Cloquet had dissected over 500 subjects who had suffered from hernia. He mistook a pathologic for a normal condition, and his error continues to be taught to this day. Gross terms this the *infundibuliform fascia*, and states that when the sac of an oblique inguinal hernia passes through the internal ring, the *infundibuliform process of the transversalis fascia* forms one of its coverings. The epigastric artery lies along the lower and inner margin of the internal ring.

"In very young children the inguinal ring is much shorter and less oblique; the internal ring being immediately behind the external ring." (Gross.)

With the growth of the pelvis in its transverse

*Read before Medical Society of the State of New York, Albany, January 29, 30, and 31, 1901.

direction the anterior spines of the ilia become farther apart, and thus draw the internal ring more and more away from (*i. e.*, to the outer side of) the external ring. Hence, the inguinal ring (*annulus abdominalis*) becomes more elongated and flattened.

The Superficial Fascia.—This is the first structure met after the skin has been incised. On being divided and reflected downward the superficial epigastric, superficial circumflex, iliac arteries and superficial external pudic vessels are exposed. The terminal filaments of the hypogastric branch of the iliohypogastric nerve, and the upper inguinal lymphatic glands will also be exposed.

Aponeurosis of the external oblique muscle, Poupart's ligament or the crural arch is that part of the aponeurosis which extends from the anterior superior spine of the ilium to the spine of the pubes. This ligament is supplied by the superficial epigastric artery.

Gimbernat's ligament is that part which is reflected downward and outward and inserted into the pectineal line.

The external abdominal ring (*annulus abdominalis*) is a triangular opening in the aponeurosis of the external oblique formed by the separation of the fibers of the aponeurosis. It is bounded below by the crest of the os pubis and on either side by margins of the aponeurosis. The artery of the vas deferens supplies this muscle.

The Internal Oblique Muscle.—This muscle is thinner and smaller than the external oblique muscle, beneath which it lies. Its aponeurosis is inserted into the crest of the os pubis, and, with the aponeurosis of the transversalis, forms the "conjoined tendon." The latter is behind Gimbernat's ligament and the external abdominal ring. Gross says that the insertion of the lower fibers of the internal oblique and transversalis extend $\frac{1}{2}$ inch laterally. Dr. Coley, quoting Dr. Blake, says that, "in a majority of cases the extent is less than $\frac{1}{2}$ inch, and sometimes inappreciable, in this case, the insertion is almost wholly formed from the internal oblique." Its external surface is connected with the external oblique, latissimus dorsi, spermatic cord, and external ring; by its internal surface with the transversalis muscle, fascia transversalis, internal ring, and spermatic cord. The circumflex iliac artery supplies this muscle.

The Cremaster Muscle is formed of numerous fasciculi arising from the middle of Poupart's ligament at the inner side of the internal oblique. The origin and insertion of the cremaster is the same as that of the internal oblique. It is supplied by the cremasteric artery.

The Transversalis Muscle arises from the outer third of Poupart's ligament and from the cartilages of the 6 lower ribs and interdigitates with the diaphragm. Its lowest fibers unite with the internal oblique, thus helping to form the "conjoined tendon."

The Fascia Transversalis is an aponeurotic membrane between the transversalis muscle and peritoneum. It is thick in the inguinal region. The epigastric and circumflex arteries furnish the blood-supply.

The Internal Abdominal Ring (*annulus abdominalis*) is situated in the transversalis fascia about $\frac{1}{2}$ inch above Poupart's ligament. It is oval in form, larger in the male than in the female. A quantity of areola tissue is

between the fascia transversalis and the peritoneum opposite the internal ring. The epigastric artery lies along the lower and inner margin of the internal ring.

Peritoneum forms a well-marked depression of varying depth opposite the inner ring; the epigastric artery furnishes the blood-supply.

The insertion of the lower fibers of the internal oblique and transversalis extends $\frac{1}{2}$ inch on the average, but in some cases it is much less. This small extent of connection of the muscles is one of the causes of failure of operations for the radical cure of inguinal hernia. The restoration of the parallelism of the fibers of the internal oblique with those of Poupart's ligament is claimed by some operators to be the main dependence for nonrecurrence, but this is extremely doubtful.

From a consideration of the anatomy of the structures involved in inguinal hernia it will be seen that they lack vascularity and nerve supply.

In an operation the nerves and bloodvessels must necessarily be severed. This prevents their perfect repair, and they are less able to withstand the intraabdominal pressure.

The imperfect state of the muscles and the lax condition of tissues due to sedentary habits render hernia more liable to happen suddenly upon violent strain.

Persons suffering with hernia complain that they have more difficulty to retain the parts in place when weakened or debilitated by disease. This may explain why elderly people, as age advances, become more subject to this misfortune.

It is well known that the changes which take place in tissue that has been subjected to reformation are uncertain, but the many causes which produce this uncertainty are not known, or if known, not well understood.

Dr. P. Assmy assigns the division of the motor nerves as the cause of ventral hernia following laparotomy. In such cases the intercostal nerves are divided. There can be no anastomosis with the nerves of the other side, and probably none with the neighboring nerves. Consequently the muscle loses its innervation and undergoes paralysis and atrophy. Hence, the atrophic and weakened abdominal walls are easily protruded in response to intraabdominal pressure. This is also true in cases when operation for inguinal hernia has been performed.

Many operators advocate the entire removal of the sac. This is necessary, as often when the sac is allowed to remain it becomes gangrenous. Other operators claim that to effect a permanent cure it is necessary to restore the obliquity of the inguinal ring. But this is impossible, especially in a large or longstanding hernia, for in such cases the ring has become obliterated. There is no passage, and the external and internal rings become one.

All herniotomies should be regarded as modified laparotomies. The only death that occurred in my practice was due to the fact that I failed to make an incision sufficiently long to make a thorough examination of the gut.

In at least 10% of cases operated upon the adhesions in repair resulting from closure of the inguinal

ring are inefficient. This is true with all kinds of suture material, that is, if suture alone be used. The ideal material for this purpose is one of sufficient life to permit a deposit of new tissue upon the peritoneum externally, in connection with that upon the transversalis fasciae directly, and the remaining tissues indirectly. Through-and-through sutures equalize the pressure on all the tissues involved. This is important with muscular tissue, which is on the stretch, and fibrous tissue. Shepherd, of Montreal, says all kinds of sutures will not last more than 3 or 4 weeks when placed in tissues on the stretch. It can readily be seen that either the sutures must give way or the tissues themselves tear. Most operators strongly favor some one kind of suture material. Nonabsorbable sutures have powerful advocates, while absorbable sutures have just as able advocates. Many statistics are given showing the advantage of one kind of suture over the other, but statistics are not always reliable. Still, the preponderance of opinion is in favor of nonabsorbable sutures, silver wire and silk-wormgut. One report states that in 116 cases in which silk was used, suppuration occurred in 24%, while in 330 cases in which silver wire was employed, only 4.2% suppurated.

If animal sutures are as short-lived as some claim them to be, patients should not be allowed to sit erect or get out of bed on the eighth or tenth day, as Bassini directs.

Those operators who favor buried suture claim that infection occurs less often when wire is used. Many oppose leaving wire sutures in place. What real objection can be raised to this procedure? The presence of wire will not interfere with the natural movements of the tissues any more than does a linear cicatrix produced by absorbable sutures. In addition, it prevents the rupture of the cicatrix by intraabdominal pressure, and, therefore, contributes to the prevention of relapse.

The use of a wire mattress meets all objections that can be urged against other methods of uniting the several tissues. If sufficient quantity of wire is used, and if the mattress is properly and permanently placed, sutures may not be necessary. If the mattress be properly placed over the opening, I doubt the necessity of suturing the tissues beyond. Of course, at times, fixation sutures may be needed. Such a procedure interferes the least with the vascularity and innervation of the tissues involved.

Absorbable sutures defeat the very object desired. The conditions are such that only a nonabsorbable and elastic material should be used.

The fear of infection need deter no one from the use of the wire mattress. If infection should occur, the method employed by the originator of the use of the mattress, Dr. A. M. Phelps, is satisfactory. He cures at all the infected portion, fills the wound with carbolic acid, and washes the latter with alcohol. Dr. Phelps claims that in all cases, in which he employed the wire mattress, not a single relapse occurred, and that the strongest part of the abdominal walls is that part involved in the field operation.

Many surgeons claim that if they could prevent relapse they would be certain of a perfect cure. Others

claim that a very large percentage of their cases are septic, but only a small percent relapse; while the former class state that their relapses will amount to 10 or 15%.

What deductions are to be made from these conflicting statements? Does infection cause recurrence? If so, what degree of infection is necessary to produce relapse? Is it not time to draw a halt, in this seeking excuses for what, in reality, is caused not by infection, but by imperfect methods and imperfect work? It is probably the patient's skin and hands which are responsible for infection. It is impossible to sterilize the skin or hands of the patient. All kinds of suture material can be sterilized.

Varicocele* is said to be a causative factor in producing inguinal hernia. Now statistics show that inguinal hernia is more frequent on the right side, while varicocele is more frequent on the left. It is reasonable to infer that if varicosis has anything to do with inguinal hernia the latter should be found more frequently on the left side than on the right, or that varicocele should be more frequent on the right side. Might not varicocele act as a preventative to inguinal hernia? If varicosis does act so, the veins of the scrotum should not be excised, and since there is no positive proof that varicosis is a causative factor in inguinal hernia, the veins should not be excised because of any fancied effect on the hernia. There are many other conditions which imperatively demand their excision, but their excision for the relief of hernia is uncalled for.

In attempting the reduction of a hernial tumor it should be borne in mind that the formation of the peritoneal sac may be double or multiple, though this is a rare condition. Therefore, it is best never to assume, but determine from positive knowledge, the actual condition. Always give the patient the benefit of the doubt.

Dr. R. H. Russell claims that inguinal hernia in children occurs because of the presence of the hernial sac, which has remained after the testicle descends into the scrotum. A permanent cure may be effected by simply excising the sac. Funke and others claim that atrophy of the testicle often follows herniotomies in children. This is caused by the cord being compressed by the cicatricial tissue.

The statistics of infection and recurrence in inguinal hernia are interesting and instructive. Dr. Marcy claims that only 2% of his cases suppurated. In 500 operations there were about 10% of recurrences. One well-known surgeon claims that suppuration is always followed by a recurrence. Dr. J. Collins Warren claims that the percentage of recurrences will average less than 8%. He favors silk for suture. According to this writer only 2% of adults are cured by wearing a truss. He differs from Drs. Bull and Coley in placing the age limit for operative treatment at 50. He has had good results in cases much older. I secured as good a result in the case of a man 78 years old as I did in any younger man. Dr. Warren claims that if a relapse does not occur within a year after the operation the patient may be considered in

*Varicocele=(varus, varix, crooked; and *εήλη*, tumor). Why not form the entire word from the Greek *Clreocle* (*κίρρός*, varix and *εήλη*, tumor)?

safe condition. In the last 14 years I have operated on 47 cases of nonstrangulated inguinal hernia. There was 1 death. This occurred, suddenly, 16 days after operation, while the patient was on the commode. Death, probably, was due to perforation of the gut, caused by internal strangulation. There was one relapse, 2 recurrences (4.22%). One case was the third operation upon a man who had undergone 2 previous operations before I attended him. Another was the second operation for a recurrence. In the first operation I used silver wire. The ages of my patients ranged from 18 months to 78 years. Including stitch-hole infection, suppuration occurred in 23 cases (49%). In one case a very deep and severe abscess developed; the source of infection was determined. Metal sutures were employed in 4 cases and kangaroo tendon in 43. Suppuration occurred in 2 cases sutured with silver wire (50%). It was not necessary to remove the wire. Twenty-one case suppurred which had been sutured with kangaroo tendon (49%). As one year is generally taken as the limit for recurrence, if the 10 operations performed during the last year be omitted, the percentage of recurrence in my practice will be 5.4%. All except 6 of these cases occurred in private practice; the 6 were performed in public hospitals. The large percentage of infection was due, probably, to the imperfect means, in private homes, to secure asepsis.

Dr. Coley, in his latest published paper on inguinal hernia in the female, states that in every case in which suppuration occurred it was due to stitch-hole infection. The Johns Hopkins Hospital Report (Vol. VII) gives 20% as the percent of infection in 366.

Dr. Coley is a firm advocate of the use of catgut and kangaroo tendon. On page 5 of his reprint, "The Radical Cure of Inguinal Hernia in the Female," he states that absorbable sutures can be made absolutely sterile. He also claims that he and Dr. Bull have used catgut and kangaroo tendon 10 years, implying that they obtained good results. Then he states that the clinical results regarding primary union are unfavorable to the use of absorbable sutures. He immediately states that the use of nonabsorbable sutures has its disadvantages, and argues against their use. He quotes Dr. Bloodgood's report to support his argument. These very tables, or his own quotations from them, are contradictory. Where silk was used suppuration rose to 24%, while where wire was used, only 4.2% suppurred. So, too, with regard to the formation of sinuses. Coley says that not alone in cases which suppurred that sinuses developed, but they may develop months and years after the operation, and that they occur when there is perfect primary union. Quoting Dr. Bloodgood again, he says, of 22 cases closed with silk only 3 healed without discharging some of the deep sutures, while 9 out of 13 closed with silver wire had no sinus formations. On page 8, he says in effect that having proven the superiority of chromicized catgut and kangaroo tendon over silver wire, silkwormgut, etc., it remains for the users of the latter materials to prove why they should not abandon their use. To an unprejudiced person it seems that if he has proved anything he has proved the superiority of silver wire and silkwormgut. Then, on the

last page, he says that 6.5% of his last series of operations suppurred, and that this took place when he used absorbable suturing material; 4.2% suppurred when wire was used, and only (?) 6.5% with the boasted absorbable sutures. The very fact that many surgeons are using chromicized kangaroo tendon is a self-evident fact that they are seeking something longer lived than the suture material ordinarily used.

One hundred and sixty-one circular letters were sent out to as many different surgeons in this country, requesting the approximate percentage of recurrence in cases upon which they had operated for inguinal hernia. Only 66 replied. Of these, 3 say they had but a few recurrences, but give no definite percentage; 8 claim to have had no recurrences; 7 give no percentage; 15 say they know nothing definite regarding the latter history of their patients; 33 give a definite approximate percentage. This varies from 1.0% to 15%. The average percentage given is 5.6%. This percentage agrees with that stated in the latest textbooks. By taking the percentage as given by these 33 operators and adding the percentage of recurrences in my own practice, the average percentage for 34 operators will be 5.58%. This percentage is based on the aggregate number of operations reported by these 34 surgeons, 6,027. Some of the figures given seem very low, while others seem excessively high. Still, the highest percentage given only equals the average percent for Europe. Prof. Girard, of Berne, says that the average percentage for Europe is 15%. His statement is corroborated by Kuemmel, of Hamburg. Dr. A. H. Ferguson gives the following statistics: Number of patients, 227; double hernia, 32; total number of operations, 259; number of patients heard from, 165; number of relapses known and reported, 0; reward offered for every case of relapse after "typic operation," \$10.00; number of cases in which the reward has been claimed, 0. He is the authority for the statement that Drs. William and Charles Mayo have performed over 500 herniotomies, using Ferguson's "typic operation," without a single relapse.

Dr. Christian Fenger says: "I should judge that the recurrences do not exceed 5%. I have myself certainly not operated a second time on 3%."

All those writers who have given a definite, approximate percentage base it on their total number of operations. This is not exactly fair if it is true that at least one year must elapse before an operation can be considered successful.

Now, if the approximate percentage of recurrence equals 5.58% on the cases that are known, how much greater would the percentage be if the fate of all the patients was known?

It is but common justice to say that those who reported no percentage or know nothing of the after history of their patients, or who do not report an approximate percentage, are just as prominent as those who did and have performed at least as many operations.

One prominent surgeon says: "The observations in these cases show that nearly $\frac{1}{2}$ have recurrence. The more modern methods of operation seem to have lowered this percentage."

Another claim that relapse is caused when there is "either sigmoid or cecal hernia where the bowel has come through the canal without peritoneal covering upon its posterior surface," and when the patient has been a heavy beer drinker and has fatty degeneration of the muscular tissue. Dr. Abbe says that since he has used the Bassini method he has had no relapse. He uses silkwormgut in all cases to suture Poupart's ligament to the internal abdominal wall. He further says: "I have never had one thrown out—nor suppurate so as to require removal."

The preferred operations today for the radical cure of inguinal hernia are 7, namely: the Marcy-Bassini, Macewen's, Andrews', Halsted's, Ferguson's, Phelps' and Bloodgood's. The expression, "Marcy-Bassini," is used advisedly, because Dr. Marcy discovered and employed this method long before Bassini announced to the world the method which bears his name. Dr. J. Collins Warren claims also hit upon this method of operation, which he to be the nearest to nature's method, independently of Bassini's. The Marcy-Bassini method seems to be most popular. From statistics it is permissible to venture the assertion that 95% of herniotomies performed are according to the Marcy-Bassini methods or modifications thereof; 3% will cover all other methods in which absorbable or buried sutures are employed; 2% will cover all operations in which wire is used. There are on record about 1,000 operations in which wire was employed. Witzel, of Germany, closes hernial orifices with deep sutures, he then weaves the silver wire in and out the strands; in other words, he "darns" the opening. The Marcy-Bassini operation was a great advance in surgical technic. A professor of surgery said that the recurrence amounted to over 50% when he employed the McBurney and Macewen operations. There was but one relapse in his last series of operations. The Bassini method was employed in 23 cases and the Halsted in 2. The relapse was a Bassini.

In conclusion, permit me to call your attention to 3 additional causes of failure in radical operations for inguinal hernia: (1) Deficient origin (attachment) of the internal oblique; (2) pressure on the walls of the abdomen by the truss (where one has been worn); (3) the length of time the hernia has existed, especially in the aged.

In making a radical operation do not divide fibers of tissue, do not cut bloodvessels, do not cut nerves. If there is no cutting of nerves or bloodvessels repair will be more certain and rapid, for the reason that the vitality and innervation of the tissues will be preserved. But the operator should cut out the fat.

The question of evolution, perhaps, plays an important part in arriving at a true philosophy of the etiology of inguinal hernia, at least in the male.

Is inguinal hernia more prevalent today than in past ages? Is inguinal hernia, or rather the structural peculiarity which makes it possible a reversion to the type? Or is there a failure during fetal life of certain metamorphosis in the morphology of the pelvic structures and organs? All of these are interesting questions, and our answers to them will determine finally the disputed theories concerning the philosophy or etiology of hernia.

It might also be well to examine into the question whether anything in the habits produced by our rapidly advancing civilization has anything to do with it. Is man advancing toward perfection morphologically, or degenerating? In the time of the Emperor Constantine operations for hernia, which involved the loss of the cord and testicle, were so numerous that they were checked by a royal decree for fear that the country would suffer from the lack of population.

Perhaps an apology is due concerning the use of names. The writer has not felt at liberty to use the names of those who imparted information through personal communications, except in a few instances. But he has felt at liberty to use the names of the authors of published articles to which he has referred in this paper.

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VAGINAL FALSE MEMBRANE DUE TO BACTERIUM COLI.

BY

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In the *Philadelphia Medical Journal* of December 30, 1899, I published a report of certain cases seen by Dr. L. Freeman and myself under the title, "General and Local Infection by Bacterium Coli, with Report of Cases." An extensive search of the literature at that time failed to show any record of a vaginal false membrane such as appears in the case to be quoted:

On September 4, a healthy girl of 14 years began to complain of headache and general malaise, and I found her with a temperature of 101.8°. The case had the appearance of one of incipient typhoid fever, and received appropriate treatment. On the fifth the temperature was slightly increased, and on the sixth a false membrane was discovered by the mother, and shown to me the next morning. On the seventh the temperature was 104°, and the smarting and burning which had attracted the mother's attention to the membrane continued. A dark patch of 2 cm. across covered the inner surface of the right labium majus, a smaller one covering the opposing surface. An examination of a piece of the membrane by Dr. W. C. Mitchell showed a pure culture of *Bacillus coli*. Gonococci were sought for in vain in the secretion and the membrane.

The urine was acid, S. G. 1025, and contained neither albumin nor sugar. The sediment, after centrifugation, contained nothing abnormal. The absence of colon bacilli should be noted.

Under the application of a 1 to 5,000 bichlorid solution the membrane was detached on the sixth day, the temperature became normal and the girl has remained well ever since. Phenacetin was given for the headache and pain, and salol to avoid, if possible, any ascent of the infection along the urinary tract. This was especially important in this case, for another member of the family, a year before, had had a long and severe infection of the entire tract by this bacillus.

The infection of 2 members of the family a year apart by the bacillus seemed to Dr. Freeman and myself rather indicative of a family susceptibility to the germ than as evidence of any possible contagion.

From the article referred to I quote the following: "Bacillus coli may and often does cause many diseases, as cystitis, nephritis, pyelonephritis, perinephritis, peritonitis, endocarditis, icterus, disease of the gallbladder, meningitis, lymphangitis, urethritis (1 case), abscess, sepsis, pyemia and septicemia. The culture is sometimes a pure one, but often mixed with pus-organisms, and of greatly varying virulence."

It is noteworthy that the diseases caused by this bacillus are rather within the body than on the external surfaces, although it is well known that *Bacillus coli* is found as a harmless inhabitant of the vulva, foreskin and anterior urethra in many cases. No history of any possible injury to the parts could be obtained. The girl had recently menstruated normally. Under the circumstances, and especially with the family history and a temperature of 104°, it was a relief to find the urine normal, and not, to quote again, "acid, foul smelling, cloudy, and loaded with the bacteria mentioned." In spite of the purely local involvement, the temperature was as high as in the grave systemic forms previously reported. The prompt subsidence of temperature at the time of separation of the membrane would confirm the idea that there was no undiscovered constitutional infection, the general symptoms being well explained by the absorption from the local lesion, as in diphtheria. It is possible that other membranes ordinarily considered diphtheric may be found to be due to *Bacterium coli*.

A NEW SERIES OF ANAEROBIC BACTERIA.

BY

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At the International Medical Convention, held at Paris last summer, some very interesting reports were read by Dr. Veillon concerning the hitherto overlooked and unknown anaerobic bacteria. Doubtless it will be demonstrated thoroughly that many of the conditions mentioned in the following translation are caused frequently by some of the series of organisms which he and his followers describe. These may account, for instance, for the grave results observed in cases of hepatic or pelvic abscess in which only the *Bacillus coli* has been found and which have led us possibly at times to ascribe too great pathogenicity to that usually benign bacillus. The following is a fairly close translation of an extract from his report, as distributed at the congress:

ANAEROBIC BACTERIA IN PATHOLOGY, WITH ESPECIAL REFERENCE TO INFANTILE PATHOLOGY.—There exists besides the known, aerobic, pathogenic bacteria, a large number of equally pathogenic microorganism which are unable to develop in the presence of oxygen; these are the strict anaerobic bacteria. Their importance has been overlooked in the past and with the exception of malignant edema (vibrion septique), symptomatic

anthrax, and tetanus, we have but vague notions of their role in human pathology.

Following an extensive systematic series of researches we have been able to isolate 14 species of strictly anaerobic organisms. These anaerobes are the principal agents of a whole series of affections of a gangrenous or putrid nature. They have been isolated in otitis, mastoiditis, cerebral abscess, pulmonary gangrene, putrid pleurisies, dental caries and suppurations of dental origin, sinuses, phlegmons of the orbit, gangrenous pericystitis, appendicitis, peritonitis, hepatic abscess, periuterine suppurations, certain puerperal infections, bartholinitis, urinary abscesses, extravasation of urine, vesico-renal and peri-renal infections, and gangrenous phlegmons. The details of the technic employed in the special study of each of the diseases in which these bacteria have been encountered will be found in a series of works undertaken in the laboratory of Prof. Grancher. We will here content ourselves with giving a resume of the biologic properties of these microorganisms. Exclusively anaerobic, they have the property of necrosing living tissues and at the same time to cause them to undergo a process of disintegration analogous to putrefaction; these are the agents of the gangrenous and putrid processes. Not only do they act locally but by the toxins which they secrete as well, they provoke a veritable general poisoning which is evidenced by the symptoms of constitutional infection and in typical cases by an alteration in general condition which may be termed the putrid facies or cachexia. In the study of their toxins and by immunization we soon hope to have a serotherapeutic treatment which will be truly rational and efficacious.

The following is a list of the publications upon the subject, which have been written by Dr. Veillon and his followers, chiefly working in the laboratories of Dr. Grancher in the Hôpital des Enfants Malades:

- Veillon, Sur un microcoque anaerobic trouvé dans les suppurations fétides (Soc. de Biol. 1898).
Veillon et Zuber, sur quelques microbes strictement anaérobies et leur rôle dans la pathologie humaine (Soc. de Biol. 1897).
Veillon et Zuber, Recherches sur quelques microbes strictement anaérobies et leur rôle en pathologie (Arch. Méd. exp. 1898).
J. Hallé, Recherches sur la bacteriologie du canal génital de la femme. Thèse, Paris, 1898.
Rist, Etudes bactériologiques sur les infections d'origine optique. Thèse, Paris, 1898.
Cottet, Recherches bactériologiques sur les suppurations peri-urethrales. Thèse, Paris, 1899.
Guillemot, Recherches sur la Gangrène Pulmonaire. Thèse, Paris, 1899.
H. Tissier, Etudes sur la flore intestinale du nourrisson à l'état normal et pathologique. Thèse, Paris, 1900.

We have in progress some work in the same line, and hope in a short time to be able to verify some of the reports noted above.

Plague in San Francisco.—Surgeon-General Wyman, of the United States Marine-Hospital Service, reports from January 1, 1901, to April 19, 1901, 12 fatal cases of plague.

CONCLUSIONS FROM PERSONAL OBSERVATIONS OF COMPOUND FRACTURES.*

BY

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How shall we treat compound fractures? though an easy problem to propound, is one at times difficult of solution for us all. I do not propose to present a review of the subject but to urge the adoption of conclusions that my personal observations of the past have taught me. I neither have nor make any claim to originality for the thoughts or procedures suggested in this paper, but urge acceptance of these conclusions, as they are essential at times to assure proper results and eliminate avoidable unfortunate conditions.

In these cases it is well to have the physician's personal interests protected by doing that which can be shown to be the very best thing for the patient. In the patient we have to consider general condition, age and any organic trouble that may exist, the peculiarity of the fracture, the condition under which it occurred, the conditions incident to the primary dressing and the time that has elapsed since its occurrence. When, because of a very small or incomplete opening, we are unable to determine the relative condition of the tissues involved, the character of the fracture, the proper approximation of the ends of the bone, it is our duty to determine these facts promptly and positively. Unless this is done a naturally protracted illness is markedly prolonged, with all the concomitant dangers, suffering, annoyance and expense.

In speaking of compound fractures, we almost always associate them with the long bones, and it is these I have in mind; for it is the exception when compound fractures of other bones occur. I do not propose to consider those cases in which great contusion, extensive comminution and laceration of the parts exist, such as result from great force or weight, gunshot-wounds or railroad accidents, when the vitality of the tissues is destroyed or the member partly severed. In these cases, the cause of the traumatism is a factor of no small moment. As you are aware, injuries from rapidly-moving bodies produce a change in the tissues, which we might designate molecular, and trophic disturbance are sure to occur in the tissues beyond the immediate point of traumatism. In such cases, the question is not whether we shall open up the wound or not, but usually one of amputation to save a life.

Another class of compound fractures is more common, which general practitioners have to meet, and which require greater skill, care and judgment to have terminate successfully, than those just mentioned. They come along irregularly in practice, and unless we have given this class of compound fractures some thought and have their peculiarities clearly in mind, we will have an occasional result that is very ugly and unsatisfactory, both to our patient and to ourselves. To show that we may obviate these occasional unsatisfactory results, is the purpose of this paper.

In these cases the skin and tissues are torn and penetrated by the ends of the fractured bone. The laceration varies from a small hole or puncture to a wound of several inches in extent, the size of the puncture bearing no relation to the possible complications or termination of the fracture. I believe it to be the common practice with most physicians to try to replace the ends of the fractured bone in the best possible apposition by extreme extension; if apparently successful, to accept it as such, then seal the wound up, put on a retaining splint and trust in God for the rest. Or sometimes, when this cannot be accomplished, the end of the bone is sawed off, replaced without thoroughly opening down to the bone, and then dressed in the manner described. To such methods and procedures, I wish to take exceptions; not because I have not had some good results when treating cases in this way, but because I have most positive convictions that there is a percentage of avoidable poor results. I recall quite a number of primary cases in which I am sure if this method had been pursued, union could not have occurred. I have also observed late cases, when this method has been followed, which presented vicious union or nonunion, a most unfortunate termination both for patient and attendant. These would have resulted differently, in my judgment, had the wound been fully opened up and the conditions determined and corrected. Such observations, occurring frequently, furnish ample reason for attempting, and, if found feasible, adopting, a method which will eliminate these uncertain results and so give us a higher percentage of satisfactory recoveries.

Unless we can conclude that infection has not occurred from the patient's skin, clothing or primary dressing; that the tissues are not buttonholed by the end of the fracture under the skin unrecognized; that there has been no foreign substance carried into the wound, such as bits of clothing, dirt, etc.; that the ends of the fracture can be approximated and remain there; that the ends of the fracture can be placed in apposition without sawing the ends of the bone; that there is no danger from the bruised tissues or loose spicules of bone I believe that we should promptly cut down on and fully open up the tissues in this class of fracture at the laceration and definitely determine these points. The wound can then be cleansed, the torn tissues cared for, all foreign substance removed, and the bone thoroughly and promptly exposed. The ends of the fractured bone can be approximated, wired or nailed as determined, the periosteum replaced as far as possible, and if thought necessary a drain for 24 or 48 hours is admissible. If the fracture is an oblique one it is very much the wiser method to wire it through and through with heavy silver wire*; while if it is a transverse fracture, once it is

* I say, "If it is the wiser method." Each case I see impresses me more forcibly that it is the imperative method. Since this paper was written, I have seen 2 cases of oblique fracture of the tibia, one compound, the other simple, which reassured me of the correctness of this statement. One was in a brother practitioner, and while I advised as I have written, an eminent consultant did not agree with me because of the patient's condition, so he approximated the fractured ends and applied a fixed dressing. At the end of 6 weeks we had a most unsatisfactory condition—only fibrous union and that in a most vicious position which required secondary operation—the simpler one was later compound by the end of the bone forcing itself through the tissues, because the end was not held securely in place, which, as you will know, is always difficult and the accomplishment of which is uncertain in markedly oblique fracture.

* Read before the Saratoga Medical Society, February 14, 1901.

replaced it will probably remain so with the usual retaining splint and dressing.

I grant that this procedure is not admissible unless we are first absolutely sure of our surgical technic, and, second, that the patient's condition does not contraindicate it. If we are not sure of our technic, then I believe we should promptly adjust a sterile dressing, without attempting to clean up the member, and turn it over to some one who is so situated that a perfect technic can be observed. If we attempt to clean up the wound for the primary dressing and cannot observe perfect asepsis, the patient is much more liable to infection than if a simple primary dressing of sterile gauze had been adjusted. If this is not at hand, a clean piece of linen or muslin can be employed with safety. If one has these cases referred to him for treatment, he is fortunate if nothing more than this has been attempted.

You must all agree with me that it is not only difficult but impossible to determine the points I have mentioned through a small punctured wound. If the wound is not enlarged and sepsis occurs, it may burrow along the muscular planes, causing danger by destruction of tissues or impairing the usefulness of the member; or it may extend to the medullary portion of the bone causing diffuse osteomyelitis, ending in extensive necrosis or pyemia. In any case the repair will be by granulation and correspondingly slow, which under the most favorable circumstances means increased suffering and expense. Thus a compound fracture that is infected or improperly cared for is an alarming condition, and may easily lead to loss of limb, life, or both. In fact, before the days of aseptic surgery this was such a well-recognized fact that amputation was the not uncommon treatment for compound fractures.

I expect that some will take exception to my broad statement as to the proper treatment for these cases, and support it by the results obtained in some or all of their cases, particularly if they are not many; 5 years ago I would have done so myself. During that time, however, my observations have forced me to change my conclusions in this class of work. I am sure if the practitioner will observe and analyze his own cases he will find some in which faulty and delayed union, or non-union has existed, which would not have been the case if the method suggested had been followed.

I review, in the briefest way, a few cases. I have a goodly number more which could be cited, but mere numbers would not change my conclusions, as I believe one avoidable poor outcome is sufficient to condemn any set line of procedure.

CASE I.—Male, age 23. Both bones of leg broken, tibia protruding through skin, laceration considerable but not sufficient to determine the condition of the tissues. On opening down to the bone we found the proximal end had buttonholed a portion of the muscular tissue, which was not determinable until this was done; and while approximation could apparently be made, union could not have occurred. In addition we found considerable comminution of the bone, and some fibers of cloth in the wound. This fracture was markedly oblique and required wiring.

CASE II.—Male, age 25. This was also an oblique compound fracture of the tibia. It was thought to have been thoroughly and successfully reduced and placed in a proper fixation splint. After 8 weeks osseous union had not occurred, although there

was faulty fibrous union. Six months later an opening showed there was tissue between the ends of the fractured bone; when this was removed and the bone wired union promptly occurred.

CASE III.—Male, age 20. Incision showed transverse fracture, both bones broken, considerable laceration of skin; proximal end overriding distal end, requiring unusual force and leverage to replace it. When this was accomplished, it remained in apposition with usual dressing.

CASE IV.—Mrs. X., age 50. Compound fracture at ankle which could not be replaced to our satisfaction. When the opening was enlarged, we found a quantity of earth in the wound.

CASE V.—Male, age 45. Fracture of both bones of the leg and compound of the tibia. We prepared to cut down at the fracture. The patient's condition was such that the anesthetizer could not go on, so we were forced to dress it in the usual way. Six weeks later, union not having occurred, we opened up the wound and found the bone comminuted, and tissues between the ends of the fracture which prevented union. This was removed, the bone wired, and union occurred.

Thus, if I had only met these 5 cases, I should conclude, and expect others to sustain me in my conclusions, that the correct way to meet these conditions is with an exploratory incision, accordingly, that we are not justified if we merely try to approximate the ends of the bone, put on an aseptic dressing and retaining splint, when there is any doubt concerning the pathologic conditions. While I have not had the opportunity of examining a sufficient number of cases to attract the attention of statisticians or authorities, yet my clinical observations from the cases I have seen teaches me that I am right in my deductions. For, any method which is generally accepted and which is liable to have primary unobserved conditions resulting in complications such as I have enumerated, is radically wrong, and our teachers would do well to emphasize this point in their lectures on the subject.

It is well to have in mind our own position from a medicolegal standpoint. In a recent paper on "Fractures at the Hipjoint," I said:

"In all cases of fracture, it is particularly essential that the physician in charge should protect himself in his prognosis, as nowadays there are so many instances of suits being brought for malpractice. It has been my practice for several years to make my prognosis in the presence of some reliable individual in all cases of fracture. And I have another rule from which I have not deviated in the past 10 years, *i.e.*, not to put up a fracture permanently alone under any circumstances. Those of you who have done otherwise and have not given this matter a thought should do so, for there is surely trouble ahead for the general practitioner who treats fractures without this precaution."

In conclusion, I earnestly urge that in compound fractures, when the pathologic condition is not positively determined, that the puncture or laceration be enlarged, the bone fully exposed, approximated and held there, if you are sure of your technic and the patient's condition does not contraindicate it. I am sure that the dangers of such procedure are nil, while its advantages may save a life or limb; that the results are more perfect and quicker; and that many unsatisfactory secondary operations may be avoided.

Indiana Reform School for Boys.—An investigation by the trustees reveals the following facts: Of the 571 boys there nearly 400 have been committed for the minor offenses, mainly incorrigibility. It is peculiarly striking that by actual numbers 300 of these incorrigibles are the children of step-parents.

THE FOOD VALUE OF ALCOHOL, AND PROFESSOR ATWATER'S EXPERIMENTS AND TEACHING.

BY

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Of those whom we regard as competent to speak on the subject, Professor Atwater is, perhaps, the strongest advocate that alcohol has had in a scientific man since the days of Liebig and Moleschott. In a recent article he says: "The testimony of the experiments now available, is, on the whole, to the effect that alcohol resembles fats and carbohydrates in the protection of fat from consumption, but is inferior to them as a protector of protein."¹ Moreover, he quotes with approval the opinions of physicians who say that "there are many cases in which the bodily functions are maintained and life even saved by alcohol when ordinary food could not be endured." Speaking of certain cases in which "the bodily functions are weakened and the power of digestion impaired," he thinks that "what is wanted is a material which will not have to be digested, can be easily absorbed, is readily oxidized and will supply the requisite energy. I know of no material which would seem to meet these requirements so naturally and so fully as alcohol."

A fairly representative opinion of the latter (those who do not agree with Professor Atwater) is that given by Dr. Winfield S. Hall, Professor of Physiology in The Northwestern University, in a paper read before The American Medical Association at its meeting held in Atlantic City last June. "Not since the days of Liebig," says Professor Hall, "have the bars which set the boundary of foods been so ruthlessly torn down. Even iron filings and phosphorous satisfy the terms of this definition (Professor Atwater's definition of a food, "that which taken into the body yields energy or builds tissue"), and a long list of ptomaines, leukomains and toxins, come clearly in the definition."²

Before making an examination of the evidence which has led Professor Atwater to regard alcohol as a food, indispensable in certain conditions, we shall the better understand his position if we first obtain the views of his predecessors upon this mooted point.

Liebig classified foods into "plastic" and "respiratory," or those which build up the tissues and those which are burned to supply the body with heat and energy. The proteid foods, meat, eggs, and the like, made up the former class; and fats, starches, sugar³, the latter class. The latter class was called respiratory because their oxidized products are eliminated chiefly through the lungs. It is, perhaps, not necessary to point out here that the proteids are also "respiratory," inasmuch as their oxidation produces energy; and that, therefore, Liebig's classification is wrong. He regarded alcohol as a respiratory food, and he classified it with the fats and carbohydrates. He recognized that alcohol was an excitant of the nervous tissue, "which through its effects upon the nerves enables the laborer to renew his failing strength, which he could not do for lack of a sufficient amount of food. He does this, however, at the expense of those tissues, and the inevitable result is

bankruptcy."⁴ Nevertheless, in spite of its evident irritating properties, Liebig put alcohol in the list of useful "respiratory" foods.

Moleschott⁵ did not agree with Liebig in his opinion that by taking alcohol the laborer bankrupts himself, but held to the opinion that when alcohol is taken it is oxidized and the laborer "saves fat and albumin" which would be oxidized in the absence of alcohol. To prove this he referred to the experiments of Scharling and Vierordt, showing that the ingestion of alcohol was followed by a diminished output of carbonic dioxide. Alcohol was, therefore, in his estimation, an economizer of tissue. He raised the point, however, whether it would not be better to let the tissues be oxidized in the normal way and provide for their renewal by appropriate food rather than to do anything to interfere with the normal process of oxidation. Furthermore, Moleschott made a distinction between alcohol and real food by pointing out that, unlike the carbohydrates and fats, alcohol could not build up wasted tissues, but could only retard their destruction by itself oxidizing and supplying the bodily energy needed.

This theory, that alcohol, being more easily oxidized than the tissues, was invariably oxidized and the tissues spared whenever alcohol was ingested, found almost universal acceptance among members of the medical profession until comparatively very recent times. This was taught to me as an established fact by one of the best known chemical physiologists of the country 16 years ago.

J. R. Mayer⁶ was even more radical than Moleschott. He declared that we must regard as a food any substance which places its chemical agency at the disposal of the tissues; that the value of a food lay in its combustibility; that substances were nourishing in proportion to their combustibility; that fats, starches, and sugars were highly combustible, therefore highly nourishing; and that alcoholic liquors derived from the sugars are not the less nutritious. Mayer went further still than this, inasmuch as he looked upon the "stimulating" effects of alcoholic liquors as being a real aid for the accomplishment of both mental and physical work.

The opinion of Voit⁷ was the same as that of Mayer and he valued a substance as a food just in proportion to the amount of calories it was able to furnish when oxidized. His definition of food was exactly the same as that Professor Atwater has given this year. He called any substance a food which would cause a deposit of material necessary for the construction of the body, or which would prevent the destruction of such material when deposited. Alcohol was a material oxidized in the body. Being oxidized, the tissues must have been spared, therefore alcohol, in his opinion, was a food. He recognizes the fact that the disturbances it produces when taken in considerable quantities very greatly limits its use as a food. That, indeed, so small is the amount which can be taken without producing derangement of function that its value as a food is not worthy of attention. Its oxidation, no doubt, gives rise to heat, and may give rise to muscular energy. The latter, however, has not been proven.

Here again we meet an opinion identical with that

formulated by Professor Atwater, "It seems probable that it also yields energy for muscular work; but to prove this absolutely is not easy. The difficulty is to make experiments which show conclusively that energy used by the muscles comes from the alcohol and not from the other materials of either the food or the body itself."

Up to very recent times, therefore (as has already been stated) medical men the world over believed that the nitrogenous tissues were protected by the ingestion of alcohol, and that alcohol was, therefore, as valuable as any of the carbohydrate foods to the extent that it exercised this sparing function. Less nitrogen was thought to be eliminated, therefore, there must have been a smaller amount of nitrogenous tissue destroyed during the period when alcohol was ingested. Binz remarked at the Congress for Internal Medicine, held in Weisbaden, in 1888, that there was one thing in this question of the disposal of alcohol in the human body about which there was no difference of opinion, and that thing was the power of alcohol to diminish the output of nitrogen. Romeyn,⁹ however, a year before that time, in connection with Forster, performed experiments the results of which were already published, showing that this was by no means true.

In these experiments alcohol was given to fasting persons; but instead of a decrease there was, in every instance, a decided increase in the nitrogen output, showing an increase in destruction of the albuminous tissues. It is only just to experimenters who have obtained contrary results to say that the subjects of these experiments were said to have received "large doses" of alcohol; how much we are not told.

Others found that while the nitrogen output was less on the day or two during which the alcohol was ingested, there was a noticeable increase in nitrogen excretion on the days immediately following the alcohol day or days.

Kellar¹⁰ experimented with himself; on the 3 days preceding the day upon which alcohol was ingested the output was 20.9, 22.0, 22.2 grams, respectively. On the alcohol day the nitrogen loss was 20.8 grams; but on 3 days immediately following the alcohol day the nitrogen loss was increased to 23.1, 23.1, and 23.1 grams, respectively. In the experiments of Van Noorden, in only 2 cases during alcohol ingestion did he find a decrease, and that was very small. In all his other experiments the nitrogen loss was augmented during the alcohol exhibition, and invariably there was an increased loss during the days immediately following. The difference in some instances was marked; in one 6.80 grams on a non-alcohol day, against 8.85 grams on an alcohol day.

Chittenden's¹¹ 3 experiments are also highly instructive. In the first, during the alcohol period, there was a great increase in the nitrogen output; in the second, a very small increase; and in the third, a somewhat larger decrease than in the second. Like Van Noorden's cases, in every instance the after period was attended by an increase in nitrogen output over the normal, and in 1 case this increase was very large.

Weiske and Flehsig¹² experimented with a sheep, giving it a food containing a liberal supply of nitrogenous material, but an insufficient quantity of carbohydrate

food, the caloric deficiency being supplied in alcohol. Here, too, there was an increase in nitrogenous output greatly above the normal, instead of a saving, as the experimenters expected.

The work of the Japanese physiologist, Miura¹³, produced the same results as the experiments of those investigators already mentioned. Setting out with a diet free from alcohol, he put himself into a condition in which he was obtaining just enough nitrogenous material to compensate for the normal daily loss (nitrogen equilibrium). He then left out a part of his carbohydrate food and took its caloric equivalent in alcohol. In the 3 experiments thus carried out the nitrogen loss was always and notably increased. Immediately after the withdrawal of alcohol he returned to his former diet, which had been found to be sufficient to preserve the nitrogenous tissues intact, but it did not then, nor for several days thereafter, suffice to yield complete protection. He then dropped the same amount of carbohydrate material from his diet that he did during the alcohol period, *but took nothing in its place*. During this time the nitrogen output was, as ought to be expected, increased, *but it still fell below the amount which was excreted when an attempt to prevent waste with alcohol was made*. In other words, Miura's experiments justified him in thinking that it was better for the tissues to suffer a mild form of starvation than to attempt to make alcohol supply the deficiency in carbohydrates causing the starvation. Alcohol here acted as a poison to the protoplasm.

The experiments of Schmidt¹⁴ under Rosemann at Griefswald differed from those mentioned above: A subject in whom nitrogenous equilibrium had been established had added to his dietary a considerable quantity of alcohol. So much alcohol, indeed, was added that had it been utilized as carbohydrate food is utilized a considerable gain in body weight would have attended its ingestion. Instead of there being an increase, however, there was a noticeable loss in the albuminous tissues of the body.

In the experiments of Schönseifen¹⁵ an insufficient quantity of carbohydrate food was given, its place being taken by a quantity of alcohol having a considerably greater caloric value than the carbohydrate food left out, but in spite of the fact that the alcohol in the experiments contained a much greater number of calories than a true food necessary to keep the nitrogenous tissues intact, it did not stop nitrogen loss, and the subject's tissues steadily lost.

In Professor Atwater's own experiments the results do not differ materially from those cited above, though he seems to be somewhat reluctant to find the verdict against alcohol. He says¹⁶: "In 2 series of experiments, in 10 of which alcohol formed a part of the diet, we were unable to detect any general result which warranted us in ascribing to either the ordinary rations or to those with alcohol any advantage in respect to protein protection. There were individual cases in which the body lost more protein with the alcohol than with the ordinary diet, but in some of them the differences were within the limits of error. In one or two instances there appeared to be a direct but temporary influence of

the alcohol in increasing the metabolism of nitrogen, *i. e.*, the increase of tissue destruction. But the results likewise varied in the ordinary diet so that, taking the experiments as a whole, we do not feel authorized in ascribing to the alcohol any specific influence different from starch, sugar and fat. The most of these experiments were made with a man who had been accustomed to the occasional use of alcoholic beverages in moderate amounts."

Further on Professor Atwater tells of another series of experiments just made, and "not yet ready for publication," with a man who is a total abstainer. "In his case there was an evident increase in the metabolism of nitrogen (*i. e.*, loss of nitrogen) during periods of 3 days each, when the alcohol was given. How long this would have continued the experiments, of course, do not show."

This latter statement is significant enough. In the non-user of alcohol we have, according to Professor Atwater's testimony as well as that of all others, the sufficiently proven fact that alcohol causes a more rapid breaking down of the tissues. We might answer the question as to how long this state of affairs would continue by saying that it would last until tissue resistance had been established against the poisonous effects of alcohol. It is not entirely unthinkable that this immunity might be complete against small quantities of alcohol in the regular user of alcoholic liquors. Why should we not assume that the subject of Professor Atwater's first series of experiments had gained that immunity in his "occasional use of alcoholic beverages in moderate amounts"? Elsewhere we shall show that, unless the subject of these experiments is an absolute non-user of alcohol the results have no value as scientific data.

Speaking of the investigation of others into this phase of the alcohol question, Professor Atwater says: (*loc. cit.*): "With several associates I have lately been going over the literature of this subject. So far as we can judge from the original data of the experiments, there appear to be cases in which the manifest tendency of alcohol has been to increase the metabolism of nitrogen" (*i. e.* tissue destruction). "In some this is very marked, but the effect in a number of instances has been only temporary."

"There are other well attested cases in which the quantity of nitrogen metabolized has been less with alcohol than without. In the majority of the most reliable experiments, so far as we can judge, the alcohol has exerted no certain influence in one direction or the other."

It is regrettable that Prof. Atwater has not given us a short resume of the results obtained by different investigators so that we might compare the facts for and against alcohol as a conservator of the albuminous tissues and determine upon which side the weight of evidence lies. In his own investigations, as we have just shown, the case is clearly against alcohol, and all the evidence cited above by many of the ablest physiologists and clinicians known to science, fully corroborates him. For my own part, I have been unable to find a single case in which experiments were carried

on with a non-user of alcoholic beverages, and the nitrogen metabolism estimated by an examination of the nitrogen excreted, in which the exhibition of alcohol has not been attended by an increase in the loss of nitrogen metabolism. As a matter of fact, much of the evidence giving to alcohol its reputation for tissue-sparing, arose from examining the respiratory output. Thus Zuntz and Geppart, finding that there was no increase in the oxygen consumption and the carbonic dioxid output, concluded that the alcohol ingested was oxidized while the other tissues were spared. Indeed, it was upon this basis alone that the idea of the tissue-sparing properties of alcohol were founded, and only in recent years has it been shown that this conclusion is almost certainly erroneous.

Another probable source of error is the taking as a subject for determining this question one accustomed to the daily use of alcoholic beverages. With alcohol, as with opium, chloral and all other narcotic substances, an immunity against its toxic effects is gained through its continued use. After a longer or shorter period of time, not only is the giving of small quantities of a narcotic not attended by any noticeable derangement, but a sudden withdrawal of the accustomed narcotic is often attended by great disturbance of all the vital functions. Suppose one is accustomed to taking the equivalent of 3 or 4 ounces of alcohol daily. He is put in a calorimeter, and, after withdrawing all alcohol and putting him in a state of nitrogenous equilibrium, his nitrogen metabolism is determined. He is now given 2 or 2½ ounces of alcohol daily. Is it not quite likely that a return to his old friend, the alcoholic beverage, will be attended by a decrease in nitrogen metabolism? Suppose the subject of our experiment has long taken a small quantity of alcohol daily, as wine or beer with his meals; how much value, with this subject, would an experiment which had for its object a determination of the effects of alcohol on nitrogen metabolism have? No value whatever. Professor Atwater has hinted at this immunity when, in several places, he speaks of a "temporary increase in nitrogen metabolism," but it is with this temporary increase we are alone concerned. The question will lose interest for us when an immunity from long use of alcohol has been established.

Thus far no attempt has been made to put what constitutes a food within the bounds of a definition. Liebig of more than 50 years ago, and Atwater of the present time, regard as a food "any substance which, taken into the body, builds tissue or yields energy." As we have already seen that this definition would include numerous oxidizable poisons, it must be rejected. "Speaking broadly," says Professor W. H. Howells, of Johns Hopkins University, "what we eat and drink for the purpose of nourishing the body constitutes a food." If we mean by "nourishing" protecting the tissues from waste as well as repairing them after waste has already taken place, then we have here a good definition. "To supply with matter which increases bulk or supplies waste," is the definition of "nourish" in one of our standard dictionaries. We are well aware of the fact that "what we eat and drink for the purpose of nourishing the body" does not cover all the possible food

materials. Indeed, it covers only the lesser percentage of them. The muscle and fat of the domestic horse, the dog, and cat, and a multitude of both land and sea animals in their native state, as well as a multitude of the uncultivated graminaceous plants, are possible sources of an abundance of food as nutritious as that which we take for the purpose of nourishing the body, and are, of course, real foods.

Now, alcohol, containing no nitrogen, cannot repair waste and cannot be converted into and stored as fat; therefore, according to the definition, it cannot "nourish." Indeed, the great weight of evidence arrived at by the most competent and careful investigators, by direct methods of examination, shows that it cannot protect the nitrogenous tissues, but, on the other hand, increases their metabolism, their breaking down into urea and other excretory products.

Recognizing the fact that alcohol has been shown not to contain the nitrogenous tissue-sparing functions which were formerly attributed to it, certain investigators have still held to the fact that it spared the consumption of fat; that while it was in process of oxidation in the body, the stored fat remained intact. In other words, as long as the body was burning alcohol to furnish the requisite number of calories, the stored fat was not called upon for any energy, and therefore it was reserved for a future time. A great deal of disputation and confusion has arisen over this point. Professor Max Kassowitz¹⁸, in an admirable critical paper, has said of this controversy: "Yet it is claimed that alcohol must of necessity spare fat. Upon what does this claim rest? Only and solely upon the fact that during the burning of alcohol in the living body the consumption of oxygen and the production of carbonic acid are not increased in the amount, but simply correspond with the amounts which would (otherwise) be used and excreted in the oxidation of alcohol alone." It is from exactly this same evidence that Professor Atwater concludes: "The testimony of the experiments now available is, on the whole, to the effect that alcohol resembles fats and carbohydrates in the protection of fat from consumption."

A statement, no matter how false, gains a certain amount of credence by iteration. Indeed, scientific literature has many propositions which would not bear investigation because they rest upon statements not at all or only partly proved, which have been passed on from writer to writer until they seem to be entitled to their places in science. Such a statement is that which declares that alcohol is, in its behavior in the body, like the carbohydrates and fats. Inquiry into this subject will show that there are many more points of dissimilarity than similarity existing between them.

1. The fats and carbohydrates are not poisonous in any quantity; alcohol, on the other hand, is a violent protoplasm poison.

2. The fats and carbohydrates are capable of being changed into a reserve supply of fat which is deposited chiefly beneath the skin and constitutes a store of latent energy upon which the organism calls whenever stress of circumstances makes increased expenditure of energy necessary. Alcohol cannot be thus converted and stored.

3. The carbohydrates and fats protect the nitrogenous tissues from undue waste. Alcohol hastens their waste.

4. The oxidation of the carbohydrates and fats proceeds in such a manner that all the oxygen necessary for their conversion is supplied by the normal process of respiration. Alcohol, on the other hand, makes a demand for oxygen so great that it cannot be supplied by the normal process of respiration. Oxygen to supply this demand is, therefore, abstracted from the tissues, causing a derangement in their functions and metabolism.

5. All tissue activity is immediately accelerated by the ingestion of a real food. The ingestion of alcohol is followed by a partial or incomplete inhibition of both glandular and muscular activity, as well as a marked diminution in the quality of the mental processes.

Of course we are speaking now of the effects of food contrasted with the effects of alcohol in normal persons not accustomed to alcohol nor any similar drug in any quantity.

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NOTE.—In making any scientific investigation, it is always incumbent upon the investigator to go to original sources to verify his quotations. This, however, is not always possible. For instance, a friend wishing to trace an expression finds that it occurred originally in "The German Emin Pasha Expedition," but he could not find a copy of it in any library in New York. I have not gone to original for all of the above material, but much of it has been the common property of the profession for years, and it is, undoubtedly, all perfectly reliable.

[TO BE CONCLUDED.]

SOME REMARKS ON THE CUMULATIVE ACTION OF DIGITALIS, WITH AN ILLUSTRATIVE CASE.

BY

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The cumulative action of digitalis is a quality spoken of by all writers on the drug that are known to me, and has been noted by a large proportion of practitioners that have had occasion to use the drug. Personally, I have noted it many times in adults, in one of whom the pulse fell to between 30 and 40 per minute, but in none of these did the symptoms go beyond this simple slowing of the pulse or appear alarming. In addition, withdrawal of the drug was followed by alleviation in comparatively short order.

This peculiar result from digitalis is said to be dependent in some way upon its slowness of absorption and elimination, and is particularly liable to be manifest in dropsical conditions with rapid absorption of the effusion, after fevers, and where there is scantiness of urine.

The symptoms of the cumulative effect of digitalis usually abate on the withdrawal of the drug, and are, according to the books, not usually of any gravity, the

cessation of the administration of the drug being about all the treatment required.

Systemically, digitalis poisoning is shown by the slow pulse becoming irregular, with quick beat, which ends very sharply (a sort of staccato), the diastole being comparatively long, and the artery large, tense and hard; dilation of the pupils, diarrhea, vomiting, suppression of urine, prostration, delirium or coma, perhaps convulsions and death.

The treatment given as applicable to this state and as gathered from several textbooks, consists in the administration of tannic acid as a chemical antidote, followed by a purge, aconite as the physiologic antidote, morphia if the pulse is irregular and requires steadying, and, as the signs of growing weakness come on, stimulants, such as caffeine, strychnia and nitroglycerin.

That the impression one is tempted to gather from textbooks to the effect that the symptoms of cumulative digitalis poisoning have no real gravity about them is erroneous, is demonstrated by the following case:

A female child of 23 months had bronchopneumonia secondary to whoopingcough. After several days' illness her pulse became weak and irregular. On February 23 a digitalis mixture was begun, a fraction less than 2 drops of the tincture being given by mouth every 3 hours or less. This was continued for 5 days, until February 28, when a total of 50-55 minims had been administered. On this date, in the 20 hours from midnight to 8 p. m., the temperature fell rapidly from 102.8° to 97.6°, and the digitalis was stopped, the other symptoms of the disease changing *pari passu* with the temperature. At 9 p. m. the pulse had fallen to 60, and was somewhat irregular and hard. The child's condition seemed good. Three doses of nitroglycerin, each 1-300 gr., were administered, with a slight improvement after the last one at 4 a. m., March 1. At 10.30 a. m., March 1, 10 grains of compound jalap powder was given, and several watery movements followed without other appreciable effect. Toward evening the pulse became gradually slower and more irregular, at one count being 48 to the minute, and of such a character that at times only a single beat occurred in 2 seconds or more. In addition, the respirations were rapid, the pupils were as large as the corneas themselves, prostration was marked and stupor was coming on. The case looked decidedly serious. A few doses of morphia of 1-200 each were given, and the pulse became a little more steady. About midnight, tincture aconite was begun in 1-10 drop doses, at intervals of 40 to 60 minutes, with apparently a little improvement in the tension of the pulse. As much water as the child could be induced to take was given, with the double idea of weakening the solution of digitalis in the blood and of favoring diuresis, which had become very scant.

But all these measures were of little value compared with another of which I am about to speak, and which to me appeared to be the prime factor in abating the lessening pulse-rate as well as relieving the other symptoms, all of which together made me very anxious. I have seen no reference to the measure to which I refer having been used for the purpose, and this forms my sole excuse for adding another paper to overburdened literature. It seemed reasonable that, since fever is an admitted hindrance to the action of digitalis, if the child's temperature could be raised by harmless means the digitalis might be rendered inactive for a long enough time to permit of its excretion. Accordingly, the child's bed was drawn before the register and a tent constructed, such as is used when vapors are to be inhaled, only the head was left free. The register was opened and the heat allowed to stream into the tent.

Within one or two minutes the effect was apparent. The pulse, while still hard, was yet softer than before; it became fuller, and quite regular and fast; the mental faculties became brighter and the child began to drink considerable water. There was no sensible perspiration. The pulse-rate within a very few minutes was at 130, and after a half-hour the heat was turned off with a brighter aspect to the case. It was not long, however, until the pulse began to slow again, but when it reached 60 the heat was reapplied. This alternation of heat and no heat was kept up *pro re nata*, the intervals of no heat gradually becoming longer until at the end of 60 hours it could be discontinued altogether, although the evidence of the digitalis had not entirely disappeared. A thermometer placed in the tent registered 120° F. Twelve hours after the hot air baths were found to be efficient, caffeine citrate, in doses of one-half grain every 2 hours, was given by mouth. It seemed to have little effect beyond steadying the pulse to a degree and producing wakefulness.

Weighing therapeutic facts, there seems to be no drugs to meet the indications present in digitalis poisoning of the cumulative variety, with the exception of aconite and some other less-known drugs, such as muscarine. Heart stimulants are hardly to be given to a heart already overstimulated, and which is found tetanic after death. Even nitroglycerin seems an illogic remedy. Aconite, to be effective, must be used in large and dangerous dosage.

Two other remedies suggest themselves as being theoretically valuable, although to be used with caution. They are chloroform inhalations—the long-continued administration of which, which would no doubt be requisite, constituting a serious objection—and bleeding, either with or without saline transfusion. It may be that the warm, moist bath would prove more effective than the dry one.

While the result was according to my hopes, it would appear that the theory which led to the use of the hot air was wrong, for the child's temperature, just after a hot-air application, was just about 99° in the rectum. However, there can be no doubt of the efficacy of the treatment, for the heat was applied and withdrawn at least a score of times, and always with the result of increasing the pulse-rate and relieving the symptoms while it was turned on, and of permitting the symptoms to return when it was turned off.

The Prophylaxis of Glanders and Tuberculosis.—Upon the recommendation of the Secretary of State, the Military Governor of Cuba has published general rules for the prophylaxis of the glanders and tuberculosis in the city and province of Havana. They provide for the inspection of all the stables and ranches in the city and province, the employment of a veterinary surgeon in all stables of cattle and industrious establishments using horses and mules, who shall be accountable for the sanitary condition of the animals. All horses and cows suspected of having glanders or tuberculosis shall be at the disposal of the commission until properly diagnosed and if the existence of such disease is confirmed the animal shall be killed and cremated immediately and the owner paid one-half of the valuation which the commission may have put upon the animal. The owners of stables shall not bring into their places any new animal without first announcing it to the commission for the purpose of the proper inspection of such animal under penalty of from \$10 to \$100, and under the same penalty the owners are obliged to report the deaths and removal of the animals. The maximum price to be paid for animals killed, \$200 (U. S. money) for each horse and \$75 for each cow.

PROLONGED INTUBATION.

BY

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With the advent of diphtheria antitoxin, the operation of intubation obtained an exact position.

Before that time, the practice of intubating the larynx for an infectious stenosis was an expectant procedure, and was in a great measure experimental. While it was practised to as great an extent as it is now, a recovery was looked upon as an exception, and in the statistical records, the percentages were written in recoveries, not as at present, in deaths. This change in the method of recording results, is perhaps one of the most striking results of the efficacy of the serum treatment of diphtheria.

To the antitoxin is also due the very many accurate results obtained in the study of the progress as well as sequel of diphtheria, especially of the laryngeal type, and those most serious cases requiring intubation.

We have thus been enabled to study more fully the value of this procedure, and we have found that we are not only able to relieve the impending suffocation—the most urgent symptom—but that we cure, and where before we were expectant we are now more certain.

In studying this operation various authors have taken up the different difficulties frequently met with. Some have studied the injuries resulting in intubating or extubating. Others have devised methods of extubating, whilst some have taken up the object of the operation, and have investigated the time required for the tube to do its work.

A statistical study of results obtained by the use of the serum has proved that there has been a very material reduction in the time required and the joint result of these labors has given well-marked rules for the guidance of all. As a very brief summary, we may say: It should be a rule of practice to remove the tube within 5 days, unless it be removed by expectoration before, and then be no longer required.

The first attempt at extubation should then be made on the fifth day. If the tube is required longer than this time, it will be an impossibility to state when the patient will no longer require the tube. If, therefore, the child requires a reintubation at once, or even in a week, the case may be assumed to be abnormal, and should come under the category of prolonged intubations, and treatment should be special to meet such indication.

Cases of this kind have been recorded by many. Welch, of the Philadelphia Municipal Hospital, records a case in which the patient required a tube 11 months, and died at last from suffocation. Engelmann and others report the same results.

While such instances have been placed on record, no remedy has ever been given, and to assist in coming to a certain method of treatment, I wish to record the following case, No. 344 in my case book, and my method of procedure, inasmuch as this patient recovered:

Herbert D., aged 2 years and 7 months. Treated with an insufficient quantity of the serum (1,000 units) 3 days after

the disappearance of the primary evidence (faucial diphtheria), or on the seventh day of his illness, began a reinfection of the laryngeal type, progressively so severe that he required intubation on the tenth, or 3 days after this symptom. The child, almost in extremis, was intubated, 3,000 units of antitoxin administered and 1-40th of strychnin nitrate given hypodermically, within the shortest space of time. In this case a No. 2 tube was first used, but failing to give relief, a No. 3 (that is, one for a child one year older) was employed, with a gratifying result. The case progressed as the average case, and extubation was performed on the fifth day. Relief was so marked that the tube was left out. But in 24 to 36 hours, stenosis became so marked that reintubation was required, and the tube was worn with prompt reintubations after as prompt extubations for a period of 36 days.

The diagnosis was of paralysis of the vocal cords as the result of the diphtheric infection, the only reason why the prolonged intubation was required; hence the following method of treatment was pursued: Strychnin in progressively larger doses until the maximum, 1-40 grain, was given 4 times a day. Regarding the tube: The large tube was required for 30 days, when the next size smaller was inserted. The child could breathe quite well, though there were frequent attacks of coughing, when the tube was twice expelled. After the fourth day the smallest size was used. This was expelled on the next day and reinserted. On the last day of the intubation, the tube was removed by coughing, and before I reached the child he was sleeping with all the marks of stenosis entirely gone. As he no longer required the tube it was left out.

As a summary, I might add: All cases requiring a tube longer than 5 days must be classified as cases of prolonged intubation. The treatment consists in large doses of strychnia and the constant reintubation and extubation, daily or every second day, of progressively smaller tubes, until the case no longer requires it.

Physical Culture.—At the twelfth convention of the American Association for the Advancement of Physical Education, held recently in New York, the substantial progress which has been made in the matter of physical education in colleges and schools in the last 25 years was demonstrated. In 270 colleges and universities special attention is given to it. In 98 of these it is in the shape of organized work, in 72 of them it is required and 24 give credit for it which is counted in the conferring of a diploma. In 300 cities physical culture has been taken up in the schools, and in 100 cities there are special teachers in the public schools.

"The popular conception of a country doctor is ludicrously wide of the mark," said a man who sells surgical instruments and spends a good deal of time with the rural trade. "It is based on novels mainly, where the rustic practitioner is generally pictured as a half-starved martyr to duty, who either drives about in a ramshackle gig or rides a 'gaunt gray mare,' with his medicines in a pair of saddlebags. The doctor's old gray mare, as I remember her, is quite a standard character in fiction. The average country doctor is far more prosperous than the average doctor in a city. I know at least half a dozen who earn fully \$10,000 a year, and a \$5,000 practice is comparatively common. This is not mere guessing, but I speak from a personal knowledge of the facts, gleaned in the course of long business relations. To be sure, it takes hard work to earn such sums. One physician of my acquaintance, who lives 40 miles from a railroad, uses 8 horses in making the rounds of his patients. He keeps several at points remote from his home, as relays. Often he is on the go for 2 or 3 days at a stretch, but he is healthy and happy in spite of the strain, and last year he collected \$9,200 cash. He expects to keep up this pace for 6 or 8 years, and then take a young partner and gradually retire from active life. This is the plan of most of our successful country doctors, and it has made fine openings for many bright graduates from the medical colleges. I have noticed, incidentally, that the country doctor usually retires at an earlier age than the city man and is able to enjoy life before he becomes decrepit. One great advantage of a rural practice is that there are comparatively few bad bills—exactly the reverse of the conditions in a city. When a farmer sends for a physician he pays him. A customer of mine in one of the river parishes lost only 4 accounts last year out of a total of over \$6,000. If you are looking for medical starvelings you'll have to go to town to find them. The country is not their habitat except in stories."—*N. O. Times-Democrat.*

PRACTICAL THERAPEUTICS

Under the charge of
A. A. STEVENS,
Assisted by
L. F. APPLEMAN.

Resorcin as a Preservative of Suprarenal Extract.—S. Oppenheimer (*New York Medical Journal*, March 9, 1901) has found resorcin an excellent preservative of solutions containing suprarenal extract. He adds 60 grains of the desiccated extract to 1 ounce of a 1% solution of resorcin, and filters a sufficient quantity for daily use.

Acute Cystitis and Urethritis.—Aronstam (*Physician and Surgeon*) has obtained good results from pichi, combined with an alkali, as in the following formula:

- ℞ Fluid extract of pichi 4 drams
- Potassium citrate 3 drams
- Tincture of hyoseyanus 2 drams
- Spirit of nitrous ether 3 drams
- Elixir of orange, to make 2 ounces

One teaspoonful in water one hour and a half after meals.

The Treatment of Migraine.—H. T. Patrick (*Medicine*, January 1, 1901) states that scrupulous attention to the general health, the best of hygiene, especially hygiene of the nervous system, and careful removal of all local abnormalities which may act as general depletants or as fretters of the nervous system, must be the first care. The author has found treatment based on the uric acid theory of the disease a relative failure, and the record of operative interference discouraging. He has yet to hear of the radical cure of a bad case of typical migraine, although considerable amelioration, amounting to a practical cure, is attained in a few cases. The affection may cease spontaneously in women after the menopause, and in men after the age of 60. In medicinal treatment his preference is for cannabis indica, but he states that success with this remedy will largely depend upon the recognition of 3 variant factors, namely: quality of preparations of the drug, difference in individual susceptibility and substitution by druggists. Many preparations on the market are worthless. The initial dose of a good fluid extract is 3 or 4 drops after each meal, and the amount is to be rather rapidly increased until the limit is reached for the case in hand. In some patients 3 drops may produce symptoms; in others 60 drops may have no effect. When cannabis indica fails, a course of bromid as for epilepsy, or of nitroglycerin, or of the two combined, may be of distinct assistance. Mendels' mixture of sodium salicylate, sodium bromid and aconit the author has found useful in a few cases when given regularly for a long time.

Tropacocain for Subarachnoid Injection.—Schwarz (*Centralbl. fur Chirurgie*, March 2, 1901) reports 16 operations in which he used tropacocain instead of cocain for subarachnoid injection. The analgesia was complete in every instance and none of the ill-effects of cocain (pallor, vertigo, pyrexia, headache and vomiting) were observed. The amount of tropacocain injected varied from .5 to .8 of a grain.

Membranous Colitis.—J. A. Robinson (*Medicine*, January 1, 1901) believes that when enteroptosis is a cause of membranous colitis it affords a reasonable ground for surgical interference. Occasionally it is necessary in severe cases to restrict the diet closely, but generally the diet should be ample, varied and digestible. Of the first importance is the protection of the intestines by wearing the entire year a flannel abdominal bandage. Every means which increases bodily vigor should be employed. Exercise, sunshine, change of scene and freedom from care are important adjuncts in the treatment. When there is renal insufficiency (a frequent accompaniment) saline diuretics, alkaline waters, chalybeate waters and an occasional hot-air bath are indicated. Rectal irrigation with hot water (100 F.) gives great relief. To avoid irritating the bowel, a soft-rubber rectal tube should be used. Except in severe cases, high hot

colonic flushings, with 1% solution of boric acid and sodium chlorid are very beneficial. They should be given by an experienced person, since undue tension of the bowel must be guarded against. Letcheff recommends hot solutions of 1 to 1,000-2,000 of silver nitrate. The author has used with great benefit a solution of methylene blue (1 grain to a quart of water) by rectal injection, the patient reclining and the injection given high. Care is necessary to avoid staining the clothes. Defective digestion calls for digestive ferments or hydrochloric acid, and in neurotic subjects nervines are indicated. The intestinal antiseptics which have given the author the best results have been bismuth salicylate, salol, betanaphthol, thymol, benzoic acid, guaiacol carbonate and creasote.

Bromin with Oil of Sesamum.—In epilepsy L. P. Clark (*Buffalo Medical Journal*, February, 1901) recommends bromin in cases of epilepsy that do not stand large doses of the bromids. One grain of bromin is equal to 2 grains of bromid salts. The following formulas are recommended:

- ℞ Oil of sesamum 9 ounces
- Pure bromin 1 ounce

A tablespoonful night and morning, increased as directed.

Or the following nutritive and sedative emulsion:

- ℞ Oil of sesamum 8 ounces
- Powdered acacia 2 ounces
- Syrup 2 ounces
- Oil of gaultheria 40 minims
- Water 6 ounces

Make an emulsion and add 1,460 grains of pure bromin. A tablespoonful night and morning, increased as directed.

Or, in order that the pure bromin shall not be lost by fuming, it may be given in emulsion with potassium bromid:

- ℞ Pulverized acacia 2 ounces
- Oil of sesamum or cod-liver oil 8 ounces
- Water 6 ounces
- Oil of gaultheria 40 minims

Make an emulsion; add 1,460 grains of pure bromin and 480 grains of potassium bromid. A tablespoonful night and morning, increased as directed.

The author claims that bromin given in this way is less irritating to the digestive tract, is not constipating, is markedly less toxic and seems to be much more lasting in its effects.

The Saline Treatment of Dysentery.—Buchanan (*British Medical Journal*, April 13, 1901) reports 300 cases of acute dysentery treated with salines with only 3 deaths. These cases added to 555 previously reported with 6 deaths, make a total of 855, with a mortality of a little over 1%. The average stay in the hospital was 11 days. One dram of sodium sulfate dissolved in an ounce of fennel-water was given 4, 6, or 8 times a day. The dose was repeated on the following day until the stool had been inspected. The saline was continued until every trace of mucus and blood had disappeared. The author does not consider this method safe for chronic or relapsing cases with ulceration of the colon.

Homatropin as a Cycloplegic.—E. Jackson (*Annals of Ophthalmology*, January, 1901), has found homatropin to be a satisfactory and reliable cycloplegic, both for children and those who have reached the age of 40 years. He recommends a 2% or 3% solution. Of this a small drop is to be instilled at the upper corneal margin every 5 minutes until 4 or 5 drops have been introduced. Homatropin, according to the author, far more rarely induces intoxication than other cycloplegics. The only common extraocular symptom is the bitter taste.

Gonorrhoea and its Sequels.—The treatment of gonorrhoea and its sequels was discussed at the meeting of the New York Academy of Medicine, held March 21, 1901 (*Journal of the American Medical Association*, April 6, 1901). G. K. Swinburne believed in the early use of urethral irrigations of a 1 to 4,000 solution of potassium permanganate at a temperature of 105° to 120° F. These should be given twice daily for the first few days, then once daily, and the interval gradually lengthened.

Ordinarily a .5 to 2% solution of protargol would be appropriate after the first few days. Van Der Poel recommended for anterior urethritis a .5 to 1.5% solution of protargol, and for posterior urethritis a strength of .5% to 1%. After all organisms have disappeared, weak solutions of the acetate or sulfate of zinc or of the acetate of lead are beneficial. At times it is necessary to treat certain areas topically through the endoscope with silver-nitrate solution (.5% to 5%). It is a good general rule not to use dilating sounds until all organisms have disappeared. R. W. Taylor did not favor active treatment in the early stages. After the acute symptoms have subsided he employs injections of warm lead water and administers antibleorrhagics. He prefers silver nitrate to protargol, and begins with irrigations of a strength of 1 to 32,000, gradually increasing the strength so that after 5 or 6 weeks a strength of 1 to 500 is attained. Hill praised picric acid for the treatment of chronic gonorrhoea when the mucoid stage is present. It should be used in a 1 to 100, or 1 to 2,000 solution, about 60 minims being employed for each instillation. F. C. Valentine expressed the belief that there are different forms of gonococci, and that each wanted remedy is most efficient in combating the inroads of these special forms.

Treatment of Influenza.—According to *Public Health Reports*, Nos. 6, 7, 8, 9, 10, 11 and 12, influenza occurred in Omaha, Nebraska, during December, 1900, but in very mild form. The best treatment consisted in the administration of calomel, quinin being especially applicable to cases occurring in the country, which required tonic and stimulative treatment. To the better-housed and protected class, quinin is injurious. Combinations of calomel, $\frac{1}{4}$ grain; codein, $\frac{1}{4}$ grain; sodium bromid, 5 grains, with quinin salicylat, are prescribed. Solitude is advocated. Cases occurring in El Paso, Texas, received a purgative dose of calomel as the main treatment. Quinin was found of no benefit, and in cases in which the digestive symptoms predominated it was injurious. Extreme prostration sometimes followed the use of quinin. Aconit was used with benefit in cases of fever. Ammonium bromid, chloral hydrat and codein were used to control persistent cough. The coal-tar products were used in severe rheumatic cases.

Toxic Action of Sodium Cacodylat.—Murrell (*British Medical Journal*, No. 2086) reports a case of poisoning from the administration of sodium cacodylat. The patient was a young woman suffering from moderately advanced tuberculosis. He ordered pills containing 1 grain of the drug to be taken 3 times a day. After taking 11 pills the patient suddenly developed symptoms of arsenical poisoning, with inability to move the left leg or extend the left wrist. Upon discontinuing the treatment the acute symptoms subsided in 24 hours, but the loss of power in the leg and wrist lasted for 3 days. The author states that his patient may have been particularly susceptible, but he considers it advisable to administer the drug in much smaller doses than those recommended by the French physicians.

Veratrin in Pruritus.—Lutaud (*Jour. de Médecin de Paris*, No. 11, 1900) recommends the external application, morning and night, of an ointment of 2½ grains of veratrin to 1 ounce of lard in localized, obstinate pruritus of women at the menopause. If the pruritus is general, he uses the drug internally in the dose of 1-180 of a grain in pill form once a day, gradually increased to 6 times a day, given half an hour before meals or 3 hours after meals.

Formic Aldehyd in Tuberculosis.—Maguire (*Harveian Lectures*, 1900) recommends a solution of 1 part of formic aldehyd to 2,000 parts of normal salt solution as a remedy for pulmonary tuberculosis, to be given by intravenous injection, using 50 cc. at one time. The results of 50 observations are reported, in all of which there was diminution of expectoration, decrease of fever, and in several instances disappearance of tubercle bacilli from the sputum.

The Value of Inoculation Against Enteric Fever.—Cayley (*British Medical Journal*, January 12, 1901) publishes some facts with regard to the protective value of inoculation in typhoid fever, as practised upon members of the staff of the Scottish National Red Cross Hospital in South Africa. Sixty-

one persons, constituting the first section of this hospital, left Southampton on April 21, 1900. All but four of this number were inoculated twice during this voyage, at an interval of 10 days, with recent material obtained from Professor Wright, of Netley. In from 2 to 10 hours after each injection, both local and constitutional symptoms were manifested, lasting from 2 to 5 days. Two nurses who had suffered from enteric fever were not inoculated, and 2 orderlies were only inoculated once. Many cases of enteric fever were treated in the hospital subsequent to its arrival at Kroonstadt in South Africa, but no case occurred amongst the personnel of this first section. The second section of 82 members left Southampton in May, 1900. All were inoculated, but many of them only once, with material which was not so fresh as in the first instance. One nurse of this section had enteric fever at Kroonstadt, she being the only one out of 36 nurses who was not inoculated, excepting the 2 of the first section who were protected by a previous attack. Five orderlies of this section had the disease, of whom 2 died. Of these 5, 2 had been inoculated once and 3 noninoculated. Of the 2 who died, 1 had been inoculated and the other had not. In August, 1900, Widal's test of the blood was made of those who had been inoculated. Twenty-three of the first section were tested, of whom 21 gave good reactions with dilutions ranging from 1 in 40 to 1 in 500; 2 gave only slight reaction—these being the 2 orderlies who were only inoculated once. Of the second section, 22 were tested. Of these, 11 gave no reaction, 9 gave very slight reaction, and only 2 gave a good reaction. The members of the first section appear, therefore, to have been much more fully protected against enteric fever than those of the second section. These results are strong evidence in favor of the protective power of the antityphoid inoculation when these inoculations are carefully performed, and when 2 inoculations have been given at a suitable interval of time.

Brush Massage.—Fry (*Journal of Nervous and Mental Diseases*, January, 1901) recommends massage by means of dry bristle brushes as an excellent mode of relieving lithemic and neurasthenic pains of all descriptions.

Fissured Nipples.—The treatment of this painful affection by the local application of orthoform has recently been commented upon very favorably. Oni recommends a saturated alcoholic solution on a compress, which he directs to remain for at least 15 minutes. Bardet has found orthoform in oil efficacious. He suggests the following formula:

℞ Orthoform 75 grains
Ether, sufficient to dissolve oil, of sweet
almond 5 drams.

Migraine.—W. Whitehead (consulting surgeon Manchester Royal Infirmary, *British Medical Journal*, February 9, 1901). states that during the last 25 years he has never failed to treat successfully the most inveterate case of migraine by the introduction of an ordinary tape seton through the skin at the back of the neck. Some of the cases were of the greatest severity, and all of them had been previously under medical treatment without avail. Several interesting cases are reported. The operation is performed as follows: The skin at the back of the neck is grasped between the finger and thumb of the left hand, and behind the fingers a long-bladed scalpel is forced so as to transfix the skin. Before the knife is removed, a long probe provided with a suitable eye is passed through the wound, using the knife as a guide. The scalpel is then withdrawn. A piece of ordinary household tape $\frac{1}{4}$ inch wide is then attached by a ligature to the eye of the probe and the probe pulled through the wound, bringing the tape with it. Four inches of tape is left free at each side, and these are gently tied together to prevent the tape being accidentally withdrawn. Instructions are given to the patient to move the tape from side to side each day. The operation need only occupy half a minute, and nitrous oxid is all-sufficient as an anesthetic. The seton ought to be worn uninterruptedly for 3 months at least in the first instance, and should the symptoms recur, a second seton ought to be introduced.

THE WORLD'S LATEST LITERATURE

British Medical Journal,

April 13, 1901. [No. 2102.]

1. Some Cases Illustrating the Surgery of the Large Intestine. CHARLES A. MORTON.
2. Cholecystectomy: Partial Hepatectomy and Pylorotomy: Recovery. BERTRAM C. STEVENS.
3. A Case of Sarcoma of the Brain Removed by Operation: Subsequent Operation for Removal of a Second Tumor: Recovery. J. M. CLARKE and R. G. P. LANSDOWN.
4. Case of Cavernous Angioma of the Orbit. A. L. WHITEHEAD.
5. The Saline Treatment of Dysentery: Based on 855 Cases with 9 Deaths. MAJOR W. J. BUCHANAN.
6. The Resistance of the Larval Mosquito to Cold. M. J. WRIGHT.
7. A Case of Recurrent Alcoholic Peripheral Neuritis. LESLIE H. JONES.
8. A Case of Neuritis Affecting the Optic and Cervical Nerves, Complicated by Carcinoma of the Breast. J. R. BENSON.
9. Case of Foreign Body in the Bronchus: Tracheotomy: Recovery. F. B. JUDGE BALDWIN.
10. A Note on Acute Dilatation of the Heart. H. OLIPHANT NICHOLSON.
11. A Note on the Treatment of Genu Valgum. E. MURHEAD LITTLE.
12. A Polypoid Excrescence of the Tonsil. E. S. YONGE.

1.—Morton, in a lecture on the surgery of the large intestine, discusses ventrofixation of the sigmoid flexure for prolapse of the rectum. This has been done in 29 cases, with encouraging results. The operation consists in making an incision parallel to and about an inch above Poupart's ligament, separating the muscular fibers, drawing up the sigmoid flexure until the prolapse disappears and fixing it by suturing the mesosigmoid, mesocolon, peritoneum or appendices epiploicæ into the upper portion of the peritoneal incision with silk sutures. He next refers to a case of excision of the cecum and some mesenteric glands for malignant disease. Excision of a malignant growth with some involved glands and end to end anastomosis by means of Murphy's button was done. Two years later there is no recurrence. He also refers to a case of obstruction due to malignant disease of the colon. In such cases he holds it best to relieve the obstruction first, and remove the growth later, as the strength of the patient is thus conserved. [J.W.M.]

2.—Stevens reports a case of malignant disease involving the gallbladder, pylorus, and liver in which cholecystectomy, pylorotomy, and partial hepatectomy were successfully performed. The patient, a female, aged 54, presented the following symptoms: Pain in the right hypochondrium with vomiting, slight jaundice, swelling of the legs and abdomen, and emaciation. A distinct tumor could be felt beneath the right costal margin. The diagnosis of gallstones with malignant disease of the gallbladder and surrounding parts was made. On operation an abscess was found in the sheath of the rectus muscle. A fistula existed between the gallbladder and stomach. The gallbladder, adjacent portion of the liver, and the pylorus were found affected with malignant disease. A V-shaped portion of the liver, with nearly all of the gallbladder was removed. The hemorrhage from the liver was controlled by pressure, and the gap closed by means of chromicized catgut. A tube was placed in the common duct. After removal of the pylorus the duodenum and stomach were united around a bone hobbin by means of chromicized catgut in the mucosa, and silk in the peritoneum, and covered with an omental graft. Carcinoma of the gallbladder is usually secondary to gallstones. The frequent association of gallstones and malignant disease is attributed to the irritation caused by the stones. Zeuker found gallstones in 85% of cases of carcinoma of the gallbladder. The jaundice in such cases may arise from obstruction or from extension of the catarrh along the mucosa of the bile ducts. [J.W.M.]

3.—Clark and Lansdown report a case of sarcoma of the brain in which a first operation was followed by recur-

rence and a second by recovery. The patient a young man, presented symptoms of an intracranial tumor. On operation a small tumor was removed by enucleation from the left parieto-occipital region. The relief hoped for did not follow, and a few weeks later there was evidence of a return of the growth at the same site. A second operation was performed and a rounded sarcoma which on account of its size had to be removed in 3 pieces was found. Following the operation there was some dulness of perception, impairment of power and sensation in the right arm, hemianopsia, and loss of vision in the lower halves of each retina. Seven days after operation his temperature began to rise and continued high for 2 weeks, during which time there was a free discharge of cerebrospinal fluid from the wound. Seven months after the last operation there is no recurrence, and, excepting the impairment of vision, and slight mental inactivity the patient is well. [J.W.M.]

6.—Wright, conducting experiments to determine the resistance of the larval mosquito to cold, observed that the larvae are able to withstand low temperatures, and that in some cases the larval stage may be extremely prolonged—extending over a period of months. Larvae were found active in pools during winter when snow was heavy and ice thick. It is thought that it is by means of the larvae that the mosquito provides for perpetuation of the species, rather than by hibernating, and that it is during winter that one may hope to do most toward exterminating mosquitos, by searching for and destroying larvae rather than mosquitos that are said to hibernate in out-of-the-way corners. Kerosene oil is a most efficient larvicide. [A.O.J.K.]

7.—Jones reports a case of recurrent alcoholic peripheral neuritis in a woman exposed to exhausting domestic duties, but who partook of but little alcohol. [A.O.J.K.]

8.—Benson reports a case of neuritis of the optic and cervical nerves with carcinoma of the breast in a woman who was not an alcoholic nor could arsenic be found in any of the beer or foods she took. Four years after the removal of a small lump from the right breast she had the left breast removed for carcinoma. Following this she suffered from pain and a "shivering" sensation in the arms, neck and head, with cramp in the calves of the legs, and later with total blindness and slight external squint of the left eye. Later, speech became thick, the tongue was puckered and wasted on the right side, and on protrusion was deflected to the right. The hands and arms tingled and felt lifeless; and there was atrophy of the thenar, hypothenar, and interosscus muscles. Herpes appeared over the musculospiral area of both arms. The disease ceased spreading and during convalescence a carcinomatous mass was removed from the right pectoral muscle and the axilla cleaned out. [J.W.M.]

9.—Baldwin reports a case of foreign body in the bronchus in which recovery followed tracheotomy. The patient, a boy aged 5 years, having put a cracked nut in his mouth, at once began to cough and his voice became husky. Laryngoscopic examination showed nearly complete bilateral paralysis of the abductors, but no foreign body. Two days later owing to increased and difficult respiration tracheotomy was performed. A tube was kept in place for 7 days when 2 small pieces of nut were expelled. Recovery followed. [J.W.M.]

10.—Nicholson, in a note on acute dilatation of the heart, refers to the accentuation of the aortic second sound, recently mentioned by Lees, and suggests that it may indicate that the left ventricle is straining every sinew and that the heart is arriving at a stage in which no further response to stimulation is possible. It is, therefore, a danger signal of grave significance and its persistence should lead one to exercise extreme watchfulness. [A.O.J.K.]

11.—Little describes a splint for the correction of genu valgum which he has used with satisfaction. It consists of a ham splint which is attached to the posterior edge of a long external splint, the lower end of which is inserted into a pocket on the outer surface of the boot. The ham splint is fastened in front to the anterior edge of the outer splint by means of webbing straps and bandages. These splints maintain the leg in extension in which position mechanical treatment is effective. [J.W.M.]

12.—Yonge reports a case of **polypoid growth of the tonsil** in a young girl whose tonsils were hypertrophied and who had recurrent attacks of sore throat. From the left tonsil an elongated pedunculated growth was removed. It was found to consist of lymphoid tissue with numerous dilated lymph vessels and covered with epithelium. [J.W.M.]

The Lancet.

April 30, 1901. [No. 4050.]

1. The Topographical Anatomy of the Abdominal Viscera in Man. CHRISTOPHER ADDISON.
2. On the Importance of Early Diagnosis and Treatment in Surgical Diseases of the Abdomen. WILLIAM ROSE.
3. Postpartum Hemorrhage. E. STANMORE BISHOP.
4. Remarks on Enlargement of the Inguinal Glands chiefly in connection with the Diagnosis of Primary Syphilis. ARTHUR COOPER.
5. Remarks on the Holmgren Test. F. W. EDRIDGE GREEN.
6. The Chemistry of Nerve-degeneration. F. W. MOTT and W. D. HALLIBURTON.
7. A Case of Erythema Scarlatiniforme Desquamativum. C. KILLICK MILLARD.
8. Neutral Red as a Means of Detecting the Presence of the Bacillus Coli Communis in Water Supplies. WILLIAM HUNTER.
9. A Note on the Concurrence of Measles and Diphtheria. J. D. RAWLINGS.
10. A Case of Subphrenic and Splenic Abscess: Operation: Recovery. W. B. CHIEADLE and H. STANSFIELD COLLIER.
11. Two Cases of Suppurative Appendicitis with Septicæmia: Recovery of One Patient after the Use of Antistreptococcal Serum. W. GIFFORD NASH.

2.—Rose emphasizes the importance of the consideration of every possible means of early diagnosis of **surgical diseases of the abdomen**, in view of the fact that the life of the patient depends upon prompt operation in cases of perforated gastric ulcer, which involves most frequently the anterior wall, rupture of the intestine affecting the upper part of the jejunum or lower part of the ileum and perforation of the appendix, all of which are indicated by shock, pain, vomiting and tenderness. In carcinoma of the cardia of the stomach the main symptom is regurgitation of food at a variable time after its ingestion. Symptoms and phenomena indicative of carcinoma of the body of the stomach, carcinoma of the intestine and of the pylorus are detailed and the fitting operation in each event. In doubtful diagnosis he advises an exploratory incision. [J.W.M.]

3.—Bishop thinks that **postpartum hemorrhage** is divisible into 2 classes according to the cause: (1) Those due to the conduct of the obstetrician, as torn cervix or vagina, inversion of the uterus, tearing of cord, partially separated placenta, or too rapid and unskillful use of forceps; (2) those, embracing $\frac{100}{100}$ of the cases, in which the uterine muscle is tired out at the close of the second stage of labor, the causes of this fatigue being presence of fibroids in the wall, overdistention from hydramnios, development of twin or more children, and relaxation of muscular fiber from previous habits or life in hot climates, or from prolonged labor. In the second class of cases it becomes necessary to check the hemorrhage by some artificial means until the uterine muscle can rest and then contract. The blood essential to the uterus during this period of rest may be obtained through the ovarian vessels, and Bishop advises that the flow through the uterine arteries be cut off by pressure on the aorta. The closed fist is applied with its ulnar surface resting upon the aorta as it lies over the left side of the vertebral column, and just sufficient pressure is exerted obliquely backward and toward the right so as to enable it to compress that vessel against the unyielding surface beneath. At any point accessible over the course of the abdominal aorta this compression can be exerted and there is always a sufficient extent to enable us to vary the site of impact. As to the duration of the compression on the aorta, it should continue until the uterine fibers begin to contract, and it will generally occur in practice that when the firm, strong impact of the blood current against the compressing hand has revived, the muscular force of the uterus will be rejuvenated; and the other hand of the surgeon can judge of this by gently touching it, and when it begins to

contract of its own free will the compressing hand is very slowly and gradually lifted, and the contraction now established will generally be found a trustworthy one. Whilst this compression is kept up, it is an easy matter to clear the uterus of clots, portions of placenta, membranes, etc., so that when the uterus begins again to contract its newly regained strength may find no needless work to do in ejecting them. [W.K.]

4.—Cooper in discussing enlargement of the inguinal glands in connection with the **diagnosis of primary syphilis** emphasizes the importance of this condition as a factor in the diagnosis of affections of the genitourinary organs, and states that its significance is not always apparent. In typical cases of syphilis the glands become palpable about the tenth day. The enlargement is progressive, the inflammation extending to a group of glands on both sides usually. They are indolent, painless, distinctly movable and more or less hard. In a suspected case where uncertainty arises due to a condition susceptible to glandular enlargement from slight causes, the condition must be noted from time to time, as the progressive character of the change in size of the glands is the most important point. The glands may enlarge as a part of a general adenopathy of the secondary stage of syphilis independent of the location of the lesion. Inflammation and suppuration of glands seldom arise from primary syphilis itself, but are due to mixed infection. The diagnosis of primary syphilis are based on 3 things: "(1) the history, (2) the primary lesion, and (3) the state of the nearest gland." [J.W.M.]

5.—Edridge-Green cites the opinions of a number of writers respecting the inefficacy of the **Holmgren test** and urges a fresh inquiry into the methods of detecting color blindness. [A.O.J.K.]

6.—Mott and Halliburton direct attention to the fact that in general paralysis of the insane **products of nerve degeneration** pass into the cerebrospinal fluid and may be readily detected, especially nucleoprotein and cholin. Cholin may also be found in the blood; but not alone in general paralysis of the insane, but also in combined sclerosis, disseminated sclerosis, alcoholic sclerosis, and beri-beri. Two tests—a chemie and a physiologic—are serviceable. A similar condition was produced in cats by division of both sciatic nerves, the reaction being most marked when the degenerative process is at its height, as indicated by the Marchi reaction. The chemie explanation of the Marchi reaction appears to be the replacement of phosphorized fat by non-phosphorized fat. [A.O.J.K.]

7.—Millard reports a case of **erythema scarlatiniforme desquamativum** in a man, aged 36 years, who had suffered many attacks since he was a child. The disorder is to be distinguished from scarlet fever by the absence of throat symptoms, by the disproportion between the intensity of the eruption and the amount of pyrexia, by the absence of the "circum-oral ring," and by the early onset of desquamation. [A.O.J.K.]

8.—Hunter published a short note on **neutral red** as a means of detecting the presence of **Bacillus coli communis** in water supplies. Details are promised in a paper shortly by Makgill. [A.O.J.K.]

9.—Rawlings reports a case of **measles and diphtheria** occurring concurrently in a child aged 13 months, and terminating fatally. The recognition of the diphtheria was due to the quantity of albumin in the urine and to the fact that the signs of laryngeal obstruction, although not great, were more than are generally found in the catarrh of uncomplicated measles. [A.O.J.K.]

10.—A case of **subphrenic and splenic abscess** successfully operated on is reported from St. Mary's Hospital. The patient, a young woman, presented the following symptoms: Pain in the left side, chest and back, fever, dyspnea, with rapid pulse and respiration. Examination showed consolidation of the base of the left lung, pleural effusion, some gastric dilation with no evidence of peritonitis or gastric ulcer, although the patient suffered 2 years before from pain with occasional vomiting after taking food. Clear fluid to the amount of 20 ounces was drawn from the pleural cavity by aspiration. Temporary improvement was followed by an exacerbation and a temperature which suggested pus. Examination showed it came from beneath the diaphragm especially from a splenic cavity. The

diaphragm was sutured to the thoracic wall, but this gave way and communication was established between the splenic and pleural cavities. Both were drained and irrigated daily with iodine solution. The condition of the patient was critical for some time. Convalescence was slow, but recovery was complete. [J.W.M.]

11.—Nash reports 2 cases in which **septicemia** followed **suppurative appendicitis**, and recovery in 1 case following the use of antistreptococci serum. In the first case, drainage of an appendicular abscess was followed by some improvement, but later death ensued. Necropsy showed the mesenteric glands enlarged and infiltrated with pus, and numerous hepatic abscesses, which arose from the septic mesenteric phlebitis. The second case was complicated by local abscesses. Recovery followed the use of antistreptococci serum. This serum is of use only in streptococci infections, and as each variety requires a different serum it should be used only after a careful bacteriologic examination of the blood. [J.W.M.]

Journal of the American Medical Association

April 27, 1901. [Vol. XXXVI, No. 17.]

1. Notes on Adrenalin and Adrenalin Chlorid. E. FLETCHER INGALS.
2. Hypospadias. C. H. MAYO.
3. The Pollution of Streams and the Purification of Public Water Supplies. Comparative Efficiency of Slow Sand and Mechanical Filters. GEORGE M. KOBER.
4. Floating Kidneys in Children. I. A. ART.
5. Advance in Obstetrics During Last Half Century. A. H. HALBERSTADT.
6. When Should Patients be Advised to Eat Everything. BOARDMAN REED.
7. Poisoning from Autointoxication. T. D. CROTHERS.
8. Proposed National Bureau of Materia Medica. F. E. STEWART.
9. Hospital Cars for Railway Service. W. L. ESTES.
10. A Rule for Combining Crossed Cylinders. HARRY S. PEARSE.

1.—**Adrenalin** in various solutions has proved an effectual astringent in acute and subacute inflammations of the nose and larynx, and in epistaxis. Before operation, 1 to 5,000 acts as powerfully as a solution of desiccated glands, gr. 30 to the ounce. When combined with boric acid in cinnamon, camphor and distilled water it will keep for several weeks. [H.M.]

2.—Mayo describes **operations for hypospadias** by simple canalization, by penile, scrotal and abdominal flaps and combinations of these and operation by mobilization and dislocation of the urethra. In cases that cannot be relieved by the latter alone, the tube may be built from the prepuce. This is extended and 2 incisions 1 inch apart made from the free border to the cervix, and, if necessary, along the dorsum. A transverse incision on the dorsum unites the two. A tube is constructed with the skin surface within and attached to the cervix. The penis is tunneled from the glands to a point beneath and a little to one side of the hypospadiac opening; the tube is drawn through and sutured at each end. In 10 days the pedicle is cut through close to the new meatus. Later a self-retaining catheter is inserted through a perineal opening and the 2 urethras are accurately coapted by sutures. A silk worm drain is used for the urethra. [H.M.]

3.—After discussing the composition and **pollution of river water** and chemical analysis of the Potomac, and the increase of fecal bacteria with turbidity, some of the statistics of typhoid and other water-borne diseases are given, and the prevention of pollution and **purification** is considered. England has had a river pollution commission since 1855, which has reduced water-borne diseases over 50%. Bartholet's bill, introduced 5 years ago, has not yet become a law. The Marine-Hospital Service could perform this service without great expense. Tables are given of plants established for the disposal of sewage in the United States, and others showing the great advantage of sand over mechanical filtration. [H.M.]

4.—**Floating kidney in children** is infrequent. It is congenital or may be brought on by trauma, especially when there is a congenital predisposition. The symptoms are noted and 5 cases are reported. [H.M.]

5.—The differentiation of the gynecologist was a comparative deathknell to the **advance of obstetrics**. Little progress has been made, except in asepsis, anesthesia and the introduction of symphysiotomy. The greatest epoch ended with the death of Hodge and Meigs, but revulsion is sure to come and obstetrics will again resume the importance of 50 years ago. Of more value than the various antiseptic agents are cleanliness and the avoidance of meddling midwifery, as the healthy vaginal secretions are germicidal themselves. Obstetricians do not take kindly to anesthetics, although the parturient state is the only condition in which, judiciously administered, they are without danger. Their application is universal. They are especially indicated in eclampsia, and neither lung nor heart-disease nor uterine inertia are contraindications. In the latter case their use should be combined with an oxytocic. They should be used in the first as well as the second stage for the relief of pain. The A. C. E. mixture is preferred. [H.M.]

6.—A large proportion of **chronic ailments** are due directly or indirectly to **wrong eating and drinking**. The normal food requirements are about $\frac{1}{2}$ part each of proteids and fats and $\frac{2}{3}$ carbohydrates. In the average table d'hôte dinner, as well as breakfast and luncheon, the albuminoids are rarely brought as low as $\frac{1}{2}$, and the carbohydrates come at the end of the meal when there is too much HCl to permit further salivary digestion, and in hyperchloridies often enough to impair the action of the pancreatic juice. The sharp condiments used overstimulate the glands, causing premature exhaustion, and the alcohol, even when taken moderately, retards digestion and impairs the motor function of the stomach. Under the guidance, then, of our ignorant French cooks, it is not safe to advise even the well to "eat everything," and still less others. [H.M.]

7.—The ordinary beer-drinker is the most prominent example of **autointoxication**. Alcohol impairs growth, repair and functional activity of the tissues. Nutrition for the cell is diverted and becomes waste product, the capillaries are diluted, the oxygen-carrying property of the blood is diminished. As the waste increases the power of elimination decreases and the processes of digestion are disturbed and altered. The starvation and irritation merge into inflammation and exhaustion, and the products of these metamorphoses become real poisons, causing many obscure symptoms. Unexplainable nervous and nutrient disturbances will often completely disappear on abstinence and an antiseptic and eliminative treatment. [H.M.]

8.—Stewart's paper is arranged in the form of a prospectus of such a **bureau** the objects of which are to establish standards of preparation, to act as a medium between scientific workers and manufacturers, to collect knowledge of **materia medica** products, and to aid manufacturers whose goods conform to the standards in introducing their brands to the medical profession. Compliance in this country with the Pharmacopeia not being obligatory, products differ widely, and the first essential to uniformity in therapeutic effects is uniformity in products. Pharmacists are bound by the same ethical obligations as physicians to give publicity to the results of original investigation. Exception can be made, without danger to science, of patents for new processes and apparatus for manufacturing so long as these patents do not cover the products themselves. The significance of trade-marks is discussed, and among the rules suggested for the bureau are those dealing with improper methods of advertisement. An appendix contains various legal decisions as to trade-marks. [H.M.]

9.—In the year ending September, 1900, there were 51,743 railroad casualties in the United States. The total casualties in the South African War to that date were about 48,000, and yet on many of our railroads there is scarcely any efficient system for first aid and comfortable transportation. For fulfilling these functions **hospital cars** are not suitable for trunk lines on account of the immense expense of fitting out and maintaining a sufficient number, and the difficulty of moving them quickly and promptly, as well as the practical impossibility of equipping them with experienced surgeons. At centers with many radiating lines, or on short suburban lines, or on those with emergency hospitals at intervals these cars would prove very useful. Such cars should also be used for isolating tuber-

cular passengers, and others with infectious diseases, in this case being attached to regular trains. It is astonishing that laws in regard to transporting the corpses of such persons are so stringent when they may travel without hindrance while still alive. [H.M.]

Boston Medical and Surgical Journal.

April 25, 1901. [Vol. CXLIV, No. 17.]

1. Remarks on Anesthesia—General, Local and Spinal. MAURICE H. RICHARDSON.
2. Experience in Search of a Cure for Asthma In the Far Southwest; With Observation of the Comparative Value of Different Sections in Respiratory Diseases. ROBERT BELL.
3. Chorea During Pregnancy. F. S. NEWELL.
4. Notes on X-Light. WILLIAM ROLLINS.

1.—Richardson, in discussing general, local and spinal anesthesia, believes that the dangers of etherization in healthy subjects are less than those attending the subcutaneous use of cocaine in extensive operations. Local or spinal anesthesia has an important field of usefulness in cases of general peritonitis, or other conditions in which regurgitation is likely to occur during general anesthesia; in diseases of the lungs, and in cervical operations, in which the respiratory passages are apt to be interfered with. He believes that spinal or local anesthesia will not, after a thorough test, compare in safety with ether or chloroform. [J.W.M.]

2.—A high altitude, dry atmosphere and abundant sunshine are best to relieve asthma. Colorado fulfils these conditions. Southern California cannot be recommended, as the climate is not dry owing to the dense fogs. Arizona stands first as a climate for all respiratory diseases. Nasal and postnasal catarrh are prevalent and aggravated in Colorado and Southern California. For tubercular patients Colorado is favorable, except for its dust and high winds. Southern California is not condemned, but other places are better. Patients should be sent west in the first stage of their disease; those in the second and third rarely recover. For nervous patients, or those liable to hemorrhage, select a moderate altitude. Advise everyone to remain for many months after the cough has ceased. [H.M.]

3.—Symptomatically the chorea which occurs in pregnancy is identical with infantile chorea. Its etiology also is similar; the tendency may be inherited, or it may be the result of previous chorea during childhood. The general opinion in England is that the chorea of pregnancy is entirely of nervous origin, and in almost all well-marked cases some more or less violent nervous shock is the apparent starting point of the trouble. The disease occurs most commonly in young women from 18 to 24 years old, and is very rare after 30 years of age. The prognosis of chorea in pregnancy is much more grave than in early life. The fetus may, in mild cases, live and be born at term; but in severe cases it usually dies and causes abortion or premature labor. In the treatment of chorea the principal drugs are the sedatives, bromid, chloral, and morphia, and the alteratives, arsenic and iron. In grave cases ether and chloroform may be given as in eclampsia. Rest in bed and freedom from worry are also valuable adjuncts. Every effort to improve the general nutrition of the patient should be made. [W.K.]

4.—Rollins in some notes on x-light states that all tubes deteriorate in use. The light is produced by the amalgamation of gas particles with metal terminals in a vacuum tube. The lower the resistance met by these particles as they are driven by the electric current from the cathode against the target the more penetrating the light produced. To overcome this resistance a reservoir and dam are used to restrain the current and send it in powerful surges, thus increasing the velocity of the cathode particles. The duration of these surges should be as short as possible, and the volume sufficient to produce the required light. By the continued formation of a cathode stream there is a reduction in the number of cathode particles until finally the tube gives no light. Rollins thinks the ideal remedy for this condition would be the restoration to the tube of the same kind of gas as was used in making the cathode stream. An important discovery to be made is a means of keeping the light constant. [J.W.M.]

Medical Record.

April 27, 1901. [Vol. 59, No. 17.]

1. Experiences with Tracheotomy. JOHN ROGERS.
2. Recurrent Vomiting of Nervous Origin. LOUIS FISCHER.
3. Tobacco as a Factor in Glycosuria. HEINRICH STERN.
4. Pityriasis Versicolor of the Face. WILLIAM S. GOTTHEIL.
5. An Extreme Case of Simple Anemia. ROLFE FLOYD, and WILLIAM J. GIES.
6. Albuminuric Retinitis In Pregnancy: Premature Labor: Death In Utero of Twin Child: Puerperal Convulsions: Hemiplegia: Acute Mania: Death. JOSEPH N. STUDY.

1.—Rogers, in reviewing experiences with tracheotomy, states that the dangers attending the operation are less than those of prolonged dyspnea. When a general anesthetic is necessary during the operation, chloroform should be employed. Laryngotomy, except in tumors, is useless. In emergency cases and chronic stenosis, except in short necked individuals and children, high tracheotomy is usually done. In chronic stenosis in which a careful dissection is possible, and in which a cure may be hoped for from the wearing of a canula for a few weeks, the low tracheotomy is preferable, although it is more difficult to pass a tube by it, and to prevent its slipping out and catching in the wound which may be a serious accident. The development of granulation tissue in cases of long-retained canula is considered neither dangerous nor of frequent occurrence. When there is uncertainty as to the location of the obstruction and the dyspnea is not relieved by a short canula, a longer one, for which a stomach tube is a good substitute, should be employed. [J.W.M.]

2.—The usual symptoms of recurrent vomiting are noted and a case in a child of 14 is reported. This followed a prolonged attack of pertussis at 8 years of age. The vomiting occurred from 1 to 12 times daily. Repeated examination of stomach contents excluded gastric disease. The trouble was believed to be of neurotic origin. There were symptoms of hysteria minor. [H.M.]

3.—Tobacco not only aggravates a glycosuria, but also—though less frequently—is a causative factor. Literature contains almost nothing as to its relation to this and to diabetes mellitus. In the cases reported by Stern, nicotine poisoning was excluded on account of the mild neurotic phenomena, and the empyreumatic poisons of the smoke affect principally mucous membranes. The condition is attributed to the CO liberated in the imperfect combustion of cigars. This is known to cause glycosuria. The blood of several patients showed carbon-monoxid hemoglobin. In some cases the sugar disappeared with restriction of smoking, and in chronic and aggravated cases it was much diminished. [H.M.]

4.—The dingy white spots were diagnosed as leukoderma at first, but the microscope showed the microsporion. [H.M.]

5.—A case of simple and another of pernicious anemia are reported in minute detail, showing striking similarity in the condition of the blood. The first case is classed as simple from the rapidity and degree of recovery and continued absence of symptoms after cessation of treatment. The conclusion is that clinical features must weigh equally with the results of the blood examination in establishing a diagnosis. [H.M.]

New York Medical Journal.

April 27, 1901. [Vol. LXXIII, No. 17.]

1. On Tenonitis and Tenonothecitis Prolifera Calcarea. CARL BECK.
2. A Combined Intranasal and Extranasal Operation for the Correction of a Congenital Concave, Vertical and Lateral Deformity of the Nose, with the Report of a Case. BURTON S. BOOTH.
3. Hospital Appointments. Are They Open to Women? MISS HELEN MACMURCHY.
4. A Contribution to the Explanation of the Nature of the So-called Predisposition to Infection with Staphylococci. F. W. GAERTNER.
5. Pneumonia, Its Proper Management in Children: Hygienic, Drug and Dietetic Details. LOUIS FISCHER.
6. Peripheral "Anesthesia-Paralysis"—Report of an Unusual Case of Bilateral Brachial Paralysis Occurring During Narcosis (for Appendicitis). WALTER M. BRICKNER.

7. The Relation of Arterial Changes to the Heart. BEVERLY ROBINSON.

1.—Beck reports the case of a Russian tailor from whom he removed the great toe 13 years ago, the joint containing some calcareous concretions. In 1900 the patient returned with a large globular tumor on the dorsum of the right hand. Operation showed the third metacarpophalangeal joint filled with cheesy material and the extensor tendons of the digits cemented together in a mortar-like mass of calcareous material. The toe is believed to have been affected in the same way and Beck has suggested as a name for the condition *tenonitis* and *tenonothecitis prolifera calcarea*. [A.G.E.]

2.—Booth details an operation upon the nose in which the intranasal portion was done under cocain anesthesia with adrenal capsule as a hemostat. He believes that this combination is preferable to general anesthesia in a large proportion of cases. [A.G.E.]

3.—Helen MacMurchy compiles a list showing a total of 559 medical appointments—government, municipal and hospital—held by women physicians, with 11 appointments recently opened to competition. Of these, 215 are resident; 302 (including 114 resident) are in the United States, and 188 (including 99 resident) are in the British Empire. [H.H.C.]

4.—Gaertner, from a series of experiments carried out on rabbit material with injections of pure cultures of *Staphylococcus pyogenes aureus*, reaches the conclusion "that the conditions which favor a disposition to infectious diseases have to be looked for in the hydremia of anemia." [H.H.C.]

5.—Fischer, in a paper on the treatment of pneumonia, gives a short resume of the modern management of the disease in children. [H.H.C.]

6.—Brickner reports a case of bilateral brachial paralysis occurring during narcosis. He concludes that the care of the arms is as important a part of the anesthetist's duty as is the administration of the narcotic. As in some of the cases collected by Brickner the arms were lying alongside the body during operation, he believes that the arms should not be allowed to remain for more than a few minutes in any one position, however innocent that position may appear to be. [A.G.E.]

7.—Robinson, in discussing the relation of arterial changes to the heart, points out that in the nodular form of arteriosclerosis aneurysmal dilation is no uncommon sequence. In those cases in which the pulmonary artery is sclerosed a certain degree of cardiac hypertrophy must be expected. In many cases this condition extends generally to the veins. In mitral stenosis it is especially to be remarked that we have a sclerotic state of the pulmonary veins. In the treatment of these cases, while it is often manifestly indicated for a while to give heart tonics and stimulants, such as strychnin, digitalis, and strophanthus, it is also wise to administer in moderate doses potassium iodid, and for long periods with occasional interruptions. [H.H.C.]

Medical News.

April 27, 1901. [Vol. LXXVIII, No. 17.]

1. The Study of Internal Medicine. WILLIAM OSLER.
2. The Relation of the Student of Medicine and the Recent Graduate to the Field of Surgery. GEORGE RYERSON FOWLER.
3. The Medical Man in the Navy. W. K. VAN REYPEN.
4. The Municipal Health Department System, and More Especially in Reference to its Advantages and Disadvantages as an Opening for the Young Medical Graduate. ARTHUR R. GUERARD.
5. The Advantages of Examining for Life Insurance. BRANDRETH SYMONDS.
6. The Outlook for the Young Physician in State Hospital and Sanitarium Work. CARLOS F. MACDONALD.
7. The Medical Man in the United States Marine-Hospital Service.

1.—Osler advises for the student of internal medicine ambitious to become in time a consultant, an occasional few months abroad or 2 or 3 weeks each year spent in the hospitals at various medical centers at home, in order to enlarge the capacity for appreciation. During the first few years he must

be satisfied though barely eking out a living while gaining experience. He should stick close to the dispensaries, collecting material for papers, but should be careful how he writes, doing thorough work under guidance, and attempting nothing startlingly original. Three lines of work may be followed, chemistry, physiology and morbid anatomy. We sorely want men thoroughly trained in organic chemistry. To Traube and men of his stamp, physiologic clinicians, this generation owes much more than to the chemic or postmortem group, but if work must be limited, our prospective consultant must yield to the claims of the dead house. [H.M.]

2.—To the student intending to fit himself for the practice of surgery 2 courses are open on graduation. One, to enter in his practice the field of general medicine, doing what surgical work comes to him and supplementing this by operating on animals. As he builds up a clientele he should begin to turn away medical work, giving more attention to his surgical cases thus increasing the confidence of his fellow practitioners in his honesty of purpose. The better course, however, is to seek an internship in some large hospital where he may serve in both medical and surgical wards, thus gaining not only experience but self-confidence and the confidence of his chiefs. If the hospital does not afford opportunities for acquiring practical bacteriology and pathology, subsequent work should be done in some pathologic institute at home or abroad. He should endeavor to obtain a position as assistant to some surgeon on a hospital staff, should keep abreast of current literature, and make occasional visits to the surgical clinics of other medical centers. [H.M.]

3.—The medical corps of the navy is recruited directly from civil life. The test for admission is one simply of merit. Two examining boards are kept constantly organized, one at Brooklyn and the other at Mare Island. The order of examination is: (1) Physical, (2) Written, (3) Oral, (4) Clinical, (5) Practical. The paper considers these in detail. After successful examination appointment as assistant surgeon, with rank of lieutenant, is made without delay. The order of promotion with accompanying pay is given, and the conditions of naval life, with its opportunities and responsibilities, is described. [H.M.]

4.—Health Department work is comparatively new, and therefore not quite so overstocked as some other departments of medicine. Unfortunately, there are as yet no schools in this country for education in matters pertaining to public health. Such knowledge can be obtained only in this branch of the public service, and the duties of sanitary authorities are far-reaching and complex. An account is given of the organization of New York City Department of Health and the work it has accomplished, and of the number of physicians employed with their remuneration and privileges and the advantages and disadvantages connected with the work. [H.M.]

5.—The writer speaks only for what are called "old line companies." The pay for each examination is good, the fee being larger than that ordinarily received for first visits in general practice. The physician has the endorsement of competent authorities and the public, and the profession appreciate this. From a scientific point of view the necessity of relying on physical diagnosis has its advantages, and socially the cultivation of tact and backbone is encouraged. [H.M.]

6.—The inducements to enter this field are the immense amount of clinical material for the study of mental disease, the liberal pecuniary compensation, the opportunity for promotion and for making a reputation as an alienist and of preparing for the management of private institutions. A detailed account of the grading and pay in the New York State hospitals is given. [H.M.]

7.—The department offers an assured income, excellent social position, and practically an appointment for life to those best qualified. The examinations are severe and knowledge must be thorough and practical. The physical examination throws out all but the robust. The location and equipment of marine hospitals are given. The service conducts one of the best laboratories in the world. Special encouragement is given to those with particular aptitudes. The general requirements of the service are described. [H.M.]

Philadelphia Medical Journal.

April 27, 1901. [Vol. 7, No. 17.]

1. Scurvy in Infants. LOUIS STARR.
2. Notes on Leukemia, with a Report of 3 Cases. CHARLES S. JEWETT.
3. Clinical Experience With Adrenalin. EMIL MAYER.
4. Observations and Tabulated Report of the Results of 150 Operations for Appendicitis. LEON BRINKMAN.
5. Points Connected With the General Etiology and Pathogenesis of Diabetes Mellitus. HEINRICH STERN.

1.—Besides discussing the etiology, pathology, symptomatology and treatment of infantile scurvy, Starr gives a tabulated report of a number of cases occurring in his own practice. In discussing the food question he says: "The faulty foods may be classed in the order of their potency: (1) The different proprietary infants' foods administered without the addition of cow's milk; (2) proprietary foods employed with the addition of insufficient quantities of cow's milk; (3) oatmeal or wheat gruel, barley and other farinaceous foods administered with water alone or with water and insufficient cow's milk; (4) condensed milk and water; (5) sterilized milk; properly modified milk subjected to a temperature of 212° F. for 30 minutes to an hour or more; (6) too dilute milk and cream mixtures; laboratory mixtures with too low albuminoid percentage." [H.H.C.]

2.—Jewett reports 3 cases of leukemia, 2 of which differ from v. Jakseh's description of this disease in the following points: (a) Neither the number of red cells nor the amount of hemoglobin is reduced below the findings in well authenticated cases of leukemia. (b) Extraordinarily large neutrophiles are not found. (c) No white cells have been found which contain red cells or portions of red cells within their protoplasm. (d) The great majority of leukocytes are lymphocytes and not polymorphonuclear neutrophiles. [H.H.C.]

3.—See Therapeutic Department.

4.—Brinkman discusses the differential diagnosis between appendicitis and typhoid fever, acute intestinal obstruction, and cholecystitis. Tabulated details of 150 operations for the former condition are given. The mortality was 23%. [A.G.E.]

5.—Stern, in his study of diabetes mellitus, as recorded in the mortality statistics of New York City for a period of 11 years (1889-99, inclusive), states that of 1,867 deaths from diabetes mellitus, 931, that is, almost 50%, occurred in females. This proportion differs widely from the supposition that the disease is much more fatal in males than in females. The total mortality from diabetes in infancy being 79, forms about 4.25% of the total deaths from this disease. Of the 13 deaths occurring under 5 years of age, 3 took place in females. Among the 66 other instances of deaths from diabetes in early life, 33 ensued in females and 33 in males, exactly 50% in each sex. The death rate from diabetes in the colored race is exceedingly low. Hebrews, no doubt, are more commonly affected with chronic glycosuria than is the nation among whom they dwell. Those born in Ireland or of Irish descent contribute over 25% of the total mortality from diabetes mellitus. The disease is not a special visitation upon the well-to-do, as is commonly supposed, but occurs frequently among the working people who, as a rule, are not addicted to gluttony or leisure hours. He describes a third clinical form of diabetes which he terms "diabetic deterioration." [H.H.C.]

Wiener klinische Wochenschrift.

March 14, 1901. [14 Jahrg. No. 11.]

1. Primitive Organs of Vision. THEODOR BEER.
2. Ligature of the Jugular Vein in Otitic Sinus Thrombosis. FERDINAND ALT.
3. Suture of the Heart. HEINRICH ZULCHNER.

2.—Alt reports 2 successful cases of operation for otitic sinus-thrombosis, in one of which the ligation of the jugular vein was necessary before opening the sigmoid sinus. [H.H.C.]

3.—Zulchner reports an interesting case of a 35-year-old man who, among other injuries, received in a stabbing affray, a thrust in the left thoracic region at about the insertion of the sixth costal cartilage. The wound penetrated through the

pericardium into the right ventricle about 1 cm. from the apex. Under narcosis parts of the fifth, sixth and seventh costal cartilages were resected and the left pleural cavity opened. Ligation of the 2 cm. long incision was unsuccessful with fine silk, so coarse thread was used with the result that it also tore through making the original simple incision into an ugly cruciform opening from which the blood escaped in a stream which soon ended the life of the patient. [H.H.C.]

Berliner klinische Wochenschrift.

March 18, 1901. [38 Jahrg., No. 11.]

1. The Importance of an Advanced Course for Health Officers. H. SCHAPER.
2. The Influence Exerted upon the Diazo-Reaction by Substances of Stronger Affinity to the Ehrlich Reagent. BURGHART.
3. Casuistics of Diaphragmatic Hernias in the Living. WIEDENMANN.
4. Paralysis of the Superior Laryngeal Nerve. DORENDORF.
5. A Bacteriologic Condition Found in Cerebrospinal Meningitis. MENZEL.
6. A Noteworthy Case of Influenzal Laryngitis. GLATZEL.
7. Treatment of Hypertrophy of the Prostate. BRAUN.
8. Extensive Ossification in the Crural Fascia. WEGNER.
9. Tenonitis Serosa. NICOLAI.
10. Otitic Cerebral Abscess. STENGER.
11. The Technique and Indication for Metreuryasis. KRUMMACHER.
12. Early Syphilitic Basilar Meningitis. HOFFMANN.
13. Max v. Pettenkofer. KUBNER.

1.—In this article Shaper gives an outline of the advanced instruction given to German military surgeons in the various universities and hospitals, more particularly in Berlin. [H.H.C.]

2.—After mentioning several drugs (including creasote and creasotal), which have a disturbing effect on Ehrlich's diazo-reaction, Burghart states that the phenols, whether given internally or produced by a diseased condition in the body, have a decidedly disturbing action. [H.H.C.]

3.—In the entire literature only 11 cases of hernia of the diaphragm have been reported in which a correct diagnosis has been established during life. A new case is reported by Wiedenmann of a man, aged 48, who had had 4 attacks of pleuritis and was finally admitted to the Charité in Berlin suffering with lancinating pain in the left thorax and hemoptysis. After a careful examination, both physical and by means of the Röntgen apparatus, a diagnosis of left-sided diaphragmatic hernia was made, with the probability that the stomach was partially displaced and prolapsed into the hernial sac. [H.H.C.]

4.—Dorendorf reports 2 cases of one-sided paralysis of the superior laryngeal nerve resulting, in the first case, in paresis of the musculus vocalis. Both cases were greatly benefited by electric treatment. [H.H.C.]

5.—Menzel reports a case of cerebrospinal meningitis in which the pus obtained from a lumbar puncture showed, besides extracellular streptococci and intracellular diplococci (meningococci?), distinctly intra-cellular streptococci. [H.H.C.]

6.—Glatzel reports a case of influenzal laryngitis differing from those reported by Fraenkel, P. Heymann and P. Koch in that the dirty-white patches found on the laryngeal mucosa were situated symmetrically along the lips of the ventricles. The patient was a servant maid aged 24 who complained of a burning and itching sensation in the throat together with hoarseness. A bacteriologic examination revealed the presence of influenza bacilli in the fibrinous patches. [H.H.C.]

7.—Braun discusses various treatments for hypertrophy of the prostate, and recommends the boutonniere operative treatment in advanced cases with retention of urine. He reports 2 cases cured by this method of procedure. [H.H.C.]

8.—Wegner describes the case of a woman, 65 years old, who had suffered for 15 years with a chronic ulcer and fistula on the inner side of the lower third of the left tibia. On examination with the probe rough pieces of bone were felt, resembling sequestrae. Operation revealed the presence of a tough fibrous connective tissue mass 15 x 5 x 0.5 cm. in size, containing a number of small pieces of true bone. Wegner attributes their presence to the long continued irritation and not to myositis ossi-

ficans, since they were not imbedded in the muscle tissue, but lay between the fascias. [H.H.C.]

9.—An interesting case of **right-sided tenonitis serosa** is reported by Nicolai in a woman 52 years old. The affection was, as is usually the case, very evidently closely connected with the rheumatic condition of some of the larger joints. Indeed, Nicolai is of the opinion that the disease is probably a metastatic result of the primary articular rheumatism, more especially since in its course it so closely resembles that of articular rheumatism. [H.H.C.]

10.—A case of **intracranial abscess**, following a left-sided otitis of 3 years' standing, is reported by Stenger, in a child 13 years old. The radical operation was followed 6 days later by trepanation of the left temporal bone and the liberation of over 250 cc. of pus and broken down brain-tissue. A bacteriologic examination revealed the presence of staphylococci in the pus. Recovery was slow, and marked by the large amount of pus escaping with every change of bandages. [H.H.C.]

11.—Krummacker discusses the technic as well as the indications for the use of Champetier de Riter's **metreurynter**, an apparatus for vaginal or cervical dilation. [O.R.]

12.—Hoffmann reports the case of a young man 26 years old who, 4½ months after infection and 2½ months after the appearance of the roseola, showed symptoms of **syphilitic meningitis**. He bases the diagnosis on the complete paralysis of the right facialis, the decided paresis of the right abducens, the weakness of the right lypoglossus and the sensory disturbance on the right side of the tongue together with severe headache and bilateral choked disc. Almost complete recovery followed energetic treatment by means of innuctions and injections of bichlorid. The case is of interest because (1) the disease manifested itself 2½ months after the outbreak of the roseola in spite of energetic antisiphilitic treatment, (2) because the motor and sensory disturbances were strictly unilateral, and (3) because the lesion was a circumscribed inflammation of the dura, corresponding in general to the periostites so often found in the early period of syphilis. [H.H.C.]

March 25, 1901. [38 Jahrg., No. 12.]

1. Prognosis of Brain Diseases in Childhood. H. OPPENHEIM.
2. A Case of Pneumopyopericardium. R. SIEVERS.
3. Operative Treatment of Varices and of Varicose Phlebitis. KAREWSKI.
4. The Progress of Malarial Investigation in Italy. M. KOCH and H. COENEN.
5. Max v. Pettenkofer (Conclusion). M. KUBNER.

1.—In the first installment of an article on the **prognosis of brain diseases in children** Oppenheim reports 5 cases which came under his observation. [H.H.C.]

2.—A rare case of **pneumopyopericardium** is reported by Sievers in a woman of 32, who, after suffering from a severe syphilitic infection, developed a left-sided croupous pneumonia. The lung became gangrenous, and a communication was established with the pericardial cavity, resulting in the presence there of pus and air. Percussion revealed no heart-dulness, but deep, sonorous sounds over the entire left thorax, such as present in emphysema. Auscultation brought out metallic sounds over the pericardium of a gurgling and splashing character, together with pericarditic friction-sounds of an amphoric nature. The autopsy confirmed the diagnosis. [H.H.C.]

3.—After discussing the advantages and disadvantages of Freudenberg's and Madelun's **operations for varicose veins** of the lower extremities, Karewski suggests the advisability of combining both. For several years he has adopted the following method in serious cases, avoiding thereby thrombosis and recurrence of varicosities: A small incision is made over the fossa ovalis, and after double ligation, the saphena is cut. The vein is then isolated from the subcutaneous fat for some distance by means of a dull instrument, and a new incision made about 20 cm. lower down. Here also the double ligation is followed by separation and excision, the bleeding from the side branches being stopped by compression. A third

incision in the neighborhood of the kneejoint allows of the extirpation of the vein to this joint, after which the second part of the operation—the removal of the varicosities—may be completed. [H.H.C.]

4.—In the conclusion of their paper on **malarial investigations** in Italy, Max Koch and Coenen give some very interesting facts concerning the mosquito-etiologies of the 3 forms of malaria, together with reports of experiments carried out by Celli, Grassi, and others in the malaria-infected districts of Italy. [H.H.C.]

April 1, 1901. [38. Jahrg. No. 13.]

1. The Distribution of Tetanus Toxin and Tetanus Antitoxin in Living Animal Bodies. F. RANSOM.
2. A Case of Splenic Anemia with Many Mononuclear Neutrophile Leukocytes. G. FREUND.
3. A Case of Idiopathic Hemorrhage Between the Retina and the Vitreous Humor. H. ZIEGNER.
4. The Prognosis of Brain Diseases in Childhood. H. OPPENHEIM.

1.—In the first part of a paper reporting a series of experiments on the **absorption of tetanus toxin and antitoxin** in animals, Ransom finds that the poison is absorbed chiefly by means of the lymphatics, only a relatively small quantity entering the vascular system. In the case of the antitoxin, the absorption also takes place principally through the lymphatic system. In intravenous injections of antitoxin the latter soon begins to leave the vascular system and enters the lymph system. [H.H.C.]

2.—Freund reports an interesting case of **splenic anemia** characterized by an unusual number of mononuclear neutrophiles in a day laborer, 58 years old. [H.H.C.]

3.—Ziegner reports a case of **idiopathic hemorrhage between the retina and vitreous humor** in a 52-year-old man. A complete absorption of the clot in the unusually short period of 3 months followed the repeated subconjunctival injection of physiologic saline solution. [H.H.C.]

4.—In the conclusion of his paper on the **prognosis of the cerebral diseases of childhood**, Oppenheim states that localized tubercular meningoencephalitis of the motor zone is, especially when occurring in childhood, an affection capable of cure. [H.H.C.]

April 8, 1901. [38 Jahrg. No. 13.]

1. A Special Form of Urticaria Factitia with Scleroderma. BETTMANN.
2. Membranous Enteritis. H. WESTPHALEN.
3. The Resection of the Lower Turbinal Bone. A. KUTTNER.
4. The Distribution of Tetanus Toxin and Tetanus Antitoxin in Living Animal Bodies. F. RANSOM.

1.—Bettmann reports 2 peculiar cases of **urticaria factitia** preceding a general scleroderma. In one case gentle tracing with the finger nail over the apparently intact skin of the chest and back produced lines of urticaria factitia which persisted for the unusual period of *six* days. [H.H.C.]

2.—Westphalen reports 3 cases of **membranous enteritis**, giving in detail the clinical symptoms and the gross and microscopic characteristics of the mucous and membranous stools. [H.H.C.]

3.—As a result of his operative experience in 50 to 60 cases, Kuttner concludes that **resection of the inferior turbinates** is indicated in *all* cases in which there exists a decided hyperplasia of the solid tissue-elements with diffuse increase in volume leading to disturbances of speech, respiration or circulation. He gives a short review of his methods of operation. [H.H.C.]

4.—In the conclusion of his paper on the **absorption of tetanus poison and its antitoxin**, Ransom states that injection of tetanus antitoxin into the subarachnoid space gives rise to no increase in the normal immunizing power of the nerve substance, and that the antitoxin passes rapidly and almost completely over into the vascular system. Injection of the antitoxin into the central nervous system causes the nerve substance to lose, at least for a time, its power to neutralize the poison, thus becoming itself toxic. [H.H.C.]

Deutsche medicinische Wochenschrift.

March 14, 1901. [27 Jahr. No. 11.]

1. A Biologic Evidence that the Albumin in Nephritic Urine is Derived from the Blood. V. E. MERTENS.
2. The Destruction of Tubercle Bacilli in Foodfats. A. GOTTSSTEIN and H. MICHAELIS.
3. The Lipochrome of Ganglion-cells. M. ROTHMANN.
4. Multiform Exudative Erythema Following Chemical Irritation of the Urethra. J. HELLER.
5. The Genesis of Adolescent Mastitis. E. FRANCK.
6. The Pathologic Fixation of the Uterus.

1.—From a series of experiments consisting in the intravenous injection of solutions of egg albumen and of albumen laden blood-serums into rabbits, Mertens reaches the same conclusion as do Tschistowitsch, Bordet, Uhlenhuth, Wasserman and Schütze, viz., that the **albumen of nephritic urine** is derived from the blood. [H.H.C.]

2.—By means of **intrapertitoneal injections** into guineapigs of a mixture of various oils containing tubercle bacilli (the whole heated to 87° C.), Gottstein and Michaelis find that this temperature is amply sufficient to kill the bacilli in oily mixtures, thus disproving the theory of Rabinowitsch that a temperature of 100° or even more is necessary for the purpose.

3.—Rothmann confirms the investigations of Nissl as to the presence in the **ganglion cells** of various animals, including man, of a light yellow pigment which takes on a deep black color on being treated with osmic acid.

4.—Heller reports a case of **multiform exudative erythema** in a man following the external use of a 20% solution of creolin before coition. The case was complicated by affection of the wrist joint, but was otherwise similar to the 4 cases reported by Lewin. Heller concludes that the condition is not due to a reflex action, but to an intoxication, or better, an antointoxication, and that such a thing as an idiopathic type of the disease does not exist. With regard to the exanthemas which sometimes follow the rectal injection of saponaceous fluids in children, Heller, after mentioning the 3 possible casual theories put forward by Still, suggests as a fourth and more plausible one the possibility that the mechanical irritation induces a serious exudation of the rectal mucosa, which, on being absorbed, gives rise to antointoxication and hence to erythema after from 24 to 48 hours.

5.—Franck reports 2 cases of **adolescent mastitis** in youths of 15 and 16 years respectively which were evidently the result of excessive masturbation. [H.H.C.]

March 21, 1901. [27 Jahr. No. 12.]

1. The Göttingen Typhus Epidemic During the Summer, 1900. P. FRAENKEL.
2. The Surgical Treatment of Tumor of the Stomach and its Secondary Conditions. W. KÖRTE.
3. Experimental Investigation Concerning the Compensation of Sensory Ataxia. A. RICKEL.
4. Indifferent Dyestuffs as a Selective Stain for Fats. L. MICHAELIS.
5. The Pretended Immunity of the Hedgehog to Cantharides and its Active Constituent. L. LEWIN.
6. Disease of the Trigeminal an Initial Symptom of Tabes. V. FRAGSTEIN.
7. A Short Observation on the Demonstration of the Progov Stumps of Solger. KERN.

1.—Fränkel gives the statistics of the severe **typhoid epidemic** in Göttingen (summer 1900) in which 56 cases were reported. [H.H.C.]

2.—Körte gives his observations on a series of 38 operations for **gastic ulcer** which came under his notice. [H.H.C.]

5.—After a series of experiments Lewin finds that the **hedgehog**, contrary to the theory of Ellinger, does not possess an **immunity from poisoning with cantharides**.

6.—Fragstein reports the case of a middle aged man who 13 years previously had contracted **syphilis**, and who suddenly began to complain of shooting neuralgic pains throughout the entire area supplied by the right trigeminal nerve. After 18 months there was a gradual loss of sensation, although the sense

of taste remained. At the same time the typical shooting pains of tabes began to occur in the lower extremities followed by other pronounced tabetic symptoms. [H.H.C.]

March 28, 1901. [28 Jahr., No. 13.]

1. A Case of Nephrotomy on Account of Hematuria Resulting from a One-sided Hemorrhagic Nephritis. H. LAURENT.
2. Saponin and Its Antidote. F. RANSOM.
3. The Göttingen Typhus Epidemic during the Summer of 1900. (Conclusion.) P. Fränkel.
4. Experimental Lumbar Puncture for Detection of Tubercle Bacilli. H. HELLENDALL.
5. A Noteworthy Case of Dissecting Aneurysm of the Abdominal Aorta. FAST.

1.—A fatal case of **nephrotomy** for hemorrhage as a result of right-sided hemorrhagic nephritis is reported by Laurent. The operative treatment was successful, as far as relieving the hemorrhagic condition was concerned, the patient eventually dying from erysipelatos infection of the wound. [H.H.C.]

2.—A result of experimental research on the hemolytic action of **saponin** and on its **antidote, cholesterin**, Ransom finds that there exists a sort of affinity between saponin and cholesterin by means of which the former acts as a poison to tissues containing the latter, but that at the same time the latter, under certain conditions, serves as a protecting agent against the former. Saponin is a poison to the erythrocytes, since it attacks the cholesterin contained within them. This does not occur at once, there being an "incubation period," after which a second stage sets in lasting until the completion of the process and the total liberation of the hemoglobin. Emulsions of saponin and cholesterin in certain proportions have no hemolytic action whatsoever on the blood. [H.H.C.]

3.—In the conclusion of his article on the **typhoid epidemic at Göttingen** in the summer of 1900, Fränkel continues his statistic observations, taking up the temperature-phenomena, and the intestinal, cardiac, and nervous complications of the epidemic. [H.H.C.]

4.—Following out the experiments of Martin, who was able to produce **tubercular meningitis** in guineapigs by means of intrameningeal injections of cerebrospinal fluid from patients suffering with tubercular meningitis, Helledall attained widely different results. In no case was he successful by the use of the typical lumbar puncture in producing tubercular meningitis in guineapigs with injections of undoubtedly tubercular human cerebrospinal fluid. On the contrary, a diffuse miliary tuberculosis was the result. In spite of this, however, he believes that the method is preferable to microscope methods on account of its extreme delicacy and sensitiveness, and that it is even to be preferred to intraperitoneal injections. [H.H.C.]

5.—Fast reports a case of **aneurysm of the abdominal aorta**, in which the antemortem diagnosis was confirmed by the autopsy. [H.H.C.]

Deutsches Archiv für klinische Medicin.

[69 Bd., 1 u. 2 Hft.]

1. Concerning Intermittent Hepatic Fever. PICK.
2. A Case of Foam Liver (Schaumleber). KERSCHENSTEINER.
3. Concerning the Elimination of Methylene Blue. ELSNER.
4. Clinical Studies Concerning the Circulatory Organs in the Early Stages of Syphilis. GRASSMANN.
5. A Case of Progressive Dystrophy, Complicated with Neuritic Paralysis of the Serratus. Also a Contribution to the Analysis of Paralysis of the Shoulder Girdle by the Method of Mollier. KAUFMANN.
6. A Case of Aene Telangiectodes (Kaposi). JESIONEK.
7. Experimental Studies on Contusions of the Chest. REINEBOTH.
8. Experimental Studies on the Origin of Gouty Nodules. FREUDWEILER.
9. Septic Processes as a Complication of Necrosis of the Pancreas. STRUPPLER.

1.—**Intermittent hepatic fever**—so called Charcot's intermittent fever—is quite well known to clinicians in this country, particularly since the publication of Osler's papers; but strange

to say, it has received scarcely any attention in Germany. Pick reports 2 cases in which careful estimation of the urea elimination was made, in order to throw light upon the ureogenic function of the liver. The first case occurred in a man of 49, who had been sick for a year with mild jaundice, with chills and fever, rising to 40° C. (140° F.), accompanied at times by colicky pains. The attacks occurred at regular intervals and were accompanied by more or less stupor. The liver was enlarged. During the period of observation (6 months), 46 febrile paroxysms occurred. The patient died with symptoms of complete obstruction of the common duct, ascites developing toward the end. At the autopsy it was found that a stone was compacted in the common duct, and had perforated the duodenum. The gall passages were dilated and filled with glairy mucus. The liver was small, granular, and the seat of biliary cirrhosis. The gallbladder was contracted. It was interesting to note that previous to each attack of fever the epigastric region became prominent and borborygmus developed. The second patient was a woman of 53, who had had typhoid fever in 1892. In 1895 she had gallstone colic, with the passage of stones. In 1896 intermittent attacks, with chill, fever and pain, developed, associated with marked stupor. The patient recovered. Charcot, on the strength of an observation of Regnard, had asserted that during the febrile attack the elimination of urea was greatly lessened. This effect was ascribed to an inability on the part of the liver to convert the ammonia salts, which are the supposed antecedents of urea, into the latter. If this were true there should be an increased elimination of ammonia salts coincident with the decrease in the urea; but Pick's studies do not show this. On the contrary, they show that there is a reduction, not alone in the urea, but also in ammonia and in the total nitrogen. The administration of ammonium citrate showed, moreover, that the ability of the liver to transform this salt into urea was not impaired. If the liver formed urea out of ammonia salts carried to it, a reduction in the quantity of urea ought to go hand in hand with an increase of ammonia in the urine. Pick therefore believes that while the ammonia salts may be the antecedents of urea, they are not brought to the liver as such, but that the waste nitrogen reaches the organ in some other form that does not pass over into the urine. Whether intermittent hepatic fever is a distinct nosologic entity, cannot be definitely decided. In Pick's opinion the name may be used to indicate a particular kind of infection of the gall-passages, which has the following characteristics: (1) Paroxysmal, intermittent fever of prolonged duration; (2) a non-suppurative character of the inflammation of the gall-passages, and the absence of any demonstrable inflammatory or suppurative focus in the liver or elsewhere in the body, despite the persistence for months of severe febrile paroxysms, with chill and stupor. (The absence of leukocytosis in the intervals and in the beginning of the paroxysms may be a diagnostic point against the presence of a purulent infection); (3) a marked diminution in the nitrogen and urea elimination in the urine, which, on the one hand, contrasts with the increased urea elimination in fevers in general, and, on the other hand, while indicating the importance of the liver for urea formation, tells against the accepted theory, in view of the absence of increase in the ammonia elimination, that the liver forms the urea from ammonia salts. The prognosis is dependent upon the cause. If the obstruction persists, the result is fatal. Therapeutically, the possibility that the disease may eventuate in biliary cirrhosis must be remembered; hence, the obstruction should be removed. If its removal does not speedily follow the use of internal remedies, operation should be undertaken. [D.R.]

2.—Kerschensteiner reports a case of "foam liver" in which the gas-production seemed to be due to *Bacillus coli*. [D.R.]

3.—A study of the elimination of methylene-blue and of the relative quantities appearing in the different excreta. The colorimetric method was used, the solutions from the excreta being compared with standard solutions of methylene-blue. It was not possible to obtain in the urine all of the methylene-blue ingested the portion eliminated varying between 40 and 60 % of that ingested. The elimination continued for from 2 to 4 days after the ingestion ceased. When the methylene-blue elimi-

nated in the feces was added to that found in the urine, a total of about 68 % of the amount ingested was obtained. The same percentage is maintained when the dose ingested is doubled or halved. It is probable that some of the methylene-blue is eliminated in an altered state, which escapes the usual methods of investigation, although it is not impossible that in pathologic conditions some is retained in the system. [D.R.]

5.—A case of progressive muscular dystrophy complicated with neuritic paralysis of the serratus magnus in a man of 30. The muscular dystrophy came on after an attack of spasms when the patient was 3 years old. It progressed for many years, and then remained stationary. Six years before coming under observation the man acquired syphilis. The paralysis of the serratus had set in acutely, with fever and tenderness on pressure; under antirheumatic, and later antisyphilitic treatment, it improved very much. The chief feature of the paper is a study of the paralysis of the serratus by the method of Mollier, a system of measurements in affections of the shoulder girdle, 5 points being taken as guides: 1 The point where the posterior edge of the clavicle meets the acromion, called the upper point (U.P.). 2. The point on both sides where the lower margin of the scapular spine passes into the vertebral margin, called the middle point (M.P.). 3. The lower tip of the scapula, called the lower point (L.P.). 4. The middle point of the upper border of the sternum, called the sternal point (S.P.). 5. The point on the spinal column opposite the sternal point, called the spinal point (Sp.P.) The method of using these points as guides in determining serratus palsy must be read in the original. [D.R.]

6.—A case of acne telangiectodes (Kaposi), also known as disseminated follicular lupus simulating acne, acne luposa, lupus miliaris, colloid milium, lupus follicularis acneiformis and acute disseminated nodular tubercular lupus. The patient was a woman of 56, and presented 3 types of lesions:—(1) Nodules and nodes of pea and cherry-stone size, sharply circumscribed, hemispheric, of a reddish-brown color, with a peculiar jelly-like luster, of a doughy or tense consistence, and with a smooth surface. Examined in profile, the lesions appeared vesicular or drop-like. (2) Flat, brownish-red, rounded or oval papules. (3) Very minute nodules, scattered irregularly, reaching the size of a pinhead, pale pink in color, and pointed. They seemed to have their origin from the hair follicles. There were no pustules; no inflammatory reaction. The hairy scalp was involved, and a few lesions were found on the mucous membrane of the soft palate. After an interval of several weeks, the small and medium-sized nodules disappeared, leaving concave, pigmented spots. There were no subjective sensations. Under ether more than two-thirds of the lesions were removed with the sharp spoon, the wounds being cauterized with the galvanic cautery. The lesions peeled out very easily, and seemed to be of a soft, spongy, lupus-like character. The cauterized places were dusted with eorform, and the patient received a prolonged warm bath every 5 days. Microscopic examination showed a tumor-like infiltration, extending from the middle of the corium up to the epidermis, and consisting of confluent foci of cells, which were largely lymphoid in character, although there were here and there epithelioid cells and giant cells; nowhere, however, was there any typical tubercle arrangement. Tubercle bacilli were not found on staining, nor in guinea-pigs that had been inoculated and had been killed after 4 or 5 weeks. [Four or 5 weeks is hardly long enough to warrant the conclusion that the lesions were not tuberculous, as several months are sometimes required for guinea-pigs to show tuberculosis after inoculation of dermal nodules.] A peculiarity of the lesions was the presence of numerous milium-like epithelial cysts. Touton considered acne telangiectodes among the tuberculids. Although in the present case the tuberculous character was not demonstrated, the author is apparently inclined to agree with this view. [D.R.]

7.—Reineboth subjected rabbits to various injuries designed to bring about contusions of the chest, in order to determine the effect upon the lung. He found that the lung-tissue was not very vulnerable [D.R.]

8.—The gist of the article is that there is in gout an excessive formation of uric acid, and that by reason of the constant surcharge of the blood with the acid the organism is inclined to

local inflammations. Necrotic tissue has no affinity for uric acid, while acutely inflamed tissue has a strong affinity. When the acme of such inflammation coincides with the maximum content of uric acid of the body juices, the uric acid is precipitated in crystalline form in the inflammatory exudate; in that way a typical gouty node is formed. The elimination of uric acid temporarily relieves the system of the excess, and new attacks remain in abeyance until again acute local inflammation and maximum uric acid content coincide. In addition to being deposited in inflammatory foci, uric acid deposition may occur in certain noninflamed tissues which by changes in the quantity of their salts offer unfavorable conditions for the solubility of the circulating uric acid. This is true of cartilage. Lessened alkalinity, at least in experimental animals, does not favor deposition of uric acid. A purely local formation of uric acid, independent of an excess of the acid in the blood, does not occur. It may then be said that the characteristic feature of gout is the presence of an increase of uric acid in the blood, and that the essence of the disease must hence be sought, not in the body juices and not in the gouty nodules, but in those places where uric acid is formed. [D.R.]

9.—A brief report of 2 cases of fat necrosis of the pancreas associated with septic complications; in the first, with acute verrucose and ulcerative endocarditis; in the second, with suppurative internal pachymeningitis. An interesting point in the second case was the absence, despite the evidences of sepsis, of a splenic tumor. In simple, uncomplicated pancreatic necrosis the spleen is not enlarged; indeed, Katz and Winkler were able to demonstrate a diminution in the size of the organ in experimental fat necrosis, and attributed this to reciprocal relations between the spleen and the pancreas. In Struppler's first case the spleen was enlarged; in the second, as already stated, it was not. The possible existence of septic complications should be taken into account when an operation for the relief of pancreatic necrosis is considered. [D.R.]

Münchener medicinische Wochenschrift.

March 12, 1901. [48 Jahrg., No. 11.]

1. Subcutaneous Paraffin Injection. MEYER.
2. An Operative Case of Pressure on the Brain Originating in Rupture of a Sinus. Recovery. BERTELSMANN.
3. Chronic Ankylosing Inflammation of the Vertebral Column. BENDER.
4. A Case of Polyneuritis. ZÄHR.
5. The Arsenic Question. STICH.
6. A Case of Paralysis of the Placental Site. GERLACH.
7. The Treatment of Panaritis. SCHULZE.
8. Alternating Mydriasis. GESSNER.

1.—Gersuny recently recommended paraffin injections for cosmetic purposes, *e. g.*, to restore shape to the mammas and to contract relaxed scrotums; but Meyer thinks that there may be some danger connected with the practice, as it may cause obstruction of the lymph spaces. Experimental animals at times die in cachexia. Regarding the fate of paraffin, he found that part of it disappears, although very slowly, probably owing to an oxidation process. [D.R.]

2.—Bertelsmann reports a successful operation for the relief of cerebral pressure due to rupture of the superior longitudinal sinus in a woman 40 years old, who was knocked down by a wagon and rendered unconscious by a blow on the back of the head. [H.H.C.]

3.—In a very interesting article, Bender contributes the report of a case of chronic inflammation of the spinal column, resulting in a complete ankylosis, uncomplicated by affection of any other joints. The case resembles very closely the 2 described by von Bechterew, and is that of a 24-year-old seamstress who for 2 years suffered from pain and gradual stiffening of the vertebral column. Bender found total ankylosis of the spinal column, the cervical region being in a state of kyphosis, the thoracic in extension and the normal lumbar lordosis almost entirely lacking. No distinct scoliosis. Purely abdominal type of respiration, with no movement whatsoever of the spinal column. There were no traces of arthritis or spondylitis deformans, as in the cases of Strümpell and Marie. [H.H.C.]

4.—A case of multiple neuritis of unknown origin, in a woman aged 32 years, with well-marked psychic symptoms, consisting in irritability and pronounced failure of memory for recent events. The paralysis of the affected parts improved, but contractures had developed, which rendered the patient's life miserable. She died of an intercurrent disease, and the microscopic examination of the nervous system showed an intact spinal cord and very slight degeneration in the anterior crural nerves. The brain was not examined. [D.R.]

5.—For forensic purposes, the Marsh test for arsenic is still the most practicable, although the biologic test (the development of a characteristic garlicy odor through the action of fungi) is a valuable subsidiary method. The biologic test must be carefully interpreted, as it seems that arsenic is at times found in normal bodies. Stich has made comparative studies upon the effects of arsenic in man, the lower animals, and plants. He finds that, in animals, it is the highly specialized cells of glandular organs and young connective tissue; and in plants, the young parenchyma near the sap conductors, that are affected by arsenic. The bloodvessels and the supporting and connective tissue of animals, and the conducting channels and cell-walls of plants, are less sensitive. The arsenic may be transformed into gas, among animals, by some snails; among plants, by moulds. In cases of intoxication in man, it is noteworthy that arsenic may be carried through the placental circulation to the fetus, and deposited in the organs of the latter. Higher plants take up but little potassium arsenate; more, if the poison enters the water channels. [D.R.]

6.—A very dangerous but fortunately very rare cause of postpartum hemorrhage is the paralysis of the placental site which prevents a proper contraction of the uterine muscles. A characteristic of this condition is that the contracted parenchyma is drawn into the uterine cavity appearing as a knoblike tumor, while there is a corresponding depression perceptible in the external uterine wall. Gerlach reports a case of this kind in his own experience, occurring in a primipara aged 21 years. Delivery by forceps was followed by spontaneous expulsion of the placenta, and then by hemorrhage which neither massage nor hot irrigation with lysol solution availed to check. Examination showed the cervix intact and that the hemorrhage was from the uterus itself. Through the thin abdominal wall he could feel a funnelform depression in the uterus, and internal examination showed a spongy tumor-like mass at a corresponding point within. The patient was now almost pulseless and tampons of iodoform gauze and ergotin injection being tried and found ineffectual, gauze saturated in chlorid of iron solution with an equal part of water was introduced into the uterus. This effectually checked the flow of blood and the uterine depression was no longer perceptible. Recovery followed. Throughout the whole of the treatment there was a free use of normal salt solution. Gerlach thinks this case was without doubt an instance of a high degree of paralysis of the placental site. Opinions differ as to the use of tampons saturated with liq. ferri.; but he believes that when, as in this case, Dührssen's tamponade proves ineffectual, the use of chlorid of iron solution is to be recommended as a last resort. [W.K.]

7.—As a result of his experience in the treatment of felon, Schulze recommends a more conservative action than that usually adopted by the majority of physicians. In 5 cases he found that medicinal treatment yielded good results, the lost phalanges or portions of phalanges being soon replaced by a new growth of bone. [H.H.C.]

8.—Gessner reports a case of alternating spastic mydriasis in a 32-year-old woman suffering from chronic myelitis of the cervical region. The etiology was obscure. [H.H.C.]

Zeitschrift für klinische Medicin.

[Vol. XLII, PARTS 1 AND 2, 1901.]

1. Diagnosis of Aneurysm of the Aorta and Innominate Artery, and the Treatment with Subcutaneous Injections of Gelatin. JOSEF SORGO.
2. The Cause of Illness in Rarefied Atmosphere. E. ARON.
3. Contribution to the Study of the Late Form of Cyanosis of Peripheral Origin. THOMAS.

4. On the Methods for the Estimation of Fat in the Blood and the Amount of Fat in Human Blood. M. BÖNNINGER.
5. On Disturbances of Sensation. ALBERT ADAMKIEWICZ.
6. Auscultatory Percussion (Ueber percussorische Transsonanz). J. W. RUNEBERG.
7. Unilateral Atrophy of the Lung and Congenital Bronchiectasia. ERNEST NEISSE.
8. The Influence of Artificial Sweating on the Gastric Secretion. PAUL EDEL.
9. Lymphatic Leukemia. M. ROSENFELD.
10. Amatus Lusitanus and His Time. A Contribution to the History of Medicine of the Sixteenth Century. MAX SALOMON.

1.—Sorgo details his experience in the **diagnosis and treatment with subcutaneous injections of gelatin of 6 cases of aortic aneurysm**. The patients during the entire treatment were confined to bed, and when possible they were limited to a strictly milk diet. No other medication was given. The gelatin was given at first in a 1% to 2% solution, but later (and this is preferred) a 4% to 5% solution. The injections, each consisting of from 100 to 150 grams of the solution, were made with a 150 cc. syringe into the thigh or abdominal wall, at intervals of from 3 to 5 days. He concludes from his experience and a study of the literature that in a large percentage of cases of sacular aneurism (13 of 18 cases), but not in cases of simple dilation of the vessel (none of 16 cases), the subcutaneous injection of gelatin is followed by coagulation of the blood, and that in many cases of hemorrhage of different sources, the bleeding may be checked by the local or subcutaneous use of gelatin. Whether these results are to be attributed to the action of the gelatin, cannot be definitely stated, because they may be due to rest and the diet of the patient; because in many cases no such results occur and in some cases the results may be merely coincidence; but especially because we as yet have no experimental proof of the coagulating action of gelatin administered subcutaneously. The injections, however, even if highly concentrated, are devoid of danger, provided asepsis be observed. The pain can only be of service in that it necessitates quiet on the part of the patient. Kidney affections are no contraindication to the internal administration of gelatin; as regards its subcutaneous injection, however, the question is still open. In addition to pain, fever is a common symptom after the injection, more particularly after the first injection. Other unpleasant manifestations, though they have been observed, are infrequent. The beneficial results of the treatment are to be gauged, not by the subjective, but rather by the objective, manifestations of the patient. Of the latter, the most important are disappearance of a pulsation previously present over a circumscribed area of the chest, or lessening in size and hardening of a palpable and pulsating tumor, lessening or disappearance of pressure symptoms (tracheal stenosis, bronchial stenosis, recurrent paralysis, dilation of veins, dyspnea); diminution of the area of dullness and of the radiographic shadow, etc. With regard to the **diagnosis of aneurysm of the aorta and the innominate artery**, Sorgo refers to a marked slowing of the respirations (to 12, 10, and even 9 a minute), and a markedly prolonged and cogwheel expiration presented by one of his patients. The slowing of the respiration was due to the marked stenosis of the trachea; the expiratory stridor, which was greatly increased during the cardiac diastole, is ascribed to the fact that, whereas during the cardiac systole the aneurysm filled and compressed the trachea to a maximum, thus interrupting the expiration and reducing the exit of air to a minimum, during the cardiac diastole the aneurysm emptied partially and the tracheal stenosis was lessened; but as it was not entirely relieved, the exit of air through the stenotic passage resulted in production of a loud murmur. Attention is also directed to the diagnostic importance of 2 loud sounds or a single loud second sound over the site of a suspected aneurysmal dilation. The second sound he believes with V. Schrötter, is not the transmitted second aortic sound, but a sound produced in the aneurysm itself. Finally it is believed that the presence of a diastolic murmur, with its point of maximum intensity beyond the second right intercostal space, associated with celerity of the pulse (and possibly sounds in the arteries and capillary pulse) exclusively in the distribution of the

innominate artery, renders the diagnosis of aneurysm of the innominate artery very probable. [A.O.J.K.]

2.—Aron, as the result of an experimental investigation conducted on man, concludes that the **cause of illness or altered breathing in rarefied atmosphere**, consists of 2 components—the chemie and physic, both due to the rarefied air as such. The former results from deprivation of oxygen, the latter from diminution of atmospheric pressure. Thus is understood the reason that aeronauts can endure the influences of rarefied air in high altitudes when they inhale pure oxygen from time to time. While they cannot relieve themselves of the discomforts of the physic alterations they thus reduce the unpleasant effects of the chemie changes in the air. He suggests that when railways to high altitudes (such as up the Jungfrau) are constructed, the officials should see to it that canisters of pure oxygen are provided at the stations, so that in cases of sudden illness immediate relief may be at hand and possible fatalities prevented. [A.O.J.K.]

3.—Thomas, in a study of the **late form of cyanosis of peripheral origin**, directs attention to the earlier publication by Bard, in which the latter attributes this so called late form of cyanosis to a mixing of arterial and venous blood in consequence of incomplete closure of the foramen ovale, the opening of the previously closed foramen being brought about by a reversal of the normal pressures in the 2 auricles. Bard later reported another case that was similar clinically, but which at necropsy revealed the foramen closed. The left lung, however, was the seat of extensive bronchiectasia, each dilated bronchus being accompanied by a distended artery and vein. Thomas reports a somewhat similar case—one in which the foramen ovale was found closed, but in which the apex of the right lung was converted into a multilocular cavity communicating with a bronchus, and the remainder of the lung markedly bronchiectatic. Thomas concurs with Bard in the belief that in these cases the cyanosis resulted from deficient oxidation of the blood, the consequence of lessened lung parenchyma and increased pressure in the pulmonary circulation. This view is confirmed by the marked dilation of the vessels in the neighborhood of the bronchiectasias and the hypertrophy of the heart, especially of the right ventricle, as in Thomas' case. Analogous cases in the literature are referred to. [A.O.J.K.]

4.—Bönninger, criticizing several **methods for the estimation of fat in the blood**, expresses a preference for a modification of the Hoppe-Seyler alcohol-ether extraction method. As a result of investigations conducted with animal blood and human blood, the latter in health and disease, he concludes that **normally human blood contains 0.75 to 0.85 % of fat**. High percentage was found in a case of nephritis and another of diabetes. The highest percentage (1.4 %) was found in a case of esophageal carcinoma, and was attributed to starvation—high percentage having been found in the lower animals in conditions of starvation. The same is also probably true with regard to a case of pneumonia in which the examination was made shortly prior to death. The kind of nutriment is of undetermined influence on the quantity of fat in the blood. In human blood the red corpuscles are believed to contain cholesterol and lecithin, but no neutral fat—the cholesterol being free; the serum contains neutral fat, lecithin and cholesterol, the latter combined with fatty acids (oleic acid). [A.O.J.K.]

5.—According to Adamkiewicz there are 3 diseases of the posterior columns of the spinal cord that resemble each other clinically but the material basis of which is different in each instance. He first of all distinguishes between **nerve-tubes and vessel-tubes**. The former is the well-known *tabes dorsalis*, the result of parenchymatous degeneration of the posterior columns; of the latter there are 2 varieties: the one is characterized by a primary proliferation of the neuroglia, the consequence of slow and chronic thickening of the bloodvessels supplying the posterior columns—**interstitial tubes**; the other the consequence of obliterative endarteritis, results from sudden closure of a principal arterial branch supplying the posterior columns and the paralysis of nerve elements that thus ensues. This because of its peculiar clinical manifestations and acute course is designated **acute tubes**. The last named is susceptible of cure; the interstitial tubes may remain stationary and

does not directly threaten life; the parenchymatous tabes is a progressive disease that ends with death. It is believed that the 2 varieties of vessel-tabes are always the result of syphilis, to which, however, the parenchymatous tabes does not owe its origin. Further peculiarities of the 2 varieties are that the parenchymatous tabes is characterized by ataxia and preserved muscle power; vessel-tabes, by motor weakness with slight ataxia. The present article deals especially with the **disturbances of sensation** that characterize the 2 conditions. In the nerve-tabes or parenchymatous tabes, in conformity with the anatomic situation of the lesions, the patients are unable to feel irritations that affect the lower extremities, and in consequence they no more appreciate pain and temperature variations than they are well oriented concerning the position of their lower extremities and the state of contraction of their muscles. In the vessel-tabes, on the other hand, in consequence of the mechanic irritation produced by the proliferating neuroglia, there is an abnormal irritability of the sensory apparatus, and the patients in consequence complain of unpleasant, even painful sensations, tinglings, "pins and needles," which as the interstitial process in the spinal cord progresses from below upward, involve corresponding portions of the body. These paresthesias, while not unknown in nerve-tabes play an unimportant role as contrasted with the characteristic anesthetics; on the contrary, they are peculiar to vessel-tabes in which anesthetics do not occur. In some cases of nerve-tabes there must ultimately occur anatomic appearances similar to those found regularly in interstitial tabes—thus is explained the occurrence in nerve-tabes of paresthesias in addition to anesthetics. To explain the variations in irritation perceptivity of tabetics that occurs *pari passu* with the intensity of the paresthesias, Adamkiewicz employs the metaphor of 2 antagonistic waves, each with its ebb and flow. [A.O.J.K.]

6.—Runeberg narrates some historic data in reference to percussion and auscultation and their combination known as **auscultatory percussion** (*percussorische Transsonanz*). He writes also of the value of the method of investigation, of the proper procedures to be carried out, and of the results to be attained. [A.O.J.K.]

7.—Neisser reports an instance of **extreme atrophy of left lung** in a man aged 42 years. There were enormous hypertrophy of the right lung, marked displacement of the heart and the mediastinum, and elevation of the diaphragm, but, and this is especially noteworthy, no deformity of the thorax. He refers to similar cases in the literature and discusses the occurrence of atrophy of the lung with and without thorax-deformity. He believes that the conditions are totally different depending upon whether the lung atrophy occurs in infancy or adult life. In infancy when the bodily tissues are susceptible of active growth, the conditions result in altered growth of both the healthy lung and the thorax, so that the thorax, following as it were the hypertrophy of the healthy lung, acquires a form differing from that which would have been its, had there been no lung atrophy, but there occurs no deformity. Referring to a few cases in which lung atrophy occurring in infancy resulted in some deformity of the thorax, and to a few occurring in adult life without thorax deformity, he concludes that all cases of extreme lung atrophy observed in adult life without thorax deformity date from fetal life or the earliest days of extrauterine life. He reports also several cases of adults with **extreme atrophy of the left lung and bronchiectasia**, with displacement of the heart and elevation of the diaphragm, but no deformity of the thorax. These also he believes to be congenital. [A.O.J.K.]

8.—Edel as the result of a series of investigations to determine the **influence of artificial sweating upon the gastric secretion** found as regards the immediate effect of the sweating (4 hours after the sweat), that in most of the cases (5) there occurred no difference as contrasted with the condition in the same patient before the sweating; in 1 case there occurred an increase in the degree of acidity. Of greater interest, however, is the remote effect of the sweat (20 to 68 hours after the last sweat). In 2 cases there occurred a slight diminution in the acidity; in 2 cases the acidity was the same before and after the sweat; and in 7 cases there occurred a slight increase in the

acidity. The sweatings were produced by warm baths. Edel being unable to confirm the results of the previous investigations of Simon, who found a general decrease in the gastric acidity following artificial sweating, criticises Simon's work and his theoretic conclusions. [A.O.J.K.]

9.—Rosenfeld groups together the views of different authors concerning the nature of **chronic lymphemia or lymphatic leukemia** as follows: (1) Chronic lymphemia is a primary disease of the lymph glands which of itself results in the production of the characteristic blood-picture. The disease of the liver, spleen, and bone-marrow is secondary—the result of metastasis; (2) chronic lymphemia is indeed a primary affection of the lymph glands, but it gives rise to the characteristic blood-picture only when the bone-marrow has become the seat of lymphadenoid degeneration; (3) chronic lymphemia is a primary disease of the bone-marrow consisting in a lymphadenoid degeneration. It may remain localized to the bone marrow, or by metastasis it may secondarily involve the lymph glands, spleen, etc.; (4) chronic lymphemia is a disease of all the lymphadenoid tissue that preexists in the body. He reports 3 cases and concludes as a result of his observations that the primary disease of the lymph glands, the existence of which cannot well be doubted, gives rise either to an aleukemic prodromal period, or to an exclusive or predominating increase of the small mononuclear leukocytes when the disease is far advanced. The development of disease of the bone-marrow, if marked, results in some alteration of the blood-picture, or the occurrence of severe clinical symptoms. A diffuse disease of the bone-marrow seems always to be associated with a progressive course of the disease. He believes that there is no reason for the opinion of Pappenheim that every case of leukemia, even the lymphemia, is primarily myelogenous. [A.O.J.K.]

Sundry British.

- 1.—Continental Progress in Practical Radiography and Apparatus. A. W. ISENTHAL. (Archives of the Röntgen Ray, March, 1901.)
- 2.—Uterine Retraction with Special Reference to the Mechanism and Management of the Third Stage of Labor. D. BERRY HART. (Scottish Medical and Surgical Journal, April, 1901.)
- 3.—A Case of Erythema Multiforme Closely Resembling Smallpox. NORMAN WALKER. (Scottish Medical and Surgical Journal, April, 1901.)
- 4.—Notes on Blackwater Fever in Southern Nigeria. R. A. BENNETT. (Scottish Medical and Surgical Journal, April, 1901.)

1.—Isenthal notes the general use on the Continent in **radiography of the electric light mains** in working the apparatus, the early abandonment of the platinum interrupter and later of mercury, the popularity of the Wehnelt break, and the use of very powerful coils. The continental tube maker does not use highly refractory material for the anticathode, but deflects the heat by conduction or artificially cooling the target. Regeneration has lately been effected by osmosis of hydrogen through a red hot platinum tube which has been suitably fused into the tube, thus lowering the vacuum. An intensifying screen is largely used with the film, frequently 2, whether only one or both sides are coated with emulsion. A short exposure prevents foggingness from diffusion rays, and stand development gives the best results. Moritz' orthodiagraph makes it possible to outline the true size and shape of internal organs and objects by using only the ray vertical to the screen and moving it about to include the outlines of the object to be traced. This is done by bringing certain lead marks into register. The article concludes with a reference to the action of Becquerel rays on the photographic plate and fluorescent screen. These rays can be neither refracted nor polarized, and have the property of ionizing air, but as yet are not of value in medical diagnosis, because of the diffusion and absorption they suffer in passing through bodies of low atomic weight. [H.M.]

2.—The placenta is not separated by **retraction of the placental site**. This is brought about by **disproportion** between the area of the site and the uterine surface of the placenta. During the first and second stages of labor the wall and the placenta act as one, decreasing in area during a pain and increasing again when the pain stops, owing to the "elastic recoil" of the uterus. In the **third stage** after a pain the increase in area of

the placental site is not accompanied by a similar increase in the placenta itself, owing to the cutting off of the influence of the fetal heart. In consequence, the microscopic filaments of attachment are torn away. An expectant management is the only safe one. It is an open question whether it is a consequence of hemamebiasis. [H.M.]

3.—Walker describes the only recorded case in which the diagnosis between smallpox and erythema multiforme was difficult, and a cut shows the papules which were stony hard, with exudation resembling commencing umbilication. [H.M.]

4.—Blackwater fever is on the increase. Most cases occur between the second and fifth years of residence. It is commoner in the dry season. No case has been recorded in a native. The symptoms are a sharp rigor, porter-colored urine, painful micturition, temperature of 104° to 105°, jaundice, persistent vomiting, inability in 12 hours to lift the head. The temperature curve is indefinite. The urine begins to clear on the third day and may be free in 6 hours from hemoglobin. The pulse respiration ratio is 3 or even 2 to 1, with breathlessness. The liver is normal, the spleen enlarged; there is anxiety, restlessness, insomnia and, in unfavorable cases, muttering delirium. Anemia is profound. The urine deposits a brown sediment of blood casts, blood corpuscles and debris. One hundred ounces may be passed daily. In other cases suppression gradually sets in. A large initial dose of calomel is given, followed by a saline and a mixture of sodium salicylate and bicarbonate. Frequent feeding and symptomatic treatment are advised. No one who has had the disease should ever return to West Africa. [H.M.]

Leading Papers on Pathology.

1. A Study of the Bacteriology and Pathology of Diphtheria. W. T. COUNCILMAN, F. B. MALLORY and R. M. PEARCE (Journal of The Boston Society of Medical Sciences, Vol. v, No. 5).
2. Some theoretical conditions upon the nature of agglutinins, together with further observations upon *Bacillus typhi abdominalis*, *Bacillus enteritidis*, *Bacillus coli communis*, *Bacillus lactis aerogenes*, and some other bacilli of allied character. By HERBERT E. DURHAM. (Journal of Experimental Medicine, Vol. v., No. 4, January, 1901.)
3. The Influence of Bile on Metabolism, by ELLIOTT P. JOSLIN. (Journal of Experimental Medicine, Vol. v., No. 5, March 25, 1901.)

1.—In this article of 180 pages with 67 photomicrographs, the results of a bacteriologic and pathologic study of 220 cases of diphtheria are described.

Bacteriology.—A general infection of some kind was found in about one-fifth of the cases, being most frequently an infection with *Streptococcus pyogenes*. The diphtheria bacillus was the next most common microorganism; the staphylococci and the pneumococci were found less frequently. In acute inflammations of the pericardium, pleura, mediastinum and lymph-nodes, the streptococci was found most frequently. In one case of acute ulcerative endocarditis the diphtheria bacillus was found in pure culture. Bronchopneumonia occurred in 131 cases; the diphtheria bacillus being found in 69, streptococci in 67, and pus cocci in 37. The diphtheria bacillus was found alone in 19 cases, but was generally associated with the pyogenic cocci or the pneumococcus. In an examination of the accessory sinuses of the nose in 63 cases inflammatory changes of varying degree were found in 39. The inflammation was sometimes catarrhal, more frequently purulent, occasionally fibrinous. The antrums of Highmore were involved in 36 cases; the frontal, sphenoid and ethmoid sinuses each a small number of times. In most of these cases *Bacillus diphtheria* was found, although usually associated with the pus-cocci or the pneumococcus. The writers believe that the slow drainage of these cavities may explain the persistence of diphtheria bacilli in cultures from the throat, after the disappearance of all local evidence of inflammation. The middle ears were examined in 144 cases. Inflammatory changes were found in 86. The results of the bacteriologic examinations in these cases were similar to those of the accessory sinuses of the nose.

Histology.—Diphtheria bacilli are found usually in the necrotic tissue and in the exudation; never in the living tissue, or in connection with the primary degenerative

lesions of the epithelium. It seems probable that the primary lesion is due to the toxic substance produced by bacilli growing in the fluids of the mouth or throat. When necrosis or injury of the epithelium is produced by this toxic substance, the tissue is invaded by the bacilli. Other microorganisms, particularly the pyogenic cocci, are frequently found associated with the diphtheria bacilli. The first step in the production of the false membrane is degeneration or necrosis of the epithelium, often preceded by direct division of the nuclei of the epithelial cells. An inflammatory exudate rich in fibrin coming into contact with this epithelium, forms a definite fibrin network. Associated with this, especially on epithelial surfaces having several layers of cells, a hyalin membrane is also frequently formed. This hyalin membrane may be formed from the fusion of the protoplasm of the cells undergoing hyalin degeneration—the nuclei of the cells disappearing, and leaving spaces which give the membrane a reticular appearance. This hyalin membrane may also be formed by a hyalin degeneration of exudation-cells. The most typical membrane is found in the larynx and trachea. The membrane never forms an intact epithelium, but may extend over it. In the connective tissues and bloodvessels beneath the membrane, a hyalin fibrinoid degeneration may occur. Degeneration of the mucous glands is pronounced.

Fatty degeneration of the muscular fibers of the heart was found in 46 of 67 cases examined. It was most marked in the vicinity of the endocardium. In cases of great severity, fatal shortly after entering the hospital, this degeneration was the only lesion of the myocardium. Segmentation and fragmentation of the myocardium was not observed. In 13 cases, very extensive degeneration leading to complete destruction of the muscle fibers was found. This consisted of a fatty degeneration with disappearance of the contractile elements. The sarcous elements disappeared, their place being taken by a granular material with the formation of large irregular vacuoles which could be readily distinguished from those of fatty degeneration by their size and irregularity. A further form of degeneration consisted of a complete destruction of the fibrils with the formation of large, irregular, hyalin masses. This was found only in the latter stages of the disease, the average duration being about 15 days. It was always more marked near the endocardium. Various degenerative changes of the nuclei of the muscle-fibers were noted. **Interstitial lesions** occurred in 2 forms: (1) in 6 cases an acute interstitial myocarditis, characterized by a large number of plasma cells between the muscle-fibers was found. Lymphoid cells were occasionally seen, but polymorphonuclear leukocytes were rare. This condition may or may not be accompanied by degeneration of the muscle-fibers. The accumulations were sometimes circumscribed and sometimes diffuse. This condition is analogous to the acute interstitial, nonsuppurative nephritis of the kidneys. The average duration of this condition was 10 days. (2) A form more chronic in its character and evidently secondary to degeneration, in which the interstitial tissue was swollen and infiltrated with large cells of an endothelial character, with considerable formation, in some cases, of connective tissue. The average duration of this condition was 17 days. Heart-thrombi were found in 8 cases. There seems to be some relation between thrombi and the acute interstitial changes of the heart-muscle. In 7 of these 8 cases, acute interstitial myocarditis was found.

Bronchopneumonia was present in 131 cases, of which 76 were discrete and 55 confluent. The process begins as an infection of the atria and from there extends; it may be limited to a single acini, to lobules, or to groups of lobules. To the condition in which only single acini are involved, which is essentially the primary lesion, the writers have given the name acinous pneumonia to distinguish it from the condition in which the entire lobule is involved. There is little lateral extension of the infection through the walls of the alveoli. Inflammation of the terminal bronchi is also present, but not necessarily of the larger bronchi. Small areas of atelectasis and emphysema were frequently found. Acute lobar pneumonia did not occur in any of these cases. Inflammatory edema was common, but a general edema of the lungs, comparable to the circulatory edema of

adults, did not occur. The character of the exudation varies greatly; it may be fibrinous, hemorrhagic, serous, or almost entirely cellular. The cells of the exudation are mainly leukocytes, and in part, cells derived from proliferation of the lining epithelium. Lymphoid and plasma cells are found not only in the exudation, but in many cases infiltrating the interstitial tissue. Necrosis leading to abscess was not an uncommon feature. Dilatation of the lymphatics was very common. No definite relation could be demonstrated between the character of the exudate and the infecting microorganisms. Pneumococci, streptococci, and diphtheria bacilli were found in connection with serous, purulent, fibrinous, and hemorrhagic exudates, and with necrosis and abscess formation. Diphtheria bacilli were very frequently found, and may be the cause, without the aid of other microorganisms, of bronchopneumonia, necrosis, and abscess-formation.

The most obvious lesions of the spleen consisted of the formation of foci of epitheloid cells in the lymph nodes. These epitheloid cells are phagocytic, and the nuclear detritus found in the foci comes generally from the lymphoid cells, which are engulfed and destroyed by the phagocytic cells. Large numbers of plasma cells are found throughout the pulp of the spleen. In the veins, an accumulation of lymphoid cells was occasionally found beneath the endothelium of the intima.

In the stomach and intestines, aside from an occasional extension of the membrane, the only important change is the hyperplasia of the lymph-nodes with a proliferation of the endothelial cells.

Lesions of the liver in diphtheria are not characteristic and do not differ from those found in other infectious diseases; they are due to the action of soluble toxic substances, and not to the diphtheria bacillus. The most common lesions are fatty and granular degeneration of the liver-cells with necroses, which are chiefly found in the centers of the lobules. A slight hyalin degeneration of the capillary walls is occasionally seen, as is also a proliferation of the endothelium.

Degenerative changes of the kidneys were found in 112 cases, being chiefly cloudy swelling, fatty degeneration and hyalin degeneration. Hyalin degeneration was found very commonly, and was most marked in the proximal convoluted tubules. Acute interstitial nonsuppurative nephritis was found in 43 cases. The infiltration was made up chiefly of plasma-cells, with numerous lymphoid cells, and a few polymorphonuclear leukocytes, and occasionally phagocytic and endothelial cells. Various cells were observed, which seemed to indicate stages of transition between the lymphoid and plasma cells. The accumulations of cells were generally focal and were most numerous at the base of cortex adjoining the pyramids, just beneath the capsule, and around the glomeruli. Degenerative changes of the tubules generally accompanied this infiltration, but were not constant. In many of these cases, large numbers of the infiltrating cells were found in the bloodvessels. They frequently showed mitotic figures, but not so frequently as did those outside the vessels. Omitting 3 cases, in which death occurred after the forty-second day, the average duration of the cases in which this condition occurred was 16 days. In the cases in which the lesion was most marked the average age was 11.5 days. In younger children, infiltration was less marked. Glomerulonephritis was found in 11 cases, in 9 of which the chief lesion was a proliferation of the cells of the glomerular tuft and Bowman's capsule, with more or less lobulation of the glomerulus. It was not possible to resolve any of these cases into the distinct types of intracapillary and capsular glomerulitis; the 2 conditions were generally combined. In all of these cases there was more or less granular material, evidently coagulated serum in the capsular space. In the tenth case there was extensive necrosis of the glomeruli, with hemorrhage into the capsule, and in the eleventh the capsule was filled with hyalin material, in which both fibrin and red blood-corpuscles were contained. The average duration of these cases was greater than that of those with the interstitial form.

Bronchial, cervical, mesenteric, axillary and inguinal lymph-nodes were examined. The most marked lesions were found in the cervical and bronchial lymph-nodes. Two types of

lesions were observed: (1) those which may follow an injury of almost any sort, consisting of congestion, hemorrhage, diffuse and circumscribed necrosis; (2) lesions which belong distinctly to diphtheria, but which may also be found, in a less marked degree, in any other acute infectious disease of children. These consist of a proliferation of the endothelial cells of the lymph-nodes, and of the endothelial cells lining the sinuses. These cells are phagocytic, engulfing and destroying principally the lymphoid cells, thus giving rise to the nuclear detritus, which is so characteristic a part of the lesion. These lesions are due to the toxic products of the diphtheria bacilli, the bacilli themselves seldom being found in these structures. Changes in the lymphoid tissue of the tonsil are similar to those of the lymph-nodes generally. The principal change in the thymus was degeneration of the lymphoid cells, especially about Hassall's bodies. The degenerated cells were frequently contained in large cells of the endothelial variety. Eosinophilic cells were very numerous.

Marked hyperplasia, with great increase of cells resembling plasma cells was the constant lesion. In the bone-marrow lymphoid cells were comparatively few in number, and polymorphonuclear leukocytes still less numerous. Eosinophilic cells were very abundant in early cases, less frequent in late cases. Apparent transition forms between the cells resembling plasma cells, and the eosinophilic cells were seen. A few endothelial cells with phagocytic properties were found. The so-called plasma cells were frequently found in the veins. "It is possible that the ordinary marrow cell is the same as the plasma cell." Examination in a small number of cases showed local and diffuse fatty degeneration of the central nervous system and skeletal muscles. The pancreas, adrenals, testicles, thyroid gland, salivary glands and pituitary body showed no changes of importance. [R.M.P.]

2.—Gruber and Durham found that within the "species" *Spirillum cholerae asiaticae* the serum-reactions were not uniform, in that the serum obtained by immunizing with one race did not necessarily give more than a trace of reaction *in vitro*, and none whatever *in vivo* when tested with another race, although it was capable of giving complete clumping and positive Pfeiffer reaction when tested upon the first race. This fact was ascribed at that time to differences in virulence of the races. The suggestion then advanced, however, would seem erroneous when considered with reference to the findings which Durham now reports. Durham's present work shows that many members of the *Bacillus enteritidis* group, although apparently identical so far as cultural and morphologic tests are concerned, reveal marked differentiation when tested by serum for agglutination. He finds for example the races "Gartner" and "Morselee" are both strongly affected by "Gartner" serum, whilst the races "Hatton," "Morbificans bovis," "psittacosis," "aertrycke," "Calmpthout," "Gand," "Sirault," "hog cholera," "typhi murinum," "Sheffield," are not very markedly affected by this serum. Taking the reverse view he finds that the serum of Hatton has comparatively slight effect upon the races "Gartner" and "Morselee;" thus a serum that gave good reaction at 1 in 200,000 upon "Hatton," practically gave but a minimal reaction upon "Gartner" and "Morselee" at 1:2,000. Thus it would seem that the lack of mutual agglutination within a definite group of bacilli would emphasize the view that the word "specific," when applied to these tests is erroneous. At the same time Durham shows that the "Gartner" type has a distinct tendency to be affected by the serum derived by the use of typhoid bacilli. Differences between the typhoid bacilli in this respect are also found, and they at once cause inquiry whether the instances in which failure to obtain the agglutination phenomenon in typhoid fever has occurred may not be explained by the employment of a race of typhoid bacillus unsuitable for the testing of that particular typhoid serum. He also discusses and endeavors to explain the partial and mutual reactions of agglutinating serums upon different races of bacteria. The next section of the work is devoted to the technicalities of preparing serums for agglutination-tests. The suggestions offered are good and are given in sufficient detail to permit of employment by those who may find them desirable. Durham gives various means of differentiating *Bacillus typhi abdomi-*

nalis, *Bacillus enteritidis*, *Bacillus coli communis*, *Bacillus lactis aerogenes*, and other bacilli of allied character; but foremost among these he places litmus milk-whey. He believes that more can be gained in the differentiation of these bacilli with this medium than with any other single medium. It is largely upon it as a basis that his present grouping or classification of the above organisms has been made. In conclusion, he gives briefly the incomplete results of his search for substances of carbohydrate nature which would serve for further differentiation of these and other bacillary groups. [R.M.P.]

3.—Joslin's research is a study of the power of the intestinal tract to assimilate the various elements of food under the influence of bile administered by mouth, and also of the cholagogic action of this secretion. The subject of his experiments was a woman who came to operation for gallstone. At operation it was found impossible to remove the stones from the common bile-duct because of the patient's condition, so that a biliary fistula was established from which bile was discharged constantly after operation. Repeated tests for bile in the stools were negative. His experiments were divided into 3 periods, similar in all respects, except that in the middle period the patient received 30 gm. of dried ox-bile. Analyses of stools taken during these 3 periods show the average digestion of fat in the periods without bile was 40%; in the period with bile 60%, *i. e.* bile increased the digestion of fat relatively by 50%. The digestion of nitrogenous food was found to improve with the use of bile pills when the amount of fat in the stools was large. Instead of an average of 15% being lost in the feces, but 7% escaped digestion during the 4 days the patient took bile. The amount of bile-solids secreted in the bile period was 47% greater than in the periods before and after. This once more demonstrates that ox-bile is a cholagogue and confirms the work of Pfaff and Balch. The effect of bile on the bowels was not remarkable, although in this case their action was more satisfactory during the bile period. The research was also extended to dogs, but with results not so satisfactory as in the human subject. [R.M.P.]

The Journal of Hygiene.

April, 1901. [Vol. 1, No. 2.]

1. A Contribution to the Etiology of Plague. J. ASHBURTON THOMPSON.
2. On the Influence of Boric Acid and Borax upon the General Metabolism of Children. F. W. TUNNICLIFFE and OTTO ROSENHEIM.
3. A Comparative Study of Varieties of *B. Coll* Isolated from "Typhoid" and Normal Dejecta. W. H. HORROCKS.
4. A Contribution to the Etiology of Epidemic Cerebrospinal Meningitis. W. J. BUCHANAN.
5. An Outbreak of Diphtheria Checked by Prophylactic Use of Antitoxin and the Isolation of Infected Persons. LOUIS CORBETT.
6. The Result of 950 Bacteriologic Examinations for Diphtheria Bacilli during an Outbreak of Diphtheria at Cambridge and Chesterton. LOUIS CORBETT.
7. The Shanghai Pasteur Institute. ARTHUR STANLEY.
8. The Structure and Biology of Anopheles. GEORGE H. F. NUTTALL and ARTHUR E. SHIPLEY.
9. On the Bacteriology of Normal Organs. WILLIAM W. FORD.

1.—Thompson presents conclusive evidence as to the mode of spread of bubonic plague in epidemic form, based upon observations made during the outbreak at Sydney, N. S. W. There was no ground for supposing that the infection was spread with food and taken by ingestion, but the observations show "that as soon as plague occurs among a wholly civilized white population, it appears at once and clearly that this disease is diffused by none of those means which are effectual in causing (for instance) epidemics of influenza, or of cholera. In its mode of spread it plainly resembled in some important respects the epizootic tick-fever. No theory could be devised I think, which would coördinate with the observed facts unless it assumed at all events an animated host which should not be human for the infection. In fact 2 such hosts are requisite; one to diffuse the infection in place, the other to communicate it to man. . . . They are the rat, and a suctorial parasite," (the flea). In support of the assumption that the epidemic was a consequence of an epizootic it was demonstrated that plague-rats were infested over the several areas in sufficient numbers to

account for their infectivity; "briefly, the area over which the epizootic extended coincided with the area over which epidemic was seen to have extended after all cases had been referred to their probable place of infection, a locality fixed upon after carefully considering the separately recorded facts concerning each of the 303 cases in man."

The evidence regarding fleas consists of the isolation of *Bacillus pestis* from the phlyctenulas or blebs resulting from the bites of fleas, and by inoculation of a guineapig with *Bacillus pestis* found in narcotized fleas taken from plague-rats. The fleas were identified as *Pulex serraticeps* and *P. fasciatus*, the latter described as the rat-flea as far back as 1801. [C.S.D.]

2.—Tunnicliffe and Rosenheim present the results of an extensive series of experiments to demonstrate the influence of boric acid and borax, used as food preservatives, upon the nutrition of the consumer, especially children.

Their conclusions are that continued doses of 1 gram of boric acid or of 1.5 gram of borax per diem have no influence whatever upon the proteid metabolism, either in healthy or delicate children. Phosphorus metabolism is not affected, nor the assimilation of fat. The body weight increased in all cases. Contrary to the observations of Foster, they found that boric acid had no effect in increasing the quantity of feces, or in their nitrogen or phosphorus percentage; neither were they able to confirm his statement that boric acid exerts an inhibiting effect on intestinal putrefactive action.

Evidently borax and boric acid may be utilized as food preservatives in moderate amounts without danger or inconvenience to the consumer. [C.S.D.]

3.—Buchanan's observations lead to the *prima facie* presumption that dust may be one of the vehicles of the specific germ of cerebrospinal meningitis. He concludes that "the identity of what in India is called cerebrospinal fever with epidemic cerebrospinal meningitis is established, not only by finding of the *Diplococcus intracellularis* in the Indian cases, but by the clinical and epidemiologic aspects of the outbreak, which exactly resembles outbreaks recorded in other countries." A strong case appears to have been made out in the present instance for connecting this disease with dust, either wind borne, accumulated on roofs, etc., or produced in various processes of grain cleaning the fact that 44 out of 47 cases came from farms of labor where there was great exposure to dust, and only 3 cases from persons who were not so exposed, is difficult of explanation, unless we believe that dust either renders men more susceptible, or, as is more probable, is the actual vehicle of the specific germ of the disease. [C.S.D.]

9.—Ford has with the aid of modern methods and technic gone over the question of the occurrence of bacteria in normal organs, first investigated by Burdon Sanderson in 1878, by Neneki and Giacosi in 1880 and by many others since then, and with practically the same results, *i. e.*, the demonstration of bacteria in abundance. However, Ford's conclusions that each species of animal, each animal, and each organ preserves its own bacterial flora is interesting. [C.S.D.]

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine Hospital-Service, during the week ended April 26, 1901:

SMALLPOX—UNITED STATES AND INSULAR.

		Cases	Deaths
Delaware:	Newcastle.....Apr. 1-15.....	4	
Florida:	Jacksonville.....Apr. 13-20.....	6	
Illinois:	Chicago.....Apr. 13-20.....	17	
Kentucky:	Cynthiana.....Apr. 17.....	6	
	Lexington.....Apr. 13-20.....	4	
Louisiana:	New Orleans.....Apr. 13-20.....	10	1
Minnesota:	Winona.....Apr. 13-20.....	2	
New Hampshire:	Manchester.....Apr. 13-20.....	7	
New Jersey:	Jersey City.....Apr. 14-21.....	4	
Ohio:	Cincinnati.....Apr. 12-19.....	7	
	Cleveland.....Apr. 13-20.....	46	
Pennsylvania:	Pittsburg.....Apr. 13-20.....	1	
	Steelton.....Apr. 13-20.....	1	
Tennessee:	Nashville.....Apr. 13-20.....	1	
West Virginia:	Wheeling.....Apr. 13-20.....	1	
Philippines:	Manila.....Mar. 2-9.....	8	
Porto Rico:	San Juan.....Apr. 6.....	13	

SMALLPOX—FOREIGN.

Austria:	Prague.....	Mar. 23-Apr. 6....	8	
Belgium:	Antwerp.....	Apr. 6.....	3	1
China:	Hongkong.....	Mar. 2-9.....		6
France:	Paris.....	Mar. 31-Apr. 6....		10
Gibraltar:		Apr. 1-7.....	2	
Great Britain:	Southampton.....	Apr. 6-13.....	3	
	Scotland, Glasgow.....	Apr. 6-13.....		5
	Leith.....	Mar. 31-Apr. 6....	1	
India:	Bombay.....	Mar. 19-26.....		12
	Calcutta.....	Mar. 16-23.....		144
	Karachi.....	Mar. 9-16.....	12	8
	Madras.....	Mar. 16-22.....		10
Mexico:	Progreso.....	Mar. 31-Apr. 6....	4	
	Yucatan, Merida.....	Apr. 11.....		prevalent
Netherlands:	Rotterdam.....	Mar. 31-Apr. 6....	1	
Russia:	Odessa.....	Mar. 31-Apr. 6....	13	1
Spain:	Corunna.....	Mar. 31-Apr. 6....		1
	Vigo.....	Mar. 1-31.....		1

YELLOW FEVER.

Colombia:	Panama.....	Apr. 8-15.....	8	
Haiti:	Cape Haitien.....	Mar. 23-30.....	1	1
Mexico:	Cotzacoalcos.....	Apr. 1.....		prevalent
	San Salvador.....	Mar. 31.....	4	3

CHOLERA.

China:	Hongkong.....	Mar. 2-9.....	1	
India:	Bombay.....	Mar. 19-26.....		4
	Calcutta.....	Mar. 16-23.....		65
	Madras.....	Mar. 16-22.....		1
Straits Settlements:	Singapore.....	Feb. 26-Mar. 2....		5

PLAGUE—INSULAR.

Philippines:	Manila.....	Mar. 2-9.....		8
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PLAGUE—FOREIGN.

China:	Hongkong.....	Mar. 2-9.....	16	
India:	Bombay.....	Mar. 19-26.....		886
	Calcutta.....	Mar. 16-23.....		1,040
	Karachi.....	Mar. 19-26.....	239	192
Straits Settlements:	Singapore.....	Feb. 26-Mar. 9....		3

Changes in the Medical Corps of the U. S. Navy, for the week ended April 27, 1901:

DENNIS, J. B., assistant surgeon, detached from the Naval Academy, May 1, and ordered to the Chesapeake, May 1.
 BOGERS, F., medical inspector, ordered to the Brooklyn for duty as fleet surgeon of the Asiatic Station.
 ARNOLD, W. F., surgeon, detached from duty at Olongapo, P. I., and ordered to the New Orleans.
 STOKES, C. F., surgeon, ordered to the Cavite Naval Station to await the Solace.
 SMITH, C. G., assistant surgeon, ordered to the Vermont, April 25.
 HENRY, H., pharmacist, ordered to the Independence, April 29.

Changes in the U. S. Marine-Hospital Service for 7 days ended April 25, 1901:

MEED, F. W., surgeon, Department letter of January 11, 1901, granting Surgeon Meed leave of absence for 60 days, amended so that said leave shall be for 1 month and 24 days—April 19, 1901.
 GLENNON, A. H., surgeon, to proceed to Tallahassee, Florida, for special temporary duty—April 22, 1901.
 MCINTOSH, W. P., surgeon, to proceed to Ducktown, Tennessee, for special temporary duty—April 19, 1901.
 PETTUS, W. J., surgeon, Department letter of January 11, 1901, granting Surgeon Pettus leave of absence for 2 months, amended so that said leave shall be for 1 month and 27 days—April 6, 1901.
 WORTENBAKER, G. P., passed assistant surgeon, to represent the service at meeting of Texas Medical Association, Galveston, Texas—April 22, 1901.
 NYDEGGER, J. A., passed assistant surgeon, to proceed to Cape Charles Venture, Va., for special temporary duty—April 19, 1901.
 MATHEWSON, H. S., passed assistant surgeon, to proceed to Ponce and Guayannilla, Porto Rico, for special temporary duty—April 24, 1901.
 KING, W. W., assistant surgeon, to proceed to Guayannilla, Porto Rico, for special temporary duty—April 24, 1901.
 GIBSON, L. P., acting assistant surgeon, granted leave of absence for 7 days—April 25, 1901.
 RODMAN, J. C., acting assistant surgeon, granted leave of absence for 7 days from April 24—April 23, 1901.
 WETTERS, MARK H., hospital steward, relieved from duty at Chicago, Ill., and directed to proceed to St. Louis, Mo., and report to the medical officer in command for duty and assignment to quarters—April 19, 1901.

Changes in the Medical Corps of the U. S. Army for the week ended April 27, 1901:

STRAUB, Captain PAUL F., assistant surgeon, is granted leave for 30 days.
 SARGENT, E. H., acting assistant surgeon, now at Vancouver Barracks, will proceed to Fort Flagler, for temporary duty during the absence, on leave, of Acting Assistant Surgeon, J. P. Truax. Upon completion of this duty Acting Assistant Surgeon Sargent will return to Vancouver Barracks.
 TRUAX, J. P., acting assistant surgeon, is granted leave for 20 days.
 PLUMMER, Captain GEORGE R., assistant surgeon, now temporarily on duty at Hamilton Barracks, Matanzas, Cuba, is assigned to duty at that post.
 SUMMERALL, Captain W. B., assistant surgeon, is relieved from further duty at Hamilton Barracks, Matanzas, Cuba, and will report to the commanding officer, artillery defenses, Havana, Cuba, for duty.
 RAYNOR, Captain WILLIS J., assistant surgeon, recently appointed, is granted leave for one month from about May 10.
 GILL, Captain CHARLES R., assistant surgeon, is granted leave for two months on surgeon's certificate.
 BUSHNELL, Major GEORGE E., surgeon, is granted leave for 14 days, to take effect upon the expiration of his present sick leave.

BAILEY, Captain GUY G., assistant surgeon, is relieved from further duty with the 1st battalion, 30th Inf., Presidio, and assigned to temporary duty with troops on the horse transport Thyra during the voyage to the Philippine Islands. Upon arrival at Manila, Captain Bailey, assistant surgeon, will report for assignment to duty.
 PURCELL, Captain FRANCIS J., assistant surgeon, is assigned to temporary duty with troops on the army transport Thomas. Upon arrival at Manila, Captain Purcell will report for assignment to duty.
 PALMER, FRED W., acting assistant surgeon, will proceed to his home, Jackson, Mich., for annulment of contract.
 HORNE, WILLIS S., acting assistant surgeon, is assigned to temporary duty with troops on the army transport Thomas. Upon arrival at Manila, Acting Assistant Surgeon Horne will report for assignment to duty.
 DAYWALT, Captain GEORGE W., assistant surgeon, is relieved from temporary duty at the Army and Navy General Hospital, Presidio, and assigned to temporary duty with troops on the army transport Warren, to sail for the Philippine Islands.
 CHALMERS, Major THOMAS C., surgeon, recently appointed, will report for transportation to Manila, P. I., where he will report for assignment to duty.
 WING, FRANKLIN F., contract dental surgeon, will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
 GRAVES, Captain LEONARD K., assistant surgeon, recently appointed, is granted leave for one month.
 VAUGHAN, Captain MILTON, assistant surgeon, recently appointed, is relieved from duty in the department of Cuba, when he will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
 HEARD, GEORGE P., contract surgeon, will proceed from Birmingham, Ala., to Fort McPherson, Ga., for duty.
 DILLON, G. PARKER, acting assistant surgeon, is granted leave for 15 days.
 MASON, Major CHARLES F., surgeon, 26th Infantry, U. S. volunteers, is relieved from further duty with that regiment and will repair to Washington, D. C., and report to the surgeon general of the army for instructions.
 GRAVES, Captain LEONARD K., assistant surgeon, now in Brooklyn, N. Y., will upon the expiration of leave granted him April 22, proceed to San Francisco, Cal., for transportation to Manila, P. I., where he will report for assignment to duty.
 SPARENBERGER, Captain FREDERICK H., assistant surgeon, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, P. I., where he will report for assignment to duty.

AMERICAN MEDICINE

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American Medicine²³³

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Responsibility for Typhoid is, of course, illustrated by every epidemic, but in a striking manner by that of New Haven. The excreta from a single patient in a neighboring town were carelessly allowed to pollute the city's source of water-supply, and the result is that about 500 people have had typhoid fever—the largest epidemic ever known in the state. The fact, again, shows how civilization means the interdependence of each upon every other, the well-being of the social organism being bound up with that of its units. But more than all else does the epidemic demonstrate professional responsibility. Each physician may have in his hands the health of the entire community. Thousands of cases of disease may be due to his carelessness as to the disposal of the excreta of his patients. The legalization of Unchristian unscience, or any form of pseudopathy will tremendously increase this danger. The legislative non-support of medical science will increase it. Political jobbery in our health boards and in the care of our water-supplies will also do the same.

Rabies; Its Cause, Frequency and Treatment, is the title of an article by Dr. D. E. Salmon, the efficient Chief of the Bureau of Animal Industry, Washington, D. C. All who have an interest in the subject—and who has not?—should secure a copy. We especially commend it to the antis. Partial statistics from only 73 cities show that there were 230 deaths from the disease from 1890 to 1900. In many other countries the disease is very prevalent. The official reports of Germany show 1,202 cases of rabies in animals (mostly dogs) in 1898. In France there were 2,374 animals affected in 1899. In Belgium there were 444 cases. In Great Britain there were 727 cases in 1895, and in Hungary 1,397 cases in the same year.

For the eradication of the disease it is only necessary that all worthless, ownerless, and vagrant dogs shall be killed, and that all dogs allowed in public places shall be muzzled. Dr. Salmon cites the following as one of many instances demonstrating the value of muzzling:

In Great Britain the number of rabid dogs officially reported was, in 1887, 217; 1888, 160; 1889, 312. In the last-mentioned year muzzling was adopted, and the number of cases fell to 129 in 1891, and 38 in 1892. Then, owing to persistent opposition, muzzling was stopped, and the effect of withdrawing this measure was at once seen in the increase of rabies. In 1893 there were 93 cases; in 1894, 248, and in 1895, 672. At this point, owing to public alarm, muzzling was again enforced, reducing the number of cases in 1896 to 438, in 1897 to 151, in 1898

to 17, in 1899 to 9. As no case was discovered from November, 1899, to March, 1900, it was believed by the veterinary officer that the disease had been extinguished from Great Britain. It may be added that in countries like France and Belgium, where muzzling has not been adopted, the disease continues to prevail to a very serious degree.

The Number of the Tuberculous.—At the recent meeting of physicians in Washington, Dr. Trudeau alluded to an investigation in which, if we do not err, it was demonstrated that there was the tuberculous reaction in 18% of supposedly well persons. Dr. Councilman also said that his postmortem records proved that in about 17% of cases there was tuberculous infection, although no history or symptoms indicated the existence of the disease. If to this showing is added the proportion of deaths due to tuberculosis we are astonished to find that in all probability about one-third of civilized people are tuberculous. This emphasizes several points:

1. The early diagnosis becomes of exceptional importance.
2. Is tuberculosis really increasing, or are we discovering more cases?
3. Is there, in modern times, a lengthening of the lives of the tuberculous or, in other words, a lessening of the virulence or fatality of the disease?
4. If so, is this due to hygiene and the progress of civilization, or to an acquired immunity?

Whatever the answer to such questions may be, they still confirm the experience of all physicians, that when cases are taken sufficiently early, and are treated with intelligence, tuberculosis is a curable disease.

Local Influences at the Meetings of the American Medical Association are almost certain to be exercised in an undue degree by the present method of choosing the delegates. The majority of those chosen are necessarily from communities lying comparatively near the meeting place. It is only natural that, without conscious purpose, the work of the delegates should result in injustice to certain parts of the country not so well represented, or in overgenerousness to those with a powerful or full corps of delegates. The essential vice of the present method is that it is not democratic, not strictly representative. In a national organization the representation should be as assured and as effective for the few and the distant as for the many and those favored by the luck of contiguity. With the continuous growth of the country proper representation becomes every year

a more important concern. If this representation could also be reduced so that the entire business of the Association could be lodged in its hands and transacted in a workmanlike way, leaving the general meetings free for purely professional purposes, it would be a great means of progress.

The Combined Medical and Surgical Clinic.—There are many diseases which must first be treated by the physician, and which must afterward come under the surgeon's care, and there are conditions which demand the expert knowledge of both physician and surgeon. This is especially true of diseases of the thoracic and abdominal organs. The decision as to the proper differentiation, diagnosis, and treatment, is often puzzling to the student and young practitioner. At the meeting of the Philadelphia County Medical Society, on May 8, 1901, Dr. R. G. LeConte, of Philadelphia, read a paper urging that there should be instituted combined medical and surgical clinics, in which the student would have placed before him by two experts the various phases of the disease under consideration. He recites the experiences of Dr. Frederick A. Packard and himself, carried out last fall at the Pennsylvania Hospital. Dr. LeConte said:

"We were associates on the wards of the hospital during October and November, 1900, and gave eight clinics in the two months. We arranged seven combined lectures, but at the last moment one patient refused further treatment and left the institution, so that only six combined clinics were given. These were on gangrene of the lung, cirrhosis of the liver, epilepsy, Graves' disease and goiter, diseases of the lymphatics and diseases of the pleura. The lectures varied from an hour and three-quarters to possibly two hours and a quarter in length. An attempt was made to trace these diseases from their incipency to their various terminations. The pathology was freely discussed and illustrated with such specimens as could be secured. The patients themselves were examined before the students and the diagnoses made. They were then removed from the clinic and anesthetized, while the various surgical procedures were discussed and then illustrated on the individual case. At some time later the results of our treatment were shown and discussed, whether the case terminated favorably or fatally.

"At the opening clinic less than forty students were present; at the second about 100, and thereafter 150 or 160 would probably represent the average attendance. Neither Dr. Packard nor myself held positions in medical schools, so the personal element did not influence the attendance, and we may fairly attribute the increase alone to the system pursued. Several students told me that these two hours saved them days of reading, and that the mental picture retained was worth volumes of type. Two physicians also told me that it was their custom to rise at six o'clock on our clinic days, in order that they might save the two hours to hear our lectures. I trust that you will understand that my quoting such remarks is not done in a vainglorious spirit, for I know full well that my qualifications as a surgical teacher are extremely limited, but I wish to emphasize the fact that with this system our lectures proved very valuable to the students, although the surgical instruction was possibly of an inferior nature.

"The drawbacks to such a system are, (1) the material at one's disposal will not always lend itself to this method of instruction, and (2) the increase of time given by the instructors, for it is expedient that both teachers be present during the whole of the lecture, the surgeon to know thoroughly the medical status of the case he is about to operate upon, and the physician to see the advantages or disadvantages that result from the operation. To the first objection, of course, there is no answer, for if one has not the material he cannot arrange the lecture. But to the second objection I would say that an

instructor who cannot afford an extra hour for the purpose of saving hours of work to each individual student is of little value as a teacher, no matter how prominent his name may be in the profession.

"The benefits derived from such a system seem threefold: to the student; to the patient who has the advantages of the thoughts of two minds instead of one; to the instructors, for it cultivates in them qualities of the highest value in the practice of medicine."

The scheme appears most commendable, and admirably planned to aid the student and postgraduate in a perplexing class of cases.

The Role of the Water Meter in Public Sanitation.—At first one might naturally suppose that as a free supply of water is so necessary to cleanliness, the meter, by lessening the use of water, would increase disease. In some cases and temporarily this might be true, but in the long run there would doubtless be a lessened death-rate, due to the fact that, according to the wise suggestion of the *Yale Medical Journal*, by means of the water-meter we could secure a purer, if not so copious, a supply of water. The method whereby this may be brought about is through sand filtration. With our present lavish wastefulness of water, sand filtration is an enormously expensive thing, almost amounting to preventing its general introduction. The water-meter would not prevent the use of a healthful and necessary supply, but would check the present absurd extravagance. The meter would therefore permit of universal sand filtration.

Grave pseudoparalytic myasthenia or asthenic bulbar paralysis, a disease happily of uncommon occurrence, is still of sufficient frequency to merit the attention that recently has been devoted to it. According to the statistics of Campbell and Bramwell published in *Brain*, summer, 1900, since the first report by Wilks in *Guy's Hospital Reports*, 1877, there have been recorded 60 cases with 23 deaths and 17 necropsies. At a winter meeting of the College of Physicians of Philadelphia, Burr and McCarthy reported an additional case—if we mistake not, the first case with necropsy reported in this country. The disorder is especially characterized by lack of vigor, by weakness on slight exertion, amounting to veritable paralysis of the muscles concerned in swallowing, chewing and speaking, of the palatal and ocular muscles. Originally thought to involve only the muscles within the sphere of influence of the motor nerves of the pons and medulla, it was later ascertained that the entire muscular system of the body may present the peculiar lack of vigor with very rapid exhaustion on voluntary effort; the original view justified the designation asthenic bulbar paralysis, later studies, the designation grave myasthenia. Though the etiology and pathogenesis of the disorder are not well understood, the weight of opinion seems to favor the idea of its being of toxic origin. In this connection we recall the observations of Jolly who, contrasting grave myasthenia with Thomsen's disease, pointed out that there exist certain poisonous alkaloids, such as physostigmin, veratrin, digitoxin, capable of producing a condition similar to congenital myotonia, whereas another, protoveratrin, gives rise to a condition not unlike grave myasthenia. The struc-

tures implicated in the disease are the peripheral motor neurons, but whether the muscular end-plates, the axons, or the cell-bodies are primarily or especially involved is still to be determined. In the very few cases in which postmortem investigations disclosed any deviations from the normal, the lesions which were inconspicuous, were found in the bulb and in the cranial nerves. These lesions, though inconspicuous as remarked, may nevertheless represent the only tangible evidences of the action of a poison whose other deleterious effects and the concomitant structural alterations elude detection by our present methods of investigation. That which concerns us especially as practitioners is the diagnosis of the disease and the knowledge of the fact that with appropriate management some of the patients may recover. From true bulbar palsy, grave myasthenia usually may be distinguished with facility, and the same may be said with regard to multiple neuritis of the cranial nerves, various syphilitic disorders, and gliosis of the pons and medulla. Another extremely important point was accentuated by Bramwell at the March meeting of the Edinburg Medico-Chirurgical Society—the resemblance of the affection to hysteria. In differentiating grave myasthenia from hysteria, Bramwell directs attention to the significance of the presence of muscular weakness which may be slight in degree and is unassociated with atrophy; the facility with which the muscles become exhausted both by faradism (myasthenic reaction), and by voluntary effort, a condition to which he applies the designation “myasthenic state”; and the absence of sensory symptoms apart from the fatigue of exhaustion, of sphincter trouble, and mental disturbances. With regard to treatment, Bramwell recommends that muscular exertion and mental excitement be avoided since both augment the severity of the symptoms. Solid food should be as finely divided as possible so as to remove all undue exertion from the muscles of mastication. It seems worth while also to bear in mind what may prove to be an extremely valuable suggestion of Bramwell, namely, that in severe cases with great muscular weakness and danger of death, inhalations of oxygen and transfusion of normal salt solution may be of service. Burr and McCarthy, while they found massage useful, believe that arsenic is the only drug that seems possessed of any efficacy. Strychnin, however, would appear to be indicated.

How to Treat “Christian Science.”—According to the *New York Herald* the following statistics summarize the condition of the “Christian Science” sect:

	1890.	1891.
Number of church societies	94	623
Number of chartered educational institutions	33	79
Number of public reading-rooms	27	283
Copies of Christian Science textbooks in circulation	50,000	205,000
Estimated value of church property now held in the United States		\$12,000,000

The churches are awakening to the hugeness of this eruption of unchristianity, and ministers everywhere are anathematizing it in the plainest of old English words. One says of it in a public address that it reminds him of the guineapig—“it does not come from Guinea, and it is not a pig.” There has arisen a class who,

frightened by its onrush, say that its phenomenal progress is due to the very opposition it has encountered; that dogmatism and ridicule help and not hinder it. That veteran fighter of shams and frauds, Dr. Buckley, of the *New York Christian Advocate*, flatly disagrees:

“Christian Science has been let alone long enough. Its principles or want of principles should be exposed, its tendencies traced, its unfulfilled promises enumerated, held up to the light. This may lead to the loss of some nominal members to the churches, but to allow this leaven to enter those churches would poison the whole lump. The situation calls, not for persecution, but for instruction and warning. Christian science is *not* dangerous if *exposed*; it may *become* so if *ignored* or if *treated* as if it were either rational or Christian. We shall soon place in the possession of Methodists the material for aggressive and defensive warfare against this insidious foe to Christianity, science, and common sense.”

One excellent result comes from it all: the lesson to the churches that any alliance with quackery is irreligious folly. It was a needed lesson. We hope they have learned it well.

We would suggest that the eradication of the disease will come in a professional way through prophylaxis, disinfection, and antisepsis. All must unite to carry out the law where it exists or to secure the passage of beneficent medical practice acts where they do not already exist. Disease is a fact. The American people are not such fools as to deny this, and to assent to the idiocy that they can treat disease who know nothing about it, and who deny its existence.

The best results from urotropin have been in those diseases of the bladder and pelvis of the kidney in which bacteria are found free in the urine. Thus, it has proved very effective in typhoid cystitis, cystitis accompanying enlarged prostate and urethral stricture, and in simple bacteriuria. On the other hand, when the bacteria, instead of being free in the urine, are chiefly in the tissues of the bladder, as they are in tuberculous and gonorrhoeal cystitis, urotropin is little value. As the urine of typhoid patients frequently contains typhoid bacilli in great numbers, Horton-Smith, Richardson, Cammidge, and others have advocated as a routine treatment the administration of urotropin during the last weeks of the disease in order to render the urine sterile, but such a procedure seems entirely unjustifiable. The bacilli are found in the urine in less than one-third of the cases. When present they are not always provocative of harm to the patient; urotropin is not always effectual in removing them, and finally, so far as the safety of the community is concerned, it is far more rational to disinfect the urine in every case after it has been voided.

Educational Statistics.—In the recent report of the Commissioner of Education the professional man may find food for thought, and the educational philanthropist cause for gratulation. His statistics for the year 1898-99 show a general increase in the number of those attending professional schools, although there has been a decided decrease of theological students enrolled in the United States, 110 less than the previous year. Balzac, speaking of the priest, the lawyer, and the doctor, said they repre-

sented the three principal elements necessary to the existence of society, conscience, property, and health. Does this decrease in the number of clerical students indicate a loss of conscience, or of the desire of conscientiousness? Or does it mean that our progress has been so great that the necessity for moral instructors is less, and that the supply exceeds the demand? However, the medical man will be more interested in the fact that there are 23,778 medical students enrolled in the United States, an increase of 345 over the previous year, those in the regular schools numbering 21,401; in homeopathic schools 1,802; in others 575. All of the medical schools which give full courses of instruction report that they have a course of four years except fifteen schools, and some of these are preparing to enter upon a course of that length; and in several the time of attendance now required for one year is equal to the whole time of attendance required twenty years ago. During the ten years from 1889 to 1899, the number of students in theology increased 18%; in pharmacy 26%; in homeopathic medicine 55%; in regular medicine 75%; in law 204%; and in dentistry 301%.

There are in the United States 151 medical schools, with a total of 4,389 instructors; and in the year 1898-99, 4,911 students were graduated. The progress of medical education is indicated by the lengthened school term in many institutions; by the higher standard required for admission; and by the increased number of men having college degrees who are studying medicine. About 9.5% of all medical students have either an A.B. or B.S. degree. This constant yearly influx into the ranks of the professional of more thoroughly educated men means keener competition, better work, and the survival of the fittest.

Politics in the Ohio Hospital for Epileptics.—

Another instance of the pernicious influence of bad politics in medicine comes to our knowledge in the attempt to force Dr. A. P. Ohlmacher from his office as Director of the Pathological Laboratory of the Ohio Hospital for Epileptics at Gallipolis, Ohio. We cannot learn what reasons for this wretched blunder may exist, but in the letter of Dr. H. C. Rutter, manager, summarily discharging Dr. Ohlmacher, no reasons are assigned. This fact is alone more than enough to justify the demand of the profession that such an outrage shall not be permitted upon a man of the high character and scientific attainments of Dr. Ohlmacher. During the past year seven contributions of value have been made by Dr. Ohlmacher and his associates in connection with his work, besides others completed but not yet published. But, as in all such affairs, it is not the personal aspect of the case that should be decisive. Professional interests are most deeply involved. Positions of trust such as this one, where professional and scientific concerns are in the balance, dare not be treated as the puppets of arbitrary power. In such cases the professional honor and interest are supreme. Men must not be discharged as if they are the slaves of money or power. We learn that the final decision will rest with Governor Nash, and physicians should use their influence to secure a reversal of an act so repugnant to the

feelings of honorable medical men. The rational, humane, and scientific treatment of epileptics, for which the Ohio and New York institutions stand, must not be endangered.

Progress in the Sanatorium Treatment of Tuberculosis is shown in the third annual report of *the Free Hospital for Poor Consumptives of Pennsylvania*, from which we epitomize the following:—

In Germany, there have been established during the last few years nearly 100 sanatoriums for the treatment of consumptives, with a combined capacity of 5,000. This has been established partly through the Government, partly through private charity, and largely through the life insurance companies. In Germany, the life insurance companies find it profitable to send their insured who have tuberculosis to sanatoria for treatment, because of what they can save in the payment of insurance money with those who get well, and the deferment of such payment with those whose lives are prolonged. They also profit by the prevention of the spread of the disease.

In England, prior to the present movement on behalf of consumptives, there were already hospital accommodations for consumptives to the extent of about 2,000 beds. Since this movement began many new sanatoriums have been opened, and the old ones have been improved. England has probably 3,000 beds for consumptives at the present time.

In France, about 2,800 beds for tuberculous subjects existed when the present movement began, and sanatoria either have been built, or are being built, since then at Lyons, Paris, Orleans, Bordeaux, Nancy, Lille, Havre, Canet, and Cimiez. The French Government is about completing a sanatorium at Agincourt, at an outlay of over a million francs.

In Russia, under the leadership of the Tsars, 5 sanatoriums have already been established and a number are under way.

In Italy, sanatoriums are being established at Arizanno, Padua, Umbria, Naples, Messina, Tarent, Cadore and Milan. A law has also been passed requiring existing hospitals to set aside wards for the treatment of consumptives.

In Norway, since 1897, 3 sanatoriums have been established, and 2 are under way—all under the government. A number of private sanatoriums have also been opened.

In Denmark, a hospital for consumptives with 94 beds was opened in 1900 for the use of the entire country, and another with 110 beds for the use of the city of Copenhagen only.

In Sweden, a large sanatorium for consumptives is at present being built as a Jubilee memorial.

In Switzerland, there are already 7 sanatoriums for poor consumptives, and a number of others have been projected.

In Austria, a sanatorium has been established at Alland, and similar institutions are projected in Bohemia, at Maehren, and at Steiermark.

In Hungary, a sanatorium for consumptives is at present being erected as a memorial to the late Queen Elizabeth.

In Poland, 3 sanatoriums for consumptives have recently been erected.

In Spain, under the leadership of the royal family, a large national sanatorium for consumptives has been opened at Porta Coeli.

In Portugal, Queen Amelia has recently given 20,000,000 reis for the establishment of a tuberculosis hospital.

In Holland, the popular young Queen of Holland within a year has given a large sum of money for the establishment of a sanatorium for consumptives.

In Canada, there are as yet but 2 sanatoriums for consumptives with a combined capacity of 75 beds. The Government of the Province of Toronto has, however, recently passed a bill encouraging the establishment of sanatoriums by providing legal machinery for raising revenue for the same. Under this act any municipality can, with the consent of the general government, establish a sanatorium, and raise revenue for its maintenance.

United States.—The National Government has established

sanatoriums in New Mexico for the treatment of tubercular marine hospital patients, and for consumptives of its army.

The State of New York has at present 10 sanatoriums for consumptives under private management, and one projected sanatorium to be supported by the State. These have an aggregate capacity of about 600 beds. The State of New York appropriated \$50,000 during the last session of the legislature for a hospital site, and is asked to appropriate \$100,000 during the present session of the legislature for buildings and maintenance. The City of New York appropriates \$75,000 annually for maintenance of consumptive patients in the Spuyten Duyvil Hospital on the Hudson.

Massachusetts has 5 hospitals for consumptives, 1 of which has been established by the State. The combined capacity of the 5 hospitals is about 350 beds. The State of Massachusetts appropriated \$150,000 for the establishment of its hospital.

Illinois has 1 hospital for consumptives in operation, and 2 projected—all in Cook county. The 3 will have a combined capacity of about 500 beds.

Colorado has 3 private sanatoriums for pay patients.

Maryland has 1 hospital for poor consumptives with a capacity of 100 beds.

Ohio has 1 hospital for poor consumptives with a capacity of 100 beds.

North Carolina has 2 pay sanatoriums for consumptives.

Alabama has 2 sanatoria for consumptives, 1 for pay patients and 1 for consumptive prisoners of the State.

New Mexico has 3 small pay sanatoriums for consumptives, and 1 large one projected.

Connecticut has 1 small pay hospital for consumptives.

Pennsylvania has 3 tuberculosis hospitals with a combined capacity of about 120 beds, and nearly $\frac{1}{2}$ of these beds are in wards of general hospitals, supported by the Free Hospital for Poor Consumptives.

Other States.—Sanatoriums for consumptives have been projected in New Jersey, Ohio, Minnesota, Michigan and Rhode Island, and probably in many other States. Rhode Island has under consideration a bill appropriating \$200,000 for a tuberculosis hospital.

The contagiousness and the prevention of pulmonary tuberculosis are as certain as that the hospital treatment of the poor afflicted with this disease is at once the scientific and the humane way of preventing the spread of the disease. The late Professor J. M. DaCosta, shortly before his death, wrote:

"The lot of the consumptive poor is indeed a terrible one. Constantly losing strength and power; feverish and in distress; shut out from hospitals because their accommodations do not permit them to receive any large number of cases likely to be of very long duration, because, too, it is now recognized that it is not fair to others to admit into the wards what will be a source of infection; shunned and neglected, and ever growing weaker, while yet obliged to labor incessantly for the daily bread of himself and family—the poor consumptive is the most pitiable figure in our midst. Help him where you can; labor for him."

EDITORIAL ECHOES

A New Light on Pernicious Anemia.—The *Medical Press* is very enthusiastic over what it considers a great discovery made by Dr. W. Hunter. This is that pernicious anemia is a septic affection, the poison being derived from the suppuration about the teeth or in the mouth and its dependencies. The poison passes into the stomach where it sets up a special form of gastritis, finally resulting in peripheral neuritis and blood-disturbances.

Cyclic Albuminuria.—The *Medical Record*, epitomizing the researches of Drs. Hawkins and Sutherland, says:

"It is certainly in some degree curious that after all these years of investigation a more accurate knowledge of cyclic albuminuria has not been attained. At present no one knows with certainty whether it is physiologic or functional or tending toward organic change in the kidney. It is self-evident that the subject is of the very first importance, and its final settlement would take rank almost with the greatest medical discoveries of this or any age."

Osteopathy vs. Massage.—"Whatever is of value in osteopathy is massage; in spite of their denials the osteopaths are simply masseurs, but using their methods with an ignorance and presumption that is liable to make their manipulations perilous in some of the graver cases they too often venture to treat. It speaks ill for the scientific culture and general intelligence of the country that such palpable pseudoscience as the utterances of the Still propaganda should find so many dupes."—[*Jour. Am. Med. Assoc.*, April 6, 1901.]

Postgraduate Study, the *Journal of the American Medical Association* thinks, may be justified by the present state of medical education, and that the postgraduate medical schools constitute a poor comment on our system of education. Such study should be rendered unnecessary by rapidly raising the general standard of undergraduate work. The *Journal* urges that kind of postgraduate study which fits one for the task, as Sir Michael Foster says, "of inquiring after new truths, of grappling not with the known but with the unknown."

Forced Feeding Follies.—The physician who undertakes to give a patient the "Rest-Cure" should be endowed with a fair amount of common sense and judgment. He must study the individual as well as the technique of his treatment, and keep in mind the fact that not all of his patients can be subjected to the same routine * * *

A patient who has spent 3 months under mismanagement, discharged with a 2 or 10-pound gain, perhaps, who suffers from indigestion and autoinfection, and is still a broken-down neurotic, is an unprofitable advertising agent who might have done the physician much credit, and saved the reputation of the "Rest-Cure," if a more careful study had been made of individual requirements. * * *

There is much folly in forced feeding.—[*Northwestern Lancet.*]

The South African Hospitals Question.—The alleged abuses, says the Royal Commission (of England), do not constitute anything in the nature of a scandal. "The undermanning of the Royal Army Medical Corps," says *The Practitioner*, "has been the main cause of such failure in the medical arrangements," but "this is not the whole truth. The real responsibility for the deficiency of medical officers must rest on the military advisers of the Secretary of State for War, who apparently out of mere caste prejudice have systematically snubbed and starved the service regardless of possible consequences. It is to them that the responsibility must be pushed home. If Mr. Burdett-Coutts would help us in doing this, he would be doing better service to the country than by striving to upset the findings of a commission of competent and impartial men because they were led by the force of evidence to the conclusion that his sensational descriptions conveyed a false impression of the state of things. The fact is that it is so long since we have had personal experience of a great war that the plain, unvarnished tale of its inevitable horrors came upon us with an appalling shock. The British public has got to realize that war is, as the American general said, simply hell. But Mr. Burdett-Coutts apparently expected it to be a kind of game in which those who were hurt were to be sprayed with rose-water and fed on chocolate creams by smart ladies who found a new sensation in playing the part of ministering angels."

AMERICAN NEWS AND NOTES

GENERAL.

"American Journal of Nursing," is the title of a new periodical under the direction of Miss Sophia F. Palmer, of Rochester, N. Y., published monthly by J. B. Lippincott, Philadelphia.

Alexander Agassiz, of Cambridge, Mass., has been elected president of the National Academy of Science. He succeeds Dr. Wolcott Gibbs, of New York, resigned. The term of the president is 6 years.

Grip is reported as prevalent in Agana, Island of Guam, from advices dated March 14, and many native children and adults are dying from the effects, mainly because of the existing ignorance among the natives of the necessity of caring properly for the sick.

Appointment Revoked.—Owing to the development of tuberculosis following grip the appointment of Brigadier-General William Ludlow to be military governor of the department of the Visayas has been revoked and he will return to the United States.

Crusade Against Mosquitos.—The sanitary department of Havana in its campaign against mosquitos, it is stated, purpose planting eucalyptus trees in all the marshy and malarial districts in and around Havana, and \$1,000 have been appropriated for that and for buying seeds.

Sanitary Treaty.—Argentine and Uruguay have entered into an alliance of sanitary protection against plague and other infectious diseases. It provides for mutual inspection and quarantine sufficient to protect either country from invasion of disease from the other without any undue interference of commerce.

To Introduce the Metric System.—The main subject discussed at the annual meeting of the American Meteorological Society, was the introduction of the Metric System into this country. The society decided to use its influence to promote its adoption. Dr. Seaman read a paper on the use of this system by physicians and pharmacists.

Minnesota State Medical Society.—The *St. Paul Medical Journal* urges all physicians in that State who are eligible to membership, but who are not members of the State Society, to apply for membership at once, so that when the American Medical Association meets there in June every reputable physician in the State may feel himself one of the hosts of the occasion.

Typhus Fever situation in Mexico is reported improving owing to good rains, and Consul-General Barlow at the City of Mexico has telegraphed the State Department his opinion that there is no reason for quarantining against that city on account of the disease. He reports that for the week ended May 1 there were 53 deaths from it, mainly among the very poor and about the same number for each of the 2 preceding weeks.

Yellow Fever (2 cases) is reported at Havana and the order of the Secretary of the Treasury, suspending the quarantine regulations until May 15, has been revoked. These regulations which go into effect immediately require certificates of immunity from persons coming from Cuba to the United States through southern ports, and 5 days' absence from Cuba on the part of persons coming from that island through northern ports.

Photographs in Surgery.—To obviate the difficulty experienced by students in surgery in securing satisfactory instruction in practice, because during an operation the surgeon is too absorbed to teach, it is suggested that a series of photographs shall be taken illustrative of the important stages of surgical procedure and used as a basis for a course of lectures that shall embrace all the common operations and also the remarkable and exceptional ones.

Anticigaret Law.—Bills prohibiting the sale, presentation of, or bringing into the State, of cigarets, cigaret paper, or any substitute thereof have been passed by the Lower Houses in both Illinois and Michigan. In West Virginia the new law of imposing a tax of \$100 on all dealers has become operative May 1. In Pottsville, Pa., cigaret smoking is so prevalent among the schoolboys that the authorities have concluded to enter suit against all dealers found selling cigarets to boys under 16.

Dead Soldiers from the Philippines.—The transport Logan recently brought the bodies of 250 officers, soldiers, and civilian employes, who died or were killed in the Philippines. Of this number 102 have been claimed by relatives, 8 will be buried by request in the Presidio cemetery, and 4 in the Arlington cemetery. Seven unknown bodies, and 34 of men who died

of smallpox, will also be interred in the Presidio, and the remainder will be buried there if not claimed by relatives within a short time.

A Case of Typhoid.—The investigation of the relationship between typhoid and the consumption of raw vegetables carried on by the Department of Agriculture is stated to lead to the conclusion that the prevalence of such diseases at certain seasons of the year may often be traced to the eating of raw vegetables that are grown near cities, on soil fertilized by refuse from sewers and by other city offal. The danger from this source is considered important enough to call for the sterilization of such fertilizing matter by oil of vitriol, or the sterilization of the raw vegetables by washing them in a 3% solution of tartaric acid, and then rinsing them in pure water.

Lack of Quarantine Facilities.—The attention of the Marine-Hospital Service has been called to the lack of quarantine facilities of the Central and South American ports. A case is cited of the steamer Chili which, having yellow fever aboard, was turned away from port after port on the west coast of South America. They were not allowed to secure medicines, disinfectants or medical attention. After a number of deaths had occurred from the disease, the vessel reached Valparaiso, and after a careful inspection the passengers were allowed to land after being imprisoned on the ship for 1 month.

Dental Surgeons in the Army.—Of the 14 candidates appearing before the Examining Board of Dental Surgeons of the United States Army, only 2 received appointments: Siebert Davis Boak, of West Virginia, and Edward Clarence Lauerdale, of New York. The Board expressed disappointment in the qualifications of the young men who presented themselves, believing the examination to have been fair. It has been officially announced that before an applicant can secure a position as Dental Surgeon in the Army he must pass examinations in the following: Histology, anatomy, physics, chemistry, metallurgy, physiology, dental anatomy and physiology, dental pathology and bacteriology, dental materia medica and therapeutics, oral surgery, orthodontia, theoretic operative dentistry, theoretic prosthetic dentistry, practical and operative, and practical prosthetic dentistry. In the theoretic examination 75% is required in each branch, while in the practical 85% is the passing limit.

Obituary.—ROBERT W. GREENLEAF of Boston, April 28, aged 46. THOMAS CONRAD PORTER, Professor of Botany and Zoology at Lafayette College, Pa., April 25, aged 79. WILLIAM WALLACE WELCH in Quincy, Ill., April 25, aged 80. JOHN T. THOREN of Chicago, April 29, aged 36. S. G. DORR of Buffalo, N. Y., April 28, aged 61. C. A. BLACK of Bay Verta, N. B., April 29. POLK WATKINS of Hattiesburg, Miss. JACOB A. SHERMAN of Plainfield, N. J., April 29, aged 81. WILLIAM F. CRIGHTON of Alexandria, Va., May 2. IRVING C. ROSSE of Washington, May 3, aged 54. DAVID H. BARTINE of Merchantville, N. J., May 3, aged 59. JOHN THRUSTON of Louisville, May 2, aged 75. HAROLD SNOWDEN of Alexandria, Va., May 4, aged 55. CHARLES Q. COCKE of Roanoke, Va., May 4, aged 83. CHARLES D. COVERNTON of Toronto, Can., April 28, aged 88. W. D. JESSOP of Pittsburg, Pa., May 2, aged 32. E. HUMPHREY of Akron, O., May 4, aged 50. H. S. PELTON of Oakland, Cal., at Nome, Alaska, in January. N. F. BANKS of Opelika, Ala., May 1, aged 70. SAMUEL K. LYON of New York City, May 4.

Smallpox in New York City is reported as having a stronger foothold than at any time since last November. More than 80 cases were reported to the Board of Health in the first 3 days of this month, and recently there were 30 cases in 1 day. Dr. Dillingham reports that in the hundreds of cases not one patient has been vaccinated in recent years. Two steamers from Italian ports, one from Marseilles and one from Hamburg, have had cases of smallpox in the steerage. In New York State the monthly bulletin of the State Board of Health reports the existence of the disease in 19 municipalities. An investigation is being made of a reported epidemic of it at Newark, N. J. A case has been discovered in the Camden county jail, and it is reported, May 7, epidemic in Gloucester City, where it has existed for 2 weeks scattered through the city and was diagnosed as chickenpox. New cases are reported from Hagerstown, Md., and from Pendletonville, Greenville, Lufkin and Navasato, Texas, from Hickman, Huntingdon, Crossville, Tenn., and from Florence, Ala., and a very serious epidemic which is spreading exists in Snohomish county, Washington, as no effort has been made to check the disease and no quarantine on affected persons has been established. In each of the towns of Wallace, Sultan and Monroe, there are from 50 to 75 cases. The matter has come to the notice of authorities and an effort will be made to check the advance of the scourge. An epidemic of smallpox is also reported in a township in Vanderburgh county, Indiana, among the farmers. In Hampton, N. H., the order to vaccinate all children who have not been vaccinated is meeting with opposition, and it is considered a very arbitrary measure on the part of the State Board of Health. In Ontario, Canada, many new cases are reported from scattered localities, and the outlook for freeing the province from smallpox or for preventing new cases is discouraging, owing to the fact that in so many of the back townships where the disease has been most active the majority of the people have never been vaccinated.

EASTERN STATES.

The Eastern Maine Insane Hospital, located at Bangor, will probably be ready for occupancy by June 1.

Yale Medical School.—An unknown benefactor has donated \$100,000 for a new building and the contract for it has been awarded at \$96,000.

The New Jersey State Board of Health is obliging New York physicians to obtain a license to practise in New Jersey if they practise on the New Jersey side of the Hudson river.

A Newark Midwife.—Mrs. Charlotte Bergmann will receive a medal from the City Clerk to commemorate the fact that she has assisted in introducing nearly 5,000 infants into the world.

A Hospital Donation.—In memory of his 2 grandsons, J. Howard Wright has offered to give the sum of \$10,000 to the Muhlenberg Hospital authorities to assist in the erection of a new hospital in Plainfield, N. J.

Inveterate Drunkards.—A study of the records of 140 inebriates committed to the House of Correction on Deer Island, Boston Harbor, between July 1 and December 31, 1900, showed that on an average each had been committed to that institution at least 15 times.

To Prevent Typhoid.—The Board of Health of Worcester Mass., are taking action for the investigation of the sanitary condition of towns bordering on the streams which constitute the water-supply of that city, to guard against conditions similar to those which have been in evidence in New Haven, Conn.

Dr. James Sanford, of Bennington, Vt., has practised medicine in Rutland County for more than 60 years, and although he will soon celebrate his eighty-fifth birthday, there is scarcely a day when he does not make a professional call on from one to a dozen patients. Who is the oldest actively practising physician in the United States?

The Abuse of Cattle in Transportation has been the subject of a complaint to Governor Odell from a resident of Evans Mills, N. Y. It has resulted in the notification being sent throughout northern New York that it is unlawful to keep livestock in transit without food for more than 24 hours and that a test case in prosecution will be made at the earliest opportunity.

A Medical Society in Fletion.—In an entertaining address delivered before the Fairfield County (Conn.) Medical Society recently, the President, Dr. L. T. Day, of Westport, discussed the fact that William Dean Howells had founded one of his novels, "Dr. Breen's Practice," upon a decision made by the society in reference to consultation between homeopaths and the regular school.

Charitable Bequests.—According to the will of the late Matilda Goddard, of Boston, Mass., \$30,000 is to be distributed among a number of charitable institutions. The bulk of this amount (\$20,000) is given to the Gwynne Home for Destitute Children. Among those mentioned for small bequests are the New England Hospital for Women and Children and the Homoeopathic Hospital, each to receive \$300.

The Smoke Nuisance.—The Massachusetts Committee on Cities will report the bill of Representative Gale of Natick which provides that the emission into the open air of dark smoke or dense gray smoke for more than 2 minutes continuously, or the emission of such smoke during 12% of any continuous period of 12 hours within quarter of a mile of any dwelling, except under a license granted as herein provided, is hereby declared a nuisance.

Bacteria in Modeling-clay.—M. O. Leighton, Health Inspector of Montclair, N. J., declares that he has found bacteria to be quite abundant in clay that has been used and reused for modeling in schools. An attempt to sterilize the clay showed that the only efficient way of accomplishing this was by the use of superheated steam under a pressure of 15 to 20 pounds for 45 minutes. The species of bacteria identified were those which occur in pus-formations. Sterile clay was then inoculated with the bacilli of typhoid, diphtheria and tuberculosis. A study of the clay showed the typhoid germ to be alive after 32 days and the diphtheria and tubercle to be still alive in 18 days.

Society for Prevention of Consumption.—At a complimentary dinner given to Dr. William C. Bissell, Bacteriologist of the University of Buffalo, the suggestion was made by Dr. Benjamin G. Long that organized work ought to be done for the suppression of consumption. Dr. Bissell favored the motion, and every doctor present agreed the idea should be carried out. They decided on the formation of a Society for the Prevention of Consumption, the principal function of which would be the spreading broadcast of information concerning tuberculosis. Dr. Long was made chairman of a committee appointed to effect an organization; it is believed that Buffalo and Western New York will derive much benefit from the new society.

NEW YORK.

Dr. Heinrich Stern has been elected Professor of Internal Medicine in the New York School of Clinical Medicine.

The Geneva City Hospital has been freed from debt amounting to \$7,200 by the gift of Thomas C. and Joshua J. Maxwell.

Dr. Roger S. Tracy, registrar of the Bureau of Vital Statistics, who has been connected with the New York Board of Health longer than any other now in its service, has resigned his position.

Charitable Bequest.—Mrs. Elizabeth R. Grafton of New York has left by will \$10,000 to the Sheltering Arms and \$10,000 to St. Luke's Home for Indigent Christian Females of the Protestant Episcopal Church.

Diphtheria in Horses.—A disease which veterinarians have diagnosed as diphtheria is said to be prevalent among the horses of farmers living between Geneseo, N. Y., and Cane-sus Lake. It is of a severe form, proving fatal in every case.

The Medical Aspect of Heredity is the subject of the address which will be delivered by Prof. J. George Adams, of McGill University, Montreal, under the auspices of the Brooklyn Medical Club, May 17, 1901, 8 p. m., in the Medical Library Building, 1313 Bedford avenue.

Protective Organization.—An association to protect physicians from bogus malpractice suits is under consideration in New York City, the County Medical Association having referred the matter to executive committees. It is said that blackmailing schemes of this kind to extort money from medical and surgical men are numerous.

Buddhist Dwarfs.—Two professional actors, a sister and brother from Burnah, of Indo-Chinese origin, arrived recently in New York. Smaura, the brother, is 18 years old and 19½ inches in height, and Fatma, the sister, 19 years old and 20½ inches in height. They are perfectly and symmetrically developed and are bright and intelligent.

Nonintoxicating Drinks in Saloons.—Senator Raines has introduced a bill to compel holders of liquor tax certificates which entitles them to sell liquor to be drunk on the premises to have also for sale in like manner the nonalcoholic beverages milk, coffee, tea, cocoa and chocolate which, on demand of the buyer, shall be served hot or cold as may be desired, in the same place and manner as intoxicating drinks are sold.

Health Authorities in a Dilemma.—The Bureau of Contagious Diseases, of the Health Department of New York, has recently been besieged by tenants and landlords. The former claim that, owing to contagious disease in their homes, the landlords wish to dispossess them. Frequently the landlords have paid the expense of moving in order to get a stricken family out of their premises. This, of course, but spreads the infection. On the other hand, the landlords claim that some families are using similar pretenses as excuses for not paying the rent.

Zoological Park Pathologist.—Dr. Harlow Brooks, pathologist to Harlem and Montefiore Hospitals, has been appointed pathologist to the New York Zoological Park. In creating this position the New York Zoological Society has defined the attendant duties: "To make regular visits to the park, to examine into the hygienic condition of the animals and to recommend such treatment and to make such autopsies and microscopic studies as will advance the knowledge of the prevention and treatment of the diseases incidental to captive animals." A laboratory will be at his disposal and by systematic bacteriologic examinations it is anticipated that the knowledge of animal diseases and their causes will be greatly enhanced.

The Medical Society of the State of New York, at the ninety-fifth annual session held at Albany, January 29, 30 and 31, 1901, unanimously agreed that each County Society should be allowed to send 5 times the number of delegates it had formerly sent to the State Society. These delegates are elected for a term of 3 years, and are eligible for permanent membership if they register twice during that time. This will make the number of delegates from the County Societies to the State Society 750 in all, or 1 delegate for every 8 or 9 members of County Societies, without increase of expense to the County Societies. It was further agreed that a semiannual meeting shall be held in the New York Academy of Medicine, New York City, October 15 and 16, 1901, for scientific work and social intercourse. Members wishing to read papers are requested to communicate with Dr. Nathan Jacobson, 430 South Salina street, Syracuse, New York; and information of any other nature can be obtained from Dr. Frederick C. Curtis, Secretary, 17 Washington avenue, Albany, New York, or from Dr. Frank Van Fleet, Associate Secretary, 63 East Seventy-ninth street, New York City. Tickets of admission to a reception which will be given by the Society to its members, delegates and guests on the evening of October 15, at Delmonico's, will be furnished without cost to all who register at the semiannual meeting, as well as to the Society's guests.

PHILADELPHIA, PENNSYLVANIA, ETC.

Medico-Chirurgical Hospital.—The trustees of the Medico-Chirurgical College have asked the State for an appropriation of \$334,000 to complete improvements now under way, and to erect new necessary buildings.

Sugarcoated Pills.—William H. Warner, whose death recently occurred in Philadelphia, was the first to introduce licorice tablets into the drug trade, and was also one of the pioneers in the introduction of the sugarcoated pill, though not the very first. Bullock & Crenshaw's sugarcoated pills were introduced some months before those of the Warner make.

A Plea for Poor Consumptives.—Dr. Lawrence F. Flick, of the Free Hospital for Poor Consumptives, has issued a circular letter asking the public cooperation in an effort to get a State appropriation of \$110,000 for the tuberculous poor of Pennsylvania. He states that there are about 5,000 of this class in the State—probably $\frac{1}{4}$ of all the sick poor—and they are excluded from the general hospitals. A letter written to Hon. Ward R. Bliss, Chairman of the Appropriation Committee, and Hon. William A. Stone, Governor of Pennsylvania, urging them to give support to the bill, will probably largely influence the making of this appropriation.

College of Physicians.—Abstract of the monthly report of the honorary librarian, Library of the College of Physicians of Philadelphia, April, 1901:

Books, pamphlets and journals received:

General Library,	447	volumes	806	pamphlets	3415	journals
Lewis Library,	11	"	0	"	0	"
S. D. Gross Library,	1	"	0	"	0	"
	459		806		3415	

Accessions, 378 volumes. Duplicates, 81 volumes.
Donors, General Library, 67.

The college has acquired, by purchase, the valuable and perhaps unique collection of books and pamphlets known as the "J. Stockton Hough Library," about 3,000 volumes, valued at \$8,000.

SOUTHERN STATES.

Dr. L. H. Stick has been appointed resident physician of the Baltimore City Hospital.

Leprosy.—In Baltimore 2 cases of leprosy are reported, both the victims being women, one of whom is isolated, the other at large.

An Army Appointment.—The President has appointed Dr. Percy L. Jones, of Nashville, assistant-surgeon with the rank of captain.

The College of Physicians and Surgeons of Baltimore, has announced that 61 young men have successfully passed the final examinations.

Insanity and Divorce.—A bill has been introduced into the Florida Legislature asking for a repeal of the recently enacted insanity divorce law.

Compulsory Vaccination.—A bill before the Florida Senate and House to enforce and compel the vaccination and revaccination of citizens and residents of the State, was attacked and finally postponed indefinitely.

Retired.—The withdrawal of Dr. James B. McGaw of Richmond, Va., from practice after 57 years of active service was marked by manifestations of the deep esteem in which he is held by his professional associates.

The Triple State Medical Association, composed of members from Ohio, Kentucky, and West Virginia, was organized in Ashland, Ky., on April 18. Dr. Lester Keller, of Ironton, O., was elected President of the Association.

Dental Abnormality.—A citizen of Baltimore, aged 78, recently cut 3 new teeth in his lower jaw. They grew to such a length that he broke them off to prevent their lacerating his tongue. His teeth had never troubled him and he had never been in a dentist's chair.

To Drain New Orleans.—At a recent meeting, the Drainage Commission of New Orleans expressed its intention to complete at an early date, the system whereby all New Orleans will be thoroughly drained. A resolution was also adopted promising cooperation if the city would make the attempt to establish and operate its own electric light system.

Salt Sickness.—This disease of cattle is considered one of the greatest drawbacks to the Florida stock business and in response to a petition of the State Convention of Stockmen to the State Legislature to request the Government to investigate it, Victor A. Norgard, representing the United States Bureau of Animal Industry, has been sent to Florida to study the disease.

A Garbage Disposal System has been adopted in Washington whereby the food refuse becomes a valuable commodity and the contractors, urged by consideration of profit, require of their employes faithful collection from all houses, as every pound of it has a distinct value. The commissioners have been wise enough to make no exception to the rule that all garbage shall be collected by the contractors.

The Indigent Insane.—Coroner M. V. Richard, of New Orleans, proposes a plan to care for the insane poor until the city or State could take charge of them. His idea is to raise a fund by means of 20 public-spirited citizens contributing each \$100 toward that end, and heads the list with his own contribution, followed by that of a nameless friend. The scheme is under the consideration of the Prison Commission of that city. The secretary of the board intimates that the favoring of such a plan would establish a bad precedent.

Insane Delusion no Defense.—Great interest is excited at Paris, Texas, as to what decision will be rendered in the case of Solomon Hotema, arrested for killing alleged witches. The majority of the physicians who examined him as to his sanity declared him insane and stated he was suffering from an insane delusion when he committed murder; they therefore argue he should not be held morally or legally responsible for his acts. The prosecution contends that insane delusion is no defense, that when a man reasons the law demands that he reason correctly. The case of Charles J. Guiteau, who was tried and executed for the assassination of President Garfield, is cited as an example.

Dr. Irving C. Rosse, who died in Washington, May 3, was born on the eastern shore of Maryland about 54 years ago of one of the oldest families in the State and of Scotch descent; for 20 years he has occupied a prominent position in medical circles. He was the author of several textbooks on medical jurisprudence and neurological diseases and of many pamphlets on special nervous diseases. He had held official positions in important medical societies in Great Britain, Germany and Austria, as well as in this country; served as a surgeon in the United States Navy for about 10 years and was a member of the Jeanette Relief Expedition. Owing to his familiarity with every phase of insanity he was called upon to serve as expert witness on the Guiteau trial, the Bean murder trial, that of Benjamin Snell and the Howard Schneider trial.

WESTERN STATES.

Dr. C. R. Holmes, of Cincinnati, has been elected president of the Western Ophthalmologic and Otolaryngologic Association.

Glanders.—Despite precautions, this disease seems to spread, and 65 horses of the Ninth Cavalry at the Presidio have been shot.

Dr. Kate Post Van Orden has been appointed a member of the Board of Health of Alameda, Cal. This is the first time a woman has served on any official board in this city.

Hospital Donation.—John E. Dubois, of Pennsylvania, has presented to the Dunham Medical College of Chicago \$1,000,000, as an act of appreciation for the benefits received by his wife while a patient in that institution.

Leprosy.—The case of a young man afflicted with leprosy for 5 years has been discovered by the Rush Medical College, Chicago, and is being investigated by the physicians there. About 19 years ago he had spent 2 years in the Sandwich Islands.

Measles prevail among children and adults in Portland, Oregon, and are reported as an epidemic in Spokane, Wash., in Two Rivers, Wis., and among the members of the Fourteenth Cavalry at Fort Leavenworth; 40 men now in hospital and new cases occurring daily.

Walla Walla Hospital, of Washington, will hereafter be known as the Joseph Conatser Walla Walla Hospital, as Joseph Conatser, who died there recently, has bequeathed \$10,000 to it in consideration of the excellent care he received, provided the name should be changed as indicated.

Medical Inspection of Schools in Chicago, 1901.—Number of pupils examined in January, 15,077; number excluded, 882. Number of pupils examined in February, 18,488; number excluded, 798. The causes of exclusion were chicken-pox, diphtheria, eczema, impetigo, measles, mumps, ophthalmia, pediculosis, ringworm, scarlet fever, tonsillitis, whooping cough, and other diseases.

The Excursion to Yellowstone Park for the members of the American Medical Association seems to be an assured fact, as the Committee on Arrangements has finally succeeded in persuading the officials to open the park a week earlier than usual to accommodate the Association. A special train will be run from St. Paul to Yellowstone Park, and the rates will be very low, but just the amount of charge is not yet definitely stated.

Increased Death Rate Due to Speculation.—The Chicago Health Department, in a report of May 6, attributes an accelerated death rate to the craze for speculating in stocks, the excitement occasioned either by loss or gain having proved fatal to persons more than 60 years old. Of 566 deaths in that city the week before, 124 were persons of 60 or older, an increase of 26% over the previous week, and of 24% over the corresponding week in 1900.

Filthy School Buildings.—The school teachers of Cleveland, Ohio, have entered a protest against the dirty school houses. They say the buildings are never scrubbed, and dust an inch or more in thickness is allowed to settle on the floors; consequently the health of the children is endangered, and a great degree of personal discomfort suffered. The matter will be taken before the school council and an effort will be made to provide the money necessary to have the buildings thoroughly scrubbed at least once a month.

Colonization of Epileptics.—Minnesota claims very restricted facilities for the care of her epileptics. Apart from 145 patients in the hospitals for the insane, and 167 in the school for feeble-minded at Faribault, no provision is made for this class of sufferers. Arrangements are being made for the separate care of 150 epileptics at the Faribault school, and so far as it goes this is admirable but fails utterly to meet the needs of numbers thus afflicted. Influence is being brought to bear upon the State Legislature to establish colonies having their own schools, shops, hospital-chapels, etc., its own interests and industries and in every way separate and distinct from the life about it. This method develops sympathy and helpfulness and does much to overcome the selfish, introspective mood and obstinacy which characterizes this disease.

Foreign Body in the Brain.—A case puzzling the surgeons of Cleveland, Ohio, is that of a man, the victim of burglars, in the St. Clair Hospital with a 32-caliber bullet in his brain which causes him no inconvenience whatever. The bullet struck the center of the forehead near the hair, penetrated the skull, and plunged downward, making a path through a portion of the brain whose function is not well understood. The surgeons have not dared to probe for the bullet, but it is thought to be lodged near this portion, for had it taken another course it would have reached and paralyzed a nerve center. No paralysis of any function has occurred, but a sudden death or an equally sudden attack of insanity would not be altogether unlooked for. The patient is kept in bed with difficulty, as, feeling as well as he does, he does not understand why he should be restrained from going to his work.

Association of American Medical Colleges.—The next regular meeting of this association will be held at the Hotel Ryan, St. Paul, Minn., June 3, 1901. It will consist of 2 sessions, an educational session and a business session. The educational session will be opened at 2 p. m. by the President's address followed by several papers of medical pedagogic interest. To this session all persons interested in medical education are respectfully invited. The representatives and associates of the Association of Southern Medical Colleges have received a special invitation. The members of the Confederation of State Examining and Licensing Boards are also invited. There will also be an exhibition of work done in medical colleges. At 8 p. m. the business session will be held at which the amendments to the constitution proposed by several colleges will be considered. The report of the judicial council, the election of members and the election of officers for the succeeding year will close the program.

CANADA.

Winnipeg General Hospital shows by its annual report that 2,849 patients have been treated there the past year. A deficit of \$4,510.50 is due to an outbreak of smallpox within its walls early in the year.

A Metric Association.—The work begun by the Canadian Government to prepare the people for the adoption of the metric system is being extended by Lieutenant-Colonel Burland, of Montreal, by the formation of a metric association.

Dominion Medical Council.—A bill has been introduced for a medical council for the whole Dominion of Canada, providing that each of the 7 provinces and the North-West Territories shall have each 3 members on this board—in all 24 regular physicians. As there are some homeopaths who are represented on the Ontario Medical Council these will also be allowed 3 members on the Dominion Board who shall be elected by themselves.

Tuberculosis.—A law which became operative June, 1900, in Quebec, provides that every householder in that province, in whose house there occurs a death from tuberculosis, shall notify the local Board of Health within 48 hours, and upon the event of such notification the municipality is obliged to have the contaminated apartments disinfected. Official statistics show that the death-rate in Quebec City from tuberculosis is 1.99 per 1,000 of the population; that of Ottawa is 3.12, of Montreal 2.87, of Kingston 2.17, of Toronto 2.41, and of London 2.67.

FOREIGN NEWS AND NOTES

GENERAL.

A Serious Famine affecting 11,000,000 population is spread over the Shan-shi province, China.

Fever is Reported as committing frightful ravages in the Delagoa Bay district of Portuguese East Africa, where in the last 3 months there have been 500 deaths.

Famine in Siberia.—Famine has overtaken the greater portion of Siberia, and the suffering is terrible. Scurvy, diphtheria, and typhus fever are likewise ravaging the country.

Plague.—From Cape Colony, under date May 3, Sir Walter F. Hely-Hutchinson, the Governor, has telegraphed to the Colonial Secretary, England, that the total of deaths from plague up to April 27 was 217. This number includes 41 Europeans. If the cases at Mafeking which present plague symptoms are embodied in the report the total of cases would number 519, including 105 Europeans. A case of illness has occurred at Galata, the largest suburb of Constantinople, which is announced officially to be bubonic plague.

Malarial Fever.—The etiology and prophylaxis of this disease occupied 2 sessions of the Hongkong branch of the British Medical Society during the winter, and 4 means of prevention were outlined as adaptable there: the destruction of breeding places by repairing drains, the use of kerosene, the use of mosquito nets and the use of quinin. The quinin given in the manner recommended by Koch was used among the local police stationed in the new territory, and these men enjoyed marked immunity although stationed in malarial districts.

Plague.—Advices from Cape Town report fresh cases of the plague, and a resistance on the part of the Malay population to have patients removed from among them. Near Sialkote, India, a serious riot occurred, due to plague inspection of women, and a force of cavalry was summoned to quell the disturbance. Plague has broken out in an Australian asylum in which there are 1,000 inmates, and is reported at Brisbane, Perth, Adelaide and 1 case at Sidney was introduced on a troopship from Cape Town. The destruction of rats has been going on steadily.

Extermination of Rats.—According to Dr. Nagusha, a prominent Japanese bacteriologist, now a visitor in Chicago, who has made a study of the plague in Hong Kong, Bombay and in his native country, Japan has made an exhaustive investigation of the role played by rats in the spread of disease and that nation may appeal to civilization to wage a war of extermination on these most active of all propagators of contagious diseases. In the opinion of some this may be taking a step in the dark, as the rat is a scavenger and in the economy of nature is supposed to fill its place.

Medical Study for German Women has not met with the approval of the authorities. Until quite lately very few of the courses were open to women and those who did undertake medical study, whether at home or in Switzerland, were not permitted to take the State examinations giving license to practise. Of late some concessions have been granted, however, and the German daily papers announce that the first State examinations for women have been recently passed by Fraulein Mathilde Wagner at Freiberg University, and by Fraulein Democh at the University of Halle, both graduates at Zürich. Fraulein Martha Wygodzinski has passed recently the first physician preliminary medical examination that has ever been given to a woman at Berlin University.

Obituary.—HENRY VEVERS, of Hereford, England, April 5, aged 80. JAMES MARE TAYLOR, of Burslem, England, April 12, aged 57. JAMES WILDING, of Bristol, England, aged 41. GEORGE STONE, of Liverpool, April 21, aged 52. WILLIAM MOORE, of Dublin, Ireland, April 17, aged 67. JAMES BAMPFYLDE, of Bath, April 22, aged 36. JOHN BARCLAY, of Summerplace, S. W., April 17, aged 81. ARTHUR W. OGLE, at Charleston, Natal, April 19, aged 48. MICHAEL KEMBLE-TEBY, of Surrey, England, at Manaus on the Amazon river, S. A., March 25. EDWIN THOMAS WATKINS, of Cambridge-gardens, Wales, April 21, aged 76. RICHARD PRIOR WINTLE, of Oxford, April 16, aged 61. THOMAS WILSON, of Scarborough, England, aged 82. GEORGE FLEMING, of Combe Martin, Devonshire, England, April 13, aged 68. HORMAH RUBITSA, of Merida, Yucatan, April 24. Prof. KOHLSTOCK, in Tientsin.

Sanitation of West Africa.—A deputation on the sanitation of West African coast towns from the Chambers of Commerce of London, Liverpool and Manchester and the Liverpool School of Tropical Medicine, were received recently at the Colonial Office, Liverpool. The points submitted included proposals that the governments of the various colonies on the west coast of Africa should be invited to prepare schemes, with estimates, for the organization of sanitation in the coast ports of

regions occupied permanently by any considerable number of Europeans, especially with regard to disposal of refuse, drainage, removal of native huts when menacing health, and the institution of sanitary regulations for observance by the public, and at the same time the appointment by the Colonial Office of a sanitary commissioner to visit all the colonies and report to the Secretary of State the condition of each one and the measures of improvement taken by the local authorities; and that where new settlements are being planned, quarters for Europeans shall be arranged on the Indian cantonment model, and strict measures taken to prevent the overcrowding of these by the general public. In reply, it was stated that these subjects were receiving the careful consideration of the Government, but the question of cost was a serious one. It was proposed that the 3 chambers of commerce should each appoint one of their number to be a member of a committee of sanitary inspection, and that a representative from the Colonial Office should accompany it, and in addition they should have a scientific expert whom the 3 gentlemen should nominate. If the deputation accepted that view, the Colonial Office would refer to this commission certain questions, the first and most important being the sanitation of the colonies and its cost.

CONTINENTAL EUROPE.

Typhoid Fever in an epidemic form has broken out in several of the forts and villages in the neighborhood of Metz. The Eighth Bavarian regiment is reported to have 281 men sick with the disease and 16 have died.

Typhus in South Russia is reported as increasing among the village population of Bessarabia, due to famine arising from failure of the last harvest. Owing to lack of forage 70% of the farmers have lost their horses, and they lack seed for the spring sowing.

A Cooking School for Doctors under the management of Frau Hedwig Heyl is said to be in operation in Berlin and more than 100 prominent physicians from France, Russia, Italy and Germany have already taken the course. Branch schools are to be operated in other European capitals.

Long Skirts.—A campaign has been opened against trailing skirts by the medical profession of Munich, and in Dresden a similar movement is afoot, and it is reported that a Committee of the Town Council has ordered the police to fine any woman appearing in the streets with trailing skirts.

The Stuff Whereof Dreams are Made is reported to have been discovered by M. Vergson, a professor at the College de France, who claims that the circulation of the blood in the retina and the pressure of the eyelid on the optic nerve causes a color-sensation and the colors assume phantom shapes, which stir the memory.

The Discoverer of the Laryngoscope, Señor Mannel Garcia, is now 96 years old. He was a singing master, and in 1854 he presented a paper to the Royal Society of London, entitled, *Physiological Observations on the Human Voice*. His observations were carried out upon himself by the aid of 2 mirrors, essentially the same as now used by laryngoscope.

Camillo Golgi, Professor of General Pathology in the University of Pavia, has been unanimously invited by the medical faculty of the University of Turin to fill Dr. Bizzozero's vacant chair. His great work in histology, his studies in malaria and his reputation as Bizzozero's most distinguished pupil were recommendations not found united in other candidates.

Preliminary to Medical Course.—The German Government has been petitioned by the *Medicinische Gesellschaft* and 70 other medical societies to require a classical training as heretofore as a preliminary to a course in medicine. An effort is being made to prevent the graduates of the technical schools from being admitted to the medical course without further training.

Prof. Koch, of Berlin, who for several years has been studying various infectious diseases in other countries, has been called back to Germany to undertake the study of some serious epidemics of typhoid fever which have been prevailing in East Prussia during the past year. The investigation will be carried out in conjunction with Prof. Flügge, of the University of Breslau.

Röntgen Rays.—L. Benoist has announced to the Paris Academy of Sciences the law that the capacity of substances for Röntgen rays depends on their atomic weight, the greater this weight the higher the capacity. It is not affected by temperature, being the same for ice as for water, and is independent of atomic arrangement and chemie combination, and depends only on atomic weight.

Influenza in Germany.—Deaths from influenza seem to be very common in Germany, or else the causes of death are incorrectly reported. Influenza was first mentioned as a cause of death in the Kingdom of Prussia in 1859, in the last 2 months of which year 314 persons died from this cause. In 1892 the maxi-

mum number thus far reported in 1 year was reached, with 15,911 deaths. Of late years the number has been considerably smaller, amounting to 77,282 deaths in the past 10 years, however.

University of Berlin.—Dr. Fedor Krause, who has recently come to Berlin from Altona to take charge of the Surgical Clinic of the Augusta Hospital, has just been appointed *ausserordentlich Professor* in the University of Berlin. Dr. Krause is known in America from his operation (also suggested independently by Hartley of New York) of excising the Gasserian ganglion by the temporal route, and his exhaustive paper on joint tuberculosis. He was a pupil of Volkmann at Halle and before he was called to take charge of the surgical clinic at Altona, in 1892, he was for 3 years a professor at the University of Halle.

The Needle Swallower of St. Germain.—The Paris papers report the interesting case of a nurse maid, aged 16, named Julienne Landrieux, who since 11 years of age has given exhibitions of swallowing sewing needles. An apothecary of St. Germain-en-Laye has removed 120 needles from various parts of her body during the past 3 months, and according to the girl's estimate there should be several hundred still left in her body. She visited the Salpêtrière clinic, where her case was considered unique, but refused to enter the hospital, preferring to have the needles removed by her apothecary by means of a magnet and forceps.

Doctors Protest.—The sick funds in Leipsic have so lowered the doctor's fee that many of them have arisen in protest. These sick funds supply physicians to attend their members at a reduced nominal and inclusive fee. The doctors found their regular patients grow less as the sick funds increased. Some physicians had treated so many as 100 cases a day and received but 7 marks (\$1.75) in payment. For their protection they organized committees and quarrels arose between the representatives of the sick funds and these committees, resulting in the strike of the physicians. They have the sympathy of their brother doctors throughout Germany.

Antialcohol Congress.—In a report read before the Antialcohol Congress, opened at Vienna, April 9, Dr. Koerber, the president, stated that Austria paid twice as much for drink as it did for its army, that 50% of the lunatics in their asylums and 60% of their criminals owed their downfall to the use of alcohols, and that 50% of the children were in the habit of using strong drink. Dr. Meimert, of Dresden, said the mortality among medical men addicted to the use of alcohol and morphin, was greater than any other profession, and that drink was even a worse enemy to women than tight-lacing. Professor Forell held that the Boers of South Africa were better able to endure the hardships of war because of their almost total abstinence. All the governments, with the exception of England, were represented at the Congress.

Improved Milk Supply.—One of the largest examples of an extensive milk-supply station in which the production of milk is dealt with scientifically, both as regards hygiene and economy, is that of C. Bolle, in Berlin, who supplies milk at the rate of 7,000,000 gallons to about 50,000 families. This firm supplies milk, cream, milk from a special farm for infants, sterilized milk, Kefyr machine-skimmed milk, buttermilk, butter and cream cheese obtained from 130 farms with their 14,000 cows which supply the central establishment. Special officers supervise these farms, and the control and observation of the health of the cows is allotted to 4 veterinary surgeons. With the exception of the milk which comes from one of their own farms all the milk received is subjected to an improved Pasteurizing process which they claim does not interfere with the taste or chemical composition of the milk, but destroys all pathogenic microbes. The central station is furnished with a bacteriologic laboratory, a chemical analytic laboratory and a chemical technic laboratory. In 1899 over 30,000 tests were made in the chemical analytic laboratory alone, and 1,500 guinea pigs were used in the bacteriologic laboratory, mainly in testing for tuberculosis.

GREAT BRITAIN.

Cost of Vaccination.—The Falmouth Board of Guardians reported April 19 that the cost of vaccination by them during the past 12 months has amounted to £527.

Measles and Chickenpox should be removed, it was decided, from the schedule of diseases notifiable under the Infectious Diseases Notification Act, at a late meeting of the Dartmouth Town Council, England.

Smallpox has been introduced into Nottingham among the Mormons there by letters, it is thought, from Salt Lake City, and this outbreak has been the means of spreading the disease through a Mormon conference held in Nottingham to 6 other places; though in single cases only.

Smallpox.—The new cases admitted to the Glasgow Hospital are being steadily reduced. The total under treatment in hospital on April 17 was 185. Since the beginning of the outbreak there have been 1,720 cases and 222 deaths. At Newcastle,

England, 23 cases of smallpox from 9 households have been reported. Smallpox is reported at Cardiff, Wales, and the sum of fourpence has been offered for every rat caught within the sanitary district there.

Exclusion of American Beef.—The report that the English Government intends to depend exclusively for 6 months on homebred beef for the British Army supplies after the beginning of June has been confirmed by the British War Office. This new rule applies only to refrigerated beef, of which the total weekly supply for the army is only 200,000 pounds; this is barely 2% of the weekly imports of refrigerated beef into England from the United States.

Destruction of Rats on Ships.—Some successful trials have been made recently in England for this purpose, with an apparatus for extinguishing fires which generates and floods the hold with sulfurous dioxide gas (SO₂). This gas, being much heavier than air, diffuses slowly, and experiments show that the rats retire before it, and when the hold is opened they are found dead at the highest parts near the exit pipes, an important point, as in other methods they might die in inaccessible places. The only ill effect noticed was the tarnishing of the gilding.

SOCIETY REPORTS

XIX GERMAN MEDICAL CONGRESS.*

HELD AT BERLIN, APRIL 16, 17, 18, 19, 1901.

The Nineteenth German Congress for Internal Medicine met in Berlin April 16-19, inclusive. The sessions, 7 in number, were of considerable interest as may be seen by a glance at the program. Unfortunately the limited time allowed the presentation of but 48 of the 70 papers announced. About 450 physicians were present.

FIRST SESSION.

Address of the President of the Congress, PROF. SENATOR (Berlin) reviewed the progress in internal medicine during the nineteenth century, and showed that it was in the sphere of diagnosis that the advance was most marked. As evidence of this he contrasted the very extensive exhibition of scientific instruments in the adjoining rooms with those in use at the beginning of the century, the entire collection of which the physician could carry to the bedside with him. But has the progress in the treatment of disease been comparable to that in its diagnosis? He answered that the period following the revelations of pathologic anatomy during which time physicians despaired of the efficacy of their treatment has been followed by one extending over the past 25 years during which the advance in therapeutics has been very great. This has been due to the development and application of the scientific methods of studying diseases, allowing deeper insight into their nature and recognition of their earlier stages. The treatment of the parasite diseases, myxedema, locomotor ataxia, of tuberculosis especially, the use of antitoxic serums, and the advances in the sphere of prophylaxis, were cited as some of the most striking illustrations of the progress made in the treatment. He reminded his hearers of the value of symptomatic treatment and of the danger of treating the disease well but the patient poorly.

The President then greeted the Honorary Guests, Dr. Von Cöler, Physician-in-chief of the German Army; Dr. Plstor (Berlin), of the Prussian Ministry, and others.

Prof. Naunyn (Strassburg), chairman of the committee in charge, then read the official notices.

General Topic, Cardiac and Vasomotor Therapy.—(Mittel.) GOTTLIEB (Heidelberg) considered the question from the point of view of experimental pathology—any disturbance of the circulation results in a pathologic distribution of the blood. To restore to normal this distribution is the office of cardiac and vasomotor drugs, and the choice of a drug should be governed by the cause producing the disturbance. In vasomotor paralysis of central origin such as occurs in acute infectious diseases, following chloral, alcohol, and other narcotics there results congestion in the splanchnic area, anemia in the brain and peripheral vessels; the pulse is small, the heart feeble. The proper drug in such a case would not be a cardiac stimulant since the heart lacks not ability to work but blood to work upon, but a drug causing vaso constriction in the splanchnic area, thus furnishing the heart with blood to pump into the anemic areas, thus restoring the distribution to normal. Such drugs are strychnin, caffeine and camphor. Local cold is also an effective measure. These drugs differ considerably in their action; strychnin, e. g., dilates the vessels of the brain and skin.

Cardiac Stimulants increase the ability of the heart to do its work, the pulse volume is increased, the overdistended veins are relieved and more normal distribution of blood

*Specially reported for AMERICAN MEDICINE by DR. CHAS. P. EMERSON with grateful acknowledgment of indebtedness to PROF. EWALD, editor of the *Berliner Klinische Wochenschrift*, for his assistance in the preparation of this report.

results. Of these drugs **digitalis** is most important, and its introduction was justly considered by Kursmanl to equal in importance that of vaccination. G. described carefully the therapeutic and toxic stages of the action of digitalis. In the therapeutic stage the increase in work done by the heart is the important factor; its action on the vessels (constriction) less so; the pulse becomes slower, the blood pressure rises. G. then described the experiments upon the hearts of warm-blooded animals performed during the past 2 years, both by the method of isolating the heart (*überleben des Herz*) and by cutting the peripheral vessels out of the circulation. In the latter case the carotid artery and jugular vein on the right side were united; a manometer was connected with the left carotid; the aorta was then tied. In such an animal all vasomotor phenomena were excluded since the pulmonary vessels do not respond to such stimuli. He showed blood-pressure tracings from such experiments showing the work done after digitoxin was increased 3 or 4 times. This, G. claims, is the result of stronger contraction of the ventricle which thus empties itself more perfectly—the absolute strength of the heart is not increased, but it uses its strength to better advantage. It is aided somewhat by the stimulation of the vagi, causing a slowing of the pulse, allowing better filling of the heart. The result to be striven for by the use of digitalis is therefore a moderate slowing of the pulse allowing complete filling of the ventricle during diastole, followed by a complete systole. All substance resembling digitalis in action produce also some vasoconstriction. G. described his experiments to prove this point. Therapeutically this action is favorable, although of minor importance, but when extreme may, by increasing the peripheral resistance to too high a point, burden the heart considerably. He then briefly considered other drugs.

Camphor not alone is a vasomotor but a direct cardiac stimulant increasing its irritability, tiding it over crises as was beautifully shown in one chart exhibited. It has little effect on the normal heart.

Caffeine also is a direct cardiac stimulant but by no means a substitute for digitalis as some French writers claim. On the isolated heart its action is much less marked. It increases the ability of the heart to work against pathologic resistance and may be of use in conditions associated with increased arterial pressure. It shows no action by normal blood pressure.

Alcohol has no direct cardiac action unless in large doses in which case it is directly toxic, but in smaller doses it favors the heart's action by producing vasodilation thus diminishing peripheral resistance, and as a specific vasomotor drug is of value in heart cases where the increased arterial pressure prevents complete emptying of the left ventricle. In conclusion he emphasized the value of experimental pharmacology clinical medicine by discovering the reason for the pathologic blood distribution and indicating the proper drug to restore this to normal.

2. SAHLI (Bern) considered the above topic from the clinical side. In the introduction of his paper he emphasized the point that in the future the physician should study the disturbances of function rather than limit himself to pathologic anatomy as was the tendency at present, since in the former field was more to be gained than in the search for specific remedies. After the exact diagnosis of the disturbance in function had been made the treatment should then be directed with a view to restore the normal functional conditions. It was from this point of view that he approached his subject, the general pathology and diagnosis of disturbed function in the different congestions of the circulation with respect to the indications for cardiac and vasomotor stimulants. The result of disturbed function is always a congestion of blood somewhere in the vascular system. He separated (1) **Cardiac congestions** resulting as well from insufficiency of the heart's systole as from disturbance of its diastole. (2) **Respiratory**, from diseases of the respiratory organs and intrathoracic exudates. S. believes this group really is a subdivision of the first. (3) **Vasodilator congestions** from paralysis of the smaller vessels of the greater circulation. The cardiac congestions were further subdivided according to the arterial pressure into those with **high tension** and those with **low tension**. S. described at length the congestion of the splanchnic area which is important since there may be no external symptoms and in its early stages is often overlooked. He pointed out the importance of, in all these congestions, recognizing the incomplete as well as the complete picture, since in either case digitalis may be indicated. He discussed at length the use of digitalis, which he considered had the same importance in a physician's practice as Sydenham had claimed for opium. He emphasized the point, however, that its proper use was, in itself, considerable of an art. It is indicated in cases of very slight congestion, and in many cases the best results from its use are not obtained, since the physician prescribes it too late. In the congestion with high arterial tension it is not contraindicated, since it not only removes the congestion, but diminishes also the pressure. It is contraindicated in but one type of congestion that in extreme noncompensated valve disease where the muscle-strength is exhausted. In many cases the heart drugs are combined with advantage. He considers the dangers of long-continued use of digitalis overestimated; cumulative action need be feared only when the case is poorly watched; with careful attention digitalis can be prescribed for

long periods of time, thus prolonging the patient's life for years. The curative action of digitalis, that is, the fact that its beneficial results continue even years after its use is discontinued, S. explains by saying that the drug breaks the *circulus vitiosus* produced by the effect of the congestion upon the heart's muscle itself. Digitalis forces the heart to greater activity, thus improving the coronary circulation. He next mentions the factors hindering the action of digitalis, one of the most important of which is *essential* congestion, as opposed to that resulting from disturbed compensation. By essential congestion he understood one due to a cause which cannot be compensated for even though the heart had very good muscular power and the systole perfect; such a condition as may result from extreme insufficiency of a valve. The action of digitalis in such a case is insufficient and transitory. Failure to recognize essential congestion has resulted in incorrect ideas concerning the difference in the action of digitalis in the various valve lesions. S. does not believe that the difference in the results of the use of digitalis in lesions of different valves is based on the hydraulic relations of the valve, but that the cases of aortic insufficiency after years of comfort come to treatment with the condition of essential congestion and many complications.

In discussing dosage S. distinguished large doses which affect both systole and diastole, and small doses affecting systole alone.

Then followed a brief discussion of other drugs. **Caffein** and **camphor** have clinically little if any action on the heart but are valuable in congestion due to vasodilation. They aid also by improving respiration and the former by its diuretic action. **Alcohol** lightens the work of the heart by diminishing peripheral resistance, but owing to its only transitory action cannot be relied upon as the only drug in high tension congestion. S. considers alcohol useless in circulatory disturbances of infectious diseases since its action on the vessels is similar to that of the toxin of the disease, but it is valuable in the chills during fever and after exposure to cold. In conditions of collapse also alcohol is not useful except the condition be one accompanied by normal or high pressure. **Ether** has an action similar to alcohol. Mention was also made of **atropin**, **strophanthus**, et al. Combinations of cardiovascular drugs were recommended and also the necessity of applying all useful therapeutic measures of whatever nature in the treatment of the case.

SECOND SESSION.

Discussion on the Preceding Two Papers.—This discussion was of special interest since so many took part, and the points were so thoroughly debated.

SCHOTT (Nauheim) claimed that it was not easy to separate vasomotor and cardiac stimulants—the essential thing is to stimulate the heart which will, when more forcibly contracting, arouse the vasomotor nerves to action. The latter are a subordinate factor.

JACOB (Cudowa) discussed the question why digitalis has so little effect in severe aortic insufficiency. He thought that the heart had already exhausted its strength and was therefore unable to respond to the added stimulus.

LANG (Marienbad) considered the poor preparations and the deterioration from age, especially of the infusion, responsible for many cases where digitalis apparently fails. He recommends combining alcohol with digitalis.

HEINZ (Erlangen) reported animal experiments which showed the finely powdered digitalis is more efficient than the coarsely ground leaves.

GOLDSCHIEDER (Berlin) believed in long-continued administration of small doses of digitalis, *e. g.* 0.1–0.2 gms. daily for months. In cases with frequent breaks in compensation the doses should not be suddenly stopped but gradually during weeks diminished. He considered digitoxin worthy of more extensive use.

HIRSCH (Leipzig) reported his experiments in conjunction with **BECK** upon the **Viscosity of the Blood and the Clinical Importance of its Determination**. Viscosity and specific gravity do not always run parallel. The former depends on the serum as well as the corpuscles. When fluid flows through a tube the central portion moves fastest, the peripheral portions in contact with the tube not at all; hence the fluid moves through a tube of its own substance, and its viscosity depends on its nature (the fluid's) and the temperature. Former investigators made the mistake of using defibrinated blood. Hirsch and Beck had studied the viscosity of the unchanged blood, its relation to food, to temperature, but especially to changes in the heart's muscle. The cardiac hypertrophy in nephritis is seen in the right ventricle as well as the left; its cause must be either a directly increased stimulation of the heart's muscle or an increase in the viscosity of the blood.

EWALD (Berlin) mentioned the importance of relieving the congestion in the vessels before the digitalis can exert its best effect. To accomplish this it is useful to remove, by puncture or scarification, the fluids in the tissues. He exhibited a rubber apparatus introduced by **Dehio** (Dorpat), and recommended it for this purpose. Ewald emphasized the fact that after all heart drugs gastric disturbance may follow, even when the same are given per rectum. **Adonis vernalis** cannot replace digitalis. He has often seen digitalis manifest the desired action only when preceded by morphia. The latter he considers a very valuable drug in heart disease.

PICK (Prag) stated that the vasoconstriction following the use of digitalis results in a diminution of edema. He recommended **hydrastis** as a good drug to constrict the peripheral vessels.

UNVERRICHT (Magdeburg) emphasized the importance of the preparation of digitalis. He recommended preparations made from digital. grandiflor. as richer in digitotoxin than those from digital. purpur., and considered the **Golaz dialysate** excellent, since it could be considered to have a constant content of the glucosid. Best of all he thought was digitotoxin. He could not recommend long continued use of digitalis, but thought what a short course of the drug would not accomplish could not be accomplished. He characterized the results of long use as digitalismus, and considered the gastric symptoms, present also after administration of the drug per rectum as of central origin.

ROSENSTEIN (Leyden) recommended **strophanthus** as next in importance to digitalis. He had used it with excellent results. Also it can be used in smaller doses than digitalis and without the gastric disturbances. Camphor, since its effects are so transitory, is suitable at critical periods. He suggested that **Hirsch** see if the changes in viscosity of the blood could explain the heart murmurs heard in anemia; he doubted that viscosity could explain heart hypertrophy.

NAUNYN (Strassburg) stated that according to his experience the infusion of digitalis was the most reliable preparation. He could not at all recommend digitoxin. He had obtained excellent results from the long-continued use of small doses (0.2 gms. per day) of digitalis, and if proper care were exercised, considered the dangers of digitalismus and the gastric disorders slight.

GRÖDEL (Nauheim) agreed with the last speaker. He had never seen digitalismus either in the sense of a condition comparable to morphinismus, or of a blunting of the faculties.

ROSENFELD (Stuttgart) has returned from the use of digitoxin to that of infusion of digitalis. To continue the effects of a course of digitalis he uses **Adonis vernalis**.

BÄLTZ (Tokio, Japan) recommended the infusion of digitalis. **Strophanthus** he considered next in value. The latter is very serviceable where rapid action is desired. He recommends **Adonis vernalis**.

OTT (Prag) mentioned the fact that digitalis varies according to its source.

The discussion was then closed by short remarks by **GOTTLIEN** and **SAHLI** answering the objections raised in the course of the discussion to points in their papers. **Sahl** repeated the advantage of using all the drugs discussed. **Strophanthus** he had used with good results, but its preparations are inconstant and it can cause diarrhea. He could not consider digitoxin a complete substitute for digitalis.

Testing the Functional Ability of the Heart and the New Points of View Resulting. **SMITH** (Schloss Marbach) determines the size of the heart to test its functional ability. He spoke at length on the causes of the dilation, and mentioned several functional neuroses as results.

The Objective Effects of Modern Heart Drugs on the Cardiac Function. **HOFMANN** (Schloss Marbach) exhibited many charts showing the effects of many drugs on the normal heart, on the pulse and blood pressure (measured with **Gärtner's** tonometer).

Blood Pressure in the Treatment of Chronic Heart Disease. **SCHOTT** (Nauheim) found in the cases where gymnastic treatment was indicated an increase in blood-pressure following the same. (Used **Gärtner's** tonometer.) In cases of arteriosclerosis, advanced myocarditis, aneurysm of the heart or aorta a fall in pressure followed the baths and exercises, proving them contraindicated in such cases.

THE AMERICAN ASSOCIATION OF GENITOURINARY SURGEONS.

HELD AT OLD POINT COMFORT, VA., APRIL 30, MAY 1 AND 2, 1901.

[Specially reported for AMERICAN MEDICINE.]

Address by the President.—**DR. SAMUEL ALEXANDER**, of New York, delivered his address, in which he called the attention of the Association to the death of **DR. FESSENDEN F. OTIS**, a former president of the Association. He then presented the subject "**The Treatment of Intra-peritoneal Traumatic Rupture of the Bladder by Laparotomy and Suture.**" His report consisted of 45 cases, with 23 deaths and 22 recoveries. After taking up the critical examination of the cause of death he considered the etiology. He condemned the routine methods of diagnosis, especially the injection and the inflation tests. Both conditions required operation and he advised that the operation should be begun by exploring the prevesical space, and if this was found to be healthy the incision should be extended upward and the abdominal cavity opened. He advised most thorough irrigations of the cavity with hot normal saline solutions. To effectually close the bladder wound it was not so much a question of the material used as of the manner in which it was introduced. In the case he reported silk was used and the rent was closed by a layer of interrupted **Lempert** sutures and **matrass** sutures.

Report of a Case of Nephrectomy for Adenocarcinoma, with remarks on Combined Cystoscopy and Segregation as a Guide to the Earlier Surgical Intervention.—Dr. JOHN P. BRYSON said that in this case there was only the absence of a vesical symptomatology to justify exclusion of the bladder as a source of the hemorrhage, and this was far from exclusive. A vesical papilloma situated behind and above the trigone may have produced the same kind of manifestation. Urethral and prostatic hemorrhage were easily excluded and the vesical symptoms accompanying the entire hemorrhage were referable to the clotting of blood in the bladder. There was entire absence of a history of renal symptoms during the entire attack. The first satisfactory step in the location of the source of mischief was in cystoscopy. This revealed a normal bladder and 2 normally situated ureteral orifices. While it was true that the injection of the left orifice and the gradual clouding of that part of the cystoscopic field as the observations progressed raised strong suspicion of the source of the bleeding, and while it was equally as true that subsequent and more extended observation might have given more conclusive evidence in the way of a blood spurt when the bleeding was more active, the real and practical value of the cystoscopy was in excluding that viscus as the source of the bleeding and preparing the way for a segregation. Segregation with the Harris instrument was easily and almost painlessly done and gave evidence of the highest value in determining the justification, not to say the necessity, for doing an exploratory operation. In looking at the tables presented he thought that one could easily conclude that (1) the 2 specimens came from the same kidney; (2) the right kidney was functioning normally; (3) the left kidney was the source of the hemorrhage, and (4) the left kidney was in such a state of irritation as to determine a unilateral polyuria, albuminuria, mild bacteriuria and pyuria.

The lower specific gravity, the greater quantity and the amount of albumin out of proportion to the amount of pus and blood, tended strongly to eliminate the ureter and pelvis as the seat of the mischief and thus to carry it quite into the renal parenchyma. It will be noted that no tests were made to determine this epithelial adequacy and the renal permeability; omissions which might today be open to criticism. Of cryoscopy he had not yet had much experience but he instituted a phloridzin test with a lively appreciation of its practical value. In at least 3 cases it had been of excellent service and it was impressed upon him that it is, in connection with the separation of the urines, capable of greatly enlarging our field of direct observations of renal capability. In the effort to determine the relative adequacy and permeability we have been accustomed to give the greater weight the quantity and specific gravity of the separated urines. The ascertaining of the relative fractional capabilities of the 2 kidneys, does not give us all the information required in regard to the kidney which is to remain and do the whole work of excreting. The matter of the relative excretion of urea may have been too much overlooked but we cannot well tell how well a kidney may be doing until we know what the blood brings to it and the antecedents of urea in the blood are, so far as we know, influenced by so many and varying conditions that it is difficult to bring it within a working formula.

The Value of the X-ray in the Diagnosis of Renal Stone: Report of 4 Cases.—Dr. PAUL THORNDIKE, of Boston, made a brief report of these 4 cases, not in order to show beautiful x-ray plates of kidneys containing calculi, but because the cases were studied by the same people under the same conditions and show results partly negative in character, which he deemed of enough interest to justify their presentation. It seemed to be true that stones which contained mineral salts are much more readily photographed than others, and yet 2 of these cases were made of layers of uric acid and in both distinct shadows were evident, while in 1 of them the stones were shown with considerable clearness, probably due to the admixture of urates in the former and of calcic phosphate in the latter case. It would seem that there was something to expect from x-ray photography in connection with the diagnosis of renal stone, for in those cases, even when there is every clinical reason for thinking that a stone, if present, is composed of uric acid, it evidently needs only a small amount of urates or some other mineral salt to give a shadow which, although it does not show for much on the plate, is still capable of being recognized with some degree of precision by properly experienced observers.

Rupture of the Urethra: A Report of Cases.—Dr. JAMES R. HAYDEN, of New York, stated that the treatment of rupture of the urethra was either operative or non-operative, depending upon the nature and extent of the injury. If there is a marked hemorrhage from the meatus, with complete retention of urine or difficult and painful urination and bloody urine, associated with difficulty or inability to enter the bladder with instruments, and also if there is a fluctuating perineal tumor with perhaps a rise of temperature, then immediate perineal section and bladder drainage are indicated. If, on the other hand, hemorrhage is slight, urination free but somewhat painful, the urine tinged with blood or containing light, bloody flakes, and catheterization normal, except perhaps causing some pain at a local spot, which feels slightly roughened or thickened, and little or no perineal tumefaction, then catheterization, irrigation and urinary antiseptics should be resorted to, with rest in bed, and the first sign of urinary extravasation looked for, in which event external urethrotomy with vesical drainage should be resorted to. Partial suture of the urethra must always be

employed in cases of complete rupture, in which the divided ends of the canal are widely separated, otherwise it is not essential.

Inversion of the Tunica Vaginalis for Hydrocele.—Dr. R. H. GREENE, of New York. He stated that within the last 10 years a new operation for the radical cure of hydrocele had originated in France, and its use was being advocated by a large number of surgeons at the present day. About 1 month ago he had operated upon a patient by this method, which was as follows (according to the description by Winklenan): "Incision down to sac of hydrocele. Incision of sac $\frac{3}{4}$ cm. long from above downward, more toward the upper than the lower pole. After the hydrocele fluid has escaped, the testicle is drawn completely out, so that the entire tunica vaginalis is turned inside out. The incision in the tunica then comes in relation with the insertion of the spermatic cord into the testicle, which incision may be shortened by a suture or two so that the testicle cannot return through the opening in the tunica. The tunica and testicle are replaced in the scrotum with the result that the entire serous surface of the tunica vaginalis proper faces toward the loose connective tissue of the tunica vaginalis communis, with which it may soon become fused, the testicle lying outside the tunica, between the tunica and the scrotal wall. This bloodless operation is concluded by closure of the external wound in the scrotum. In the majority of cases the testicle is dislocated upward as the result of the operation." Drainage is not required. The only complication mentioned by any writer is "a slight periorehifc swelling, due probably to the saturation of the loose connective tissue interspaces with the secretion of the serous membrane, and which may persist for some time." This operation can be performed for double hydrocele by means of a single scrotal incision, followed by an incision through the membrane separating the 2 sides of the scrotum.

A Case of Unusual Bacillus or Abnormally Behaved Gonococcus.—Dr. J. P. TUTTLE, of New York, related the case of a patient, 50 years old, who gave a protracted history of urethritis and who was taken with symptoms of a severe cystitis, and who discharged large quantities of pus and mucus in the urine. No results were obtained from inoculation experiments. In culture experiments a mixed form of coccus, similar to gonococcus but resembling more the diplococcus found in cerebrospinal meningitis, was found. It differed from the gonococcus in that it was rapidly destroyed in an acid media but thrived in an alkaline one.

Partial Excision of the Bladder and Urethra for Carcinoma.—Dr. TUTTLE reported this case of cancer of the rectum which involved the urethra, the prostate and possibly the wall of the bladder.

Clinical Observations in Syphilis.—Dr. JOHN A. FORDYCE, of New York, had recently seen gangrene of the initial lesion in a patient who presented no phimosi or paraphimosi, who was not addicted to alcohol and who was in good health. During this process the induration disappeared only to return upon cessation of the process. Chlorinated soda solutions he had found to be rapidly beneficial, probably due to the penetration into the tissues of the chlorine which was set free. The cure was facilitated by the use of iodoforn. Certain forms of lichen planus may readily be mistaken for the popular or papulo-aquamous syphilide, as in a case reported by him there were grouped papules with circinate or gyrate outlines having a pigmented center and surrounding areas of pigmentation. This resembles in a very striking manner the relapsing syphilide. He related a case of a patient in whom a very careful examination showed a pronounced thickening and exquisite sensibility of both ulnar nerves and atrophy of the muscles of the ball of the left thumb. These conditions together with the eruption which one would not expect to encounter in syphilis pointed strongly to lepra, an opinion which was confirmed by the presence of lepra bacilli in a piece of tissue excised from one of the infiltrated patches. Mercury administered intramuscular, caused a disappearance of the eruption. Crocker and others have noted a rapid disappearance of leprosy nodules after intramuscular injections of mercury.

A Case of Prostatectomy.—Dr. JAMES BELL, of Montreal, cited this case which was of interest because of the atrophy of the testicle 50 years before operation and the demonstration at the time of operation that practically the whole of the prostatic enlargement was in the left side of the prostate and, therefore, the Bottini incision could not have had any effect upon this enlargement.

What I Have Learned from 161 Operations for the Relief of Benign Hypertrophy of the Prostatic Gland.—Dr. ORVILLE HORWITZ, of Philadelphia, read this paper. The various operations he performed were classified as follows:

Vasectomy.—Twenty-eight cases with no deaths. The results obtained lead him to make the following conclusions: 1. As a curative measure vasectomy is of little value, and is not to be recommended. 2. The operation appears to be most effective when performed on patients between 50 and 60 years of age, in whom the prostatic enlargement is of the soft glandular variety. The genital organs of patients of this age are usually in a healthy condition, and the individuals usually object to any operation that is liable to interfere with their sexual functions. 3. The operation is serviceable in those cases where the physical condition of the patient renders him unfit to undergo surgical procedure, who will not submit to a mere serious proceeding, who has to depend upon the frequent use of the cath-

eter, or who suffers from periodic attacks of orchitis. 4. Sexual vigor is not diminished by the division of the vasa deferentia. 5. Atrophy of the testicle does not result from the operation.

Castration.—Forty-four cases, 2 deaths. The following deductions he thought were warrantable: 1. In selected cases, bilateral castration will always hold a place in genitourinary surgery as a means of removing the obstruction caused by prostatic hypertrophy. 2. The operation is indicated in men of advanced years, whose sexual powers are lost, the overgrowth of the prostate being glandular in character, or who have reached that period of life where the passage of a catheter becomes difficult and retention of urine not uncommon, or if advanced disease of the bladder and kidneys does not preclude a serious operation. 3. The primary effect of castration on the glandular prostatic hypertrophy is first to relieve congestion, and secondarily to cause atrophy. 4. When the prostatic enlargement is fibrous in character no benefit is derived from the operation, and the employment under these circumstances is not to be recommended. 5. Orchidectomy in very old subjects with extensive disease of the bladder and kidney is attended by a large mortality, and is a very serious operation.

Suprapubic Cystotomy.—The indications for a suprapubic cystotomy in prostatic hypertrophy may be summarized as follows:

1. When retention exists, and it is found possible to evacuate the urine by the usual methods that are employed for the purpose. 2. As a temporary palliative means in those patients who have reached the "break-down part of catheter life," whose resisting powers have disappeared, and who suffer from secondary involvement of the bladder and kidneys, and whose condition is such as to preclude the resorting to any more serious operation, but require immediate relief from the symptoms caused by the obstructing prostate gland. 3. In feeble old men, in whom the enlargement of the prostatic growth is fibrous in character, which renders the introduction of a catheter difficult, and the passage of the Bottini cautery knife impossible, in whom there is long-standing chronic cystitis, with probably diseased kidneys, which precludes a prostatectomy, suprapubic cystotomy may be selected as the least dangerous and most satisfactory operation which can be employed.

Prostatectomy.—His conclusions he summarized as follows: 1. With the exception of ligation of the internal iliac arteries, prostatectomy is the most dangerous of any operation that has been recommended for the relief of prostatic obstruction, due to hypertrophy. 2. Suprapubic prostatectomy is the safest method, especially if combined with perineal drainage. 3. The best period to select to perform this operation is early, before the breakdown of catheter life and serious complications have supervened. 4. Either an atonied or contracted bladder of long standing, associated with chronic cystitis, attended by the formation of sacs or pouches, are contraindications for the operation. 5. A partial prostatectomy is indicated in those cases where a valve-like lobe exists, which interferes with urination, or where there is partial hypertrophy of one of the lobes. 6. A complete prostatectomy is indicated where a hypertrophy of the 3 lobes has taken place, especially if the condition is associated with tumor formation, projecting well back into the bladder, or has given rise to a stenosis of the prostatic urethra. 7. Perineal prostatectomy is best suited in those cases where the enlargement of the lateral lobe has a tendency to grow toward the rectum or obstruct the urethra. 8. When performing a perineal prostatectomy, the semicircular incisions advocated by Pyle, or the transverse cut of Nicoll is the most satisfactory. 9. The removal of a portion of a small, hard fibrous prostate gland by means of the perineal route is a very difficult operation. There is danger of not only extirpating the entire gland, but the prostatic urethra as well.

Bottini Operation.—From the results obtained by the experience that he recorded in his paper, he felt warranted in forming the conclusions as follows: 1. Success following the Bottini operation depends on having perfect instruments, a good battery, the necessary skill, and the employment of a perfect technic. 2. In suitable cases the Bottini operation is the safest and best for the radical cure thus far devised for the relief of prostatic hypertrophy. 3. It is often very efficacious in advanced cases of obstruction as a palliative measure, rendering catheterism easy and painless, relieving spasm, lessening the tendency to constipation, and improving the general health. 4. It is of special service in the beginning of obstructive symptoms due to hypertrophy of the prostate gland, and may be regarded as a means of preventing catheter life. 5. It is indicated in all forms of hypertrophy, except where there is a valvular formation, or where there is an enormous growth of the 3 lobes, associated with tumor formation giving rise to a pouch, both above and below the prostate gland. 6. Where the bladder is hopelessly damaged, together with a general atheromatous condition of the blood vessels, associated with polyuria, results are negative. 7. Pyelitis is not a contraindication as a resort to operation. 8. The character of the prostatic growth has no bearing on the results of the operation.

Some of the Conditions Following the Bottini Operation for Prostatic Obstruction.—Dr. L. BOLTON BANES, of New York, brought out the following points which he considered of importance: 1. The muscular impediment which almost immediately followed the removal of the instrument. In order to overcome this difficulty he had made a series of metal cath-

eters patterned after the Trendelenberg searcher, with solid tips in order that the instrument may be sterilized. 2. The process of repair, as witnessed with the cystoscope, begins and proceeds as under ordinary aseptic conditions. A specimen removed from one of his patients was then shown which demonstrated that the grooves made had immediately relieved the mechanical obstruction. It was his opinion that the spontaneous urination which followed the operation was due, not only to the formation of the grooves, but to the contraction of the cicatrices and to atrophy of the gland tissue. 3. The decided necessity for after-treatment. Patients usually come for treatment with chronic catarrh of the prostate, seminal vesicles, bladder and urethra and the after-treatment in these cases should be continued until all the foreign material has disappeared. Out of 42 cases he had 3 deaths. His explanation for these deaths was "bad judgment in operating." A parenchymatous prostatic abscess existed in 1 case and this could not have been diagnosed. In another instance death occurred in an old man who insisted upon the operation.

Officers.—President, Dr. W. T. Belfield, of Chicago; Vice-President, Dr. Paul Thorndike, of Boston; Secretary, Dr. James R. Hayden, of New York; Member of Council, Dr. William K. Otis, of New York. Next place of meeting, Atlantic City.

AMERICAN GASTROENTEROLOGICAL ASSOCIATION.

FOURTH ANNUAL MEETING AT WASHINGTON, D. C., MAY 1, 1901.

[Specially reported for AMERICAN MEDICINE.]

Syphilis of the Liver.—Dr. MAX EINHORN reviewed the literature covering liver disease in connection with syphilis. Up to the seventeenth century the impression prevailed that ulcers of syphilitic origin were the result of bad humors of the body. A review of the pathology of this condition was made, together with a report of 34 cases. Hepatic syphilis was grouped under gummatous, syphilitic cirrhosis and syphilitic disease accompanied by icterus. In a certain case a patient was cured by treatment with sodium iodid and inunctions of mercury. Syphilis of the liver could be absolutely diagnosed when gummatous are present. Gummatous are easily mistaken for malignant neoplasms. Pain is present in the right hypochondrium, constant or spasmodic, sometimes simulating gallstone colic. There are disturbances of digestion with loss of weight, the organ is found swollen. Later there may be evidences of amyloid degeneration; the spleen is not always enlarged; treatment, potassium iodid or sodium iodid, and like preparations. The hygiene of the patient should be well looked after.

Discussion.—J. C. HEMMETER thought the paper was a classic, systematizing as it did so much valuable literature in one article.

Dr. EDWARD QUINTARD reported a case of a small tumor with absence of polymorphonuclear neutrophiles. He believed that Dr. Einhorn's treatment was good.

It seemed to Dr. LICHTY as if, in the diagnosis, one would have to fall back on the therapeutic test. He likewise believed in the iodids and the antiluetic treatment.

Dr. HEMMETER said that out of 3 cases of syphilis of the liver that came under his notice, there was 1 in a man who, instead of having supposed tuberculosis of the lung, had suffered from gumma of the lung which had torn the bronchial tube.

The German Clinics of Today.—Dr. J. C. HEMMETER was of the opinion that every physician should familiarize himself with the *modus operandi* of the disease and its influence on the patient. The study of the patient is paramount. He went over the different processes in the German clinics. He thinks it necessary that there should be established in this country a journal dealing principally with dietetics, medical treatment, and clinical, experimental and pathologic research.

Discussion.—Dr. QUINTARD thought the suggestion a timely one, and Dr. EINHORN spoke of the necessity for a closer study not only of scientific methods, but of curing the patient. Dr. AARON likewise endorsed the proposition.

Dr. HEMMETER's idea is that the paper shall find its birth in this society.

In the absence of the authors, the following papers were read by title: **Etiology of Hepatic Sclerosis**, Dr. A. L. BENE-DICT; **Treatment of Gastric Ulcer**, Dr. D. D. STEWART; **The State of the Gastric Secretion in Chronic Rheumatism and Rheumatoid Arthritis**, Dr. FRANK H. MURDOCH.

Spastic Ileus.—Dr. EDWARD QUINTARD, said that spastic ileus is not so rare as is supposed. The similarity between the spastic and mechanical forms was brought out well, as well as the methods of differential diagnosis. In 2 of his cases there had not been fecal vomiting. He believed in a pathologic antiperistalsis, and related certain cases to prove that such was the case. While he thought that the theory of Hagenet explained many of the cases of fecal vomiting in mechanical ileus, he likewise believed that the theory of antiperistalsis came very nearly covering the ground in spastic ileus.

Discussion.—Dr. ROSE wished for a better understanding of the pathologic condition of the splanchnic nerves. Warm water

and opiates, together with the inflation of the rectum with carbonic acid gas, were remedial measures of merit. With the latter he had good results in dysentery and pertussion.

Some Cases of Tetany.—WILLIAM GERRY MORGAN gave an intelligent exposition of the etiologic factors and referred to the dehydration theory. Tetany is an affection characterized by tonic and occasionally clonic spasms in the hands, arms, forearms, legs and feet, and in dangerous cases, neck, face, larynx and body. He distinguished epilepsy from gastric tetany and reported several cases of interest.

Discussion.—Dr. ROSE remarked that one would find in English literature a great many cases reported in connection with dilation of the stomach. In speaking of compensation in dilation of the stomach, he said that compensation may fail and then there are symptoms of acute dilation.

Report of 2 Cases of Acute Dilation of the Stomach.—Dr. JULIUS FRIEDENWALD. (This will be published in a future issue of AMERICAN MEDICINE.)

Discussion.—Dr. HEMMETER spoke of a case which was operated on for gallstone, and inspection of the stomach revealed that it was normal. After the patient died the stomach was found to be enormously distended.

Dr. EINHORN said that the cases were very interesting, but he should certainly think that they ought to be termed as acute dilation.

Dr. FRIEDENWALD believed that there were but few authentic cases of dilation.

The following papers were read by title in the absence of the authors: **Experiments in Peristalsis**, Dr. FENTON B. TURCK; **Some Clinical Studies in Gastric Secretion**, Dr. G. W. McCASKEY; **Report of a Case of Cancer of the Cardiac End of the Esophagus at a Distance of 21 Inches from the Incisor Teeth in a Man 5 Feet and 3 Inches Tall**, Dr. C. D. SPIVAK. (This will appear in a future issue of AMERICAN MEDICINE.)

Dr. A. ROSE.—**Treatment of Atonia Gastrica and Splanchoptosis by Means of Abdominal Strapping.** Dr. ACHILLES exhibited to the Society the bandage which he used as an abdominal support. He believed that "a number of pathologic conditions of the stomach are caused by insufficient activity of its muscular fibers, diminished activity of its walls, elongation of the suspending ligament of the lesser curvature, the lesser omentum and gastropoptosis." He used the word "gastropoptosis" in place of "gastroptosis." As to causes, hernia, tumors of the spleen and liver and enlargement of the abdominal space were mentioned; also the injurious effects of "tight-lacing, and the tight attachment of skirt-strings aggravate an existing gastroptosis." He had examined 100 patients to ascertain the phenomenon.

Discussion.—The bandage was not successful in the hands of Dr. LICHTY, while Dr. HEMMETER said that the bandage as mentioned by Dr. ROSE "had the advantage of grasping the whole abdomen," and of lifting it up, and, in his opinion, was the best contrivance he had yet seen.

Dr. EINHORN said that there were a few cases in which there was difficulty, but in most instances a bandage could be made well, and the advantage is that the patient can take it off at night. Strapping the plaster on the skin irritates it. He believed that the bandage was more efficacious.

Hyperchlorhydria.—Dr. JOHN A. LICHTY said that indigestion of diet is not given as a causative factor; in the majority of cases suffering from digestive disturbances there is marked hyperacidity. Out of 225 cases 84 were analyzed and found to contain more than a normal amount of acid.

Dr. HEMMETER presented some interesting microscopical specimens, the most interesting perhaps being that of a case of arteriosclerosis in a boy of 10 years.

ELECTION OF OFFICERS.—President, Dr. W. D. BOOKER, Baltimore; first vice-president, Dr. S. J. MELTZER, New York; secretary and treasurer, Dr. CHARLES D. AARON. Dr. MAX EINHORN was elected as a member of Council to serve for 3 years.

ASSOCIATION OF AMERICAN PHYSICIANS.

16TH ANNUAL MEETING HELD AT WASHINGTON, D. C., APRIL 30, MAY 1 AND 2.

[Specially reported for AMERICAN MEDICINE.]

President's Address.—WILLIAM H. WELCH, of Baltimore, called attention to the opportunities enjoyed by students for acquiring a systematic training in anatomy, pathology and physiology as compared with those that were open to them in clinical medicine and surgery. The laboratory side of their teaching had advanced from the weakest to the strongest position in medical education. The conditions in regard to the branches referred to were somewhat like those prevailing in the German Universities. The American schools were only at the beginning of this process of development, but it was gratifying to notice that the path had been opened, and the lines on which they were advancing clearly marked. Much less satisfactory conditions existed with regard to the far larger number of students who wished to fit themselves for clinical medicine and surgery. In short, the training of physicians had not kept pace with that of those who intended to devote themselves to the more purely scientific branches of education connected with

medicine. Dealing with matters more particularly affecting the association, he alluded to the pressure on its doors for admission to membership and expressed approval of a suggestion thrown out by one of his predecessors that, instead of increasing the number of active members, a freer use might be made of the honorary list. In concluding his remarks, Dr. Welch referred to the fact that the association had lost by death during the year 4 of its founders, 3 of whom had filled the presidential chair, Dr. JAMES T. WHITTAKER, Dr. JACOB DaCOSTA, Dr. SAMUEL C. BUSEY and Dr. WILLIAM H. DRAPER, to the memory of each of whom he paid a fitting tribute.

The reading of papers was then proceeded with, the first being one by Dr. H. A. HARE, Philadelphia, entitled **An Undescribed Cardiac Sound**. A contribution by Dr. ROBERT T. EDES, Boston, on **Slow Pulse with Special Reference to Stokes-Adams' Disease** was read by title, the author not being present. Dr. WILLIAM S. THAYER, Baltimore, discussed the **Frequency and the Diagnosis of the Flint Murmur in Aortic Insufficiency**. Dr. ALFRED STENDEL, Philadelphia, followed with a paper on the **Causes and Clinical Features of Cardiac Hydrothorax**. Dr. BEVERLY ROBINSON, New York, dealt exhaustively with the subject of **Myocarditis and Fatty Degeneration of the Heart**. Dr. A. JACOBI, New York, described cases of **Hemorrhage from a Pleural Abscess**.

Dr. CHARLES CARY, Buffalo, presented a case of **Pneumonia Complicated by Pseudo-Membranous Exudate on the mucous membranes of the mouth, tongue, pharynx, nares, conjunctivae, glans penis, anus, etc., caused by Diplococcus pneumoniae**.

Pernicious Anemia was the subject of papers by Dr. FRANK BILLINGS, Chicago, and Dr. F. P. HENRY, Philadelphia. Dr. Billings continued the report he made last year, in which he gave the details of 20 cases. In 10 of these cases the patients were dead at the time referred to. Four had died since; 2 had disappeared, and 4 were still under observation. The results in all the later cases confirmed the conclusions he put forward in his previous paper. Nine new cases had come under observation during the year, and they also presented the characteristic conditions, the blood changes showing waves of improvement followed by a decline. Dr. Henry gave further details of a case he had previously reported.

Under the title of **Acute Miliary Tuberculosis, Primarily Splenic**, Dr. D. D. STEWART, of Philadelphia, reported a number of cases in which signs of disease were seen nowhere except in the spleen until close on the time when they resulted fatally, when the manifestations of general affection usually appeared.

Dr. JOHN H. MUSSER, Philadelphia, presented notes on the **Relapsing Fever of Hodgkin's Disease**. (This will appear in a future issue of AMERICAN MEDICINE.)

Dr. ALFRED STENDEL, on behalf of Drs. C. Y. WHITE and WILLIAM PEPPER, Philadelphia, presented the results of a **Study of Granular Degeneration of the Red Blood-Corpuscles**. He remarked that he had a practical interest in the subject because the cases experimented on were cases of sub-acute lead poisoning which had come under his observation. His colleagues, however, were interested in the experiments scientifically. A large number of lead workers had been examined, and most of them showed the characteristic symptoms, though some of them remained for many years in apparently good health. Dr. JACOBI asked for further information as to the effect on the general system of this supposed lead poisoning, and gave as his reason for pressing the inquiry that he often gave large doses of acetate of lead to stop hemorrhages. If it were really lead poisoning that was produced, he desired to know how the general health was not affected in the cases referred to. Dr. Stengel said he did not care to go into the discussion of the question thus raised. All he could say was that the lead workers referred to presented the symptoms he had described, and yet remained in apparently good health.

Dr. M. ALLEN STARR, New York, presented a paper with the view of showing the **Toxic Origin of Neurasthenia and Melancholia** in certain cases. He by no means said that all cases of neurasthenia and melancholia were of toxic origin, for among common causes of these diseases were anxiety and worry, overexertion (mental or physical), and the degeneration of the neurons on account of diseased conditions. At the same time, however, he did contend that some cases were toxic in their origin. Dr. W. W. JOHNSTON, Washington, dealt with the **Evils arising from Failure to Recognize the True Nature of Neurasthenia and some Causes of this Failure**. (This will appear in a future issue of AMERICAN MEDICINE.)

Dr. JOHNSTON also showed a case of **Addison's Disease**—a young man who had been 2 years under treatment with suprarenal extract, and who was now in very much improved health, being able to work without feeling fatigued on a farm. His color, however, still remained symptomatic of the disease, though not so dark as it was.

Papers were read by Dr. C. A. HERTER, New York, on the **Acid Intoxication of Diabetes and Its Relation to Prognosis**, and by Dr. GEORGE ADAMI, Montreal, on the **Classification of Intoxications from a Pathologic Standpoint of View**. As a supplement to the former paper, Dr. E. P. JOSLIN read a short communication on **Metabolism in Diabetic Coma**, with special reference to acid intoxication.

The proceedings of the first day were brought to a close by an evening session, at which a number of demonstrations were

shown by the aid of the lime light. Dr. CHARLES S. BOND, Richmond, Ind., exhibiting some features of **Photo-Micrography**; Dr. WILLIAM F. COUNCILMAN, Boston, **Renal Lesions in Diphtheria**; Dr. H. C. ERNST, Boston, **Lantern Slides**; Drs. S. FLEXNER and R. M. PEARCE, Philadelphia, specimens of **Experimental Acute Pancreatitis**; Dr. WELCH and Dr. E. L. OPIE, Baltimore, specimens of **Hemorrhagic Pancreatitis**, human and experimental, and of **Filarial Lymph**; Dr. WELCH for Drs. K. C. McCALLUM and BUCKLEY, specimens of **Multiple Myelomata** and of **Epizootic Hemorrhage, Encephalitis**, etc.

SECOND DAY.

The first item on the program on the second day was **A Study of Bubonic Plague Based Upon the Outbreak in San Francisco**, the clinical aspects of the disease being dealt with by Dr. L. F. BARKER, Chicago; its bacteriology, by Dr. F. G. NOVY, Ann Arbor; and its pathology, by Dr. SIMON FLEXNER, Philadelphia. One satisfactory feature noted by Dr. Barker, in regard to the plague in San Francisco, was that there had been no outbreak among the rats as there usually was when an extensive epidemic was to be expected. Thirty-one cases in the Chinese colony at San Francisco had been positively proved to be bubonic plague, and the probability was that there had been a good number more cases which had escaped notice. Of the 31 cases 23 were Mongolians and 3 Caucasians. The ages of the victims were higher than usually noticed elsewhere, the average number being between 31 and 41, whereas it was generally between 21 and 31. This, however, was to some extent accounted for by local circumstances, as was also the fact that most of those attacked were of the male sex, there being comparatively few women and young people among the Chinese in San Francisco. The disease as a rule commenced with a chill and an intermittent irregular fever; the patient had nausea, usually vomiting; followed by severe nervous symptoms, often delirium and coma; within 24 hours a bubo would be found. Thereafter the symptoms generally increased from day to day, death usually taking place on the fourth day. Individuals who lived beyond the sixth day were more likely to recover. The development of the bubo was very rapid, quite different from the enlargement of the glands in venereal and other infections. Sometimes it was as large as one's fist, but sometimes again it was so very small that it had to be carefully looked for. It was not to be regarded as the enlargement of a single gland, a group of glands being usually involved. It was accompanied by a rapid development of edema, and the edema was characteristic, having a marked elastic power of resistance. The patients frequently complained of rheumatism, and the Chinese doctors put on the sticky black plasters which were used for that complaint. Indeed in a district where the plague existed the presence of this plaster might be regarded as evidence that the person wearing it was affected with the disease. In diagnosing a suspected case where the plague had not previously existed, it was all-important to have a bacteriologic examination. Despite the belief entertained by some that bacteriology was too young a science to be allowed to interfere with the interests of business men, it afforded an infallible test of the presence of the plague. As to treatment there was not much to be said, though if he had the disease himself, Dr. Barker added, he would fill himself as full as possible of Roux's serum. Dr. Flexner, after describing the pathology of the disease, stated that the obstacles that had existed so far to the proper examination of plague conditions in San Francisco were likely to be removed in consequence of arrangements that had been made with the authorities.

Discussion.—SURGEON-GENERAL STERNBERG remarked that if such an outbreak had occurred 30 years ago they would probably be reading in the daily newspapers of 500 deaths a day in San Francisco and of the spread of the disease to other parts of the country. That the plague had been so successfully kept under control was due to their having a trained bacteriologist on the spot, and the fact that on discovery of the disease steps had been taken to deal with it. Otherwise the plague might have developed into proportions equivalent to those of the previous century.

Dr. W. H. PARK, New York, described 2 extremely mild cases of plague which had arrived in the harbors of that city in a ship from South America, and Dr. VICTOR A. VAUGHAN, Ann Arbor, gave a detailed report on the case of the student there who had acquired the disease through engaging in laboratory work on cultures from bubonic patients.

Replying on the discussion, Dr. BARKER remarked that Ann Arbor was to be congratulated on the speedy recognition of the disease, and the saving of the patient.

Experimental Yellow Fever.—Dr. WALTER REED and Dr. JAMES CARROLL. This will be published in a future issue of AMERICAN MEDICINE.

Discussion.—Surgeon-General STERNBERG thought that Dr. Reed and his colleague should be congratulated on the success of their experiments, which had cleared up many conflicting facts which had previously puzzled the profession in regard to this disease. He himself had spent some years in trying to discover the microorganism of yellow fever, and he had no doubt that its discovery would yet be effected. He had never doubted that mosquitos might be the means of spreading the disease, though he had criticized Finlay's claims in respect thereto because his report did not support the theory he advanced. The

reason that Finlay failed in his demonstration was evidently that he did not keep his mosquitos long enough. His (the Surgeon-General's) own experiments had shown that yellow fever could not be communicated to the lower animals. The result of the experiments now reported was to demonstrate absolutely that the fever could be produced experimentally, and that a condition of immunity might thus be produced.

The President said it ought to be known that none of the patients experimented on had died. Those who had voluntarily submitted themselves as subjects for experimentalism—young American soldiers and others—were deserving of much credit. They were veritable heroes.

A Case of malarial nephritis with massing of the parasites in the kidney was presented by Dr. JAMES EWING, New York. A paper on **Septic Infection through the Stomach and Duodenum** was read by Dr. WALTER B. JAMES, New York; a report on 2 cases of **Streptothricial Infection, 1 Broncho-Pneumonia, the second Abscess of the Brain**, was presented by Dr. JOHN H. MUSSER, Philadelphia, on behalf of himself and Dr. N. B. GWYN, and Dr. A. C. ABBOTT, Philadelphia, gave a demonstration showing a product of bacillus pyocyanus resembling vegetable gum.

At the afternoon session Dr. WILLIAM A. PARK, New York, discussed the question of the extent to which **Urine is a Suitable Soil for Bacilli Growth**. A paper on **Orchitis Complicating Typhoid Fever** was read by Dr. FRANCIS KINNICUTT, New York. Notes on the **Treatment of Some Forms of Cancer by the X-rays** were contributed by Dr. FRANCIS H. WILLIAMS, Boston. Among the other items on the program were: **Osteitis Deformans**, by Drs. FREDERICK A. PACKARD and J. DUTTON STEELE, Philadelphia; **the Spiral Form of Arthritis Deformans**, by Dr. WILLIAM OSLER, Baltimore; **Certain Tropho-Neuroses and their Relation to Vascular Disease of the Extremities**, by Dr. B. SACHS, New York; a case of **Subcortical Glioma of the Lower Part of the Ascending Frontal Convolution**, a contribution to the nature of the speech disturbance arising from lesions in this situation, by Dr. J. STEWART, Montreal (this will appear in a future number of AMERICAN MEDICINE); **Personal Experiences in Cases of Jacksonian Epilepsy**, with special reference to the question of treatment by operation, by Dr. JAMES J. PUTNAM, Boston; **The Clinical and Microscopical Results of the Examination of 3 Cases of Family Periodic Paralysis**, by Drs. JOHN K. MITCHELL, SIMON FLEXNER, and D. L. EDSELL, Philadelphia; and **Hereditary Appendicitis**, by Dr. F. FORCHHEIMER, of Cincinnati.

The annual dinner of the association was held in the evening at the Arlington Hotel. One of the features of the proceedings was the reading by Dr. W. A. NORTHROP of an unpublished poem by Oliver Wendell Holmes.

THIRD SESSION.

The first paper was read by Dr. FRANZ PFAFF, Boston, and consisted of some observations he had made in a case of **Diverticulum of the Esophagus**.

Dr. EDWARD L. TRUDEAU, Saranac Lake, read a paper on **Tuberculosis**, in which he demonstrated the importance of a recognition of the significance of the disease in its early stage in relation to treatment. Physicians generally, he thought, were far from being sufficiently impressed with the importance of making an early diagnosis, and the consequence was that many patients were not informed of the nature of their malady and advised to make a change of climate until it was too late. So long as the significance of the earlier symptoms was overlooked and treatment postponed until the disease had advanced to a grave state, he was afraid that much disappointment would be experienced in regard to the results obtained by the new open-air methods of treatment.

Dr. J. GEORGE ADAM, on behalf of Dr. J. McCrac, Montreal, reported the results of a series of cases of burns. The general effect of the observations described was to support the suggestion that burns produced toxins bearing a marked similarity to bacteriologic toxins.

An elaborate paper on **Hemolysis** was read by Dr. S. J. MELTZER, New York.

A number of other papers were read by title, among them being: **The Relative Prevalence of Bright's Disease in New York, London and Berlin**, by Dr. HERMANN N. BIGGS, New York; **Lithemic or Recurrent Coryza**, by Dr. B. K. RACHFORD, Cincinnati; a further report on a case of **Presystolic Mitral Murmur, associated with Systolic Triaspical Murmur complicating Pregnancy**, reported to the Association in 1899; **The Extension of Aortic Aneurysms into and between the Walls of the Heart and Dissecting Aneurysm of the Heart**, by Dr. LUDVIG HEKTOEN, Chicago; **A Case of Spondylose Rhizomelique with autopsy**, by Dr. CHARLES L. DANA, New York; **The Relation of the Tracheal Tug to Fixation and Elasticity of the Left Lung**, by Dr. HENRY SEWALL, Denver, and **A Study of Bacteria isolated from Cases of Dysentery**, by Dr. F. F. WESBROOK, Minneapolis.

New Office-bearers.—The election of new officers resulted as follows: President, Dr. James C. Wilson; vice-president, Dr. James Stewart; recorder, Dr. S. Solis Cohen; secretary, Dr. Henry Hun; treasurer, Dr. J. Crozier Griffiths; councillors, Drs. Frank Billings and Francis P. Kinicutt; representative on executive committee of Congress, Dr. William Osler; alternate, Dr. Francis H. Williams.

ORIGINAL ARTICLES

THE NECESSITY FOR GREATER CONSERVATISM IN THE USE OF VASODILATORS IN CERTAIN CASES OF CARDIOVASCULAR DISEASE.*

BY

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In the career of every form of treatment there are several stages. The first is discussion, skepticism overcome, and adoption. The second is intelligent application in the light of previous discussion and the consequent general information. Third, the routine use of an accepted treatment as a matter of course in a particular disease.

When Brunton applied amyl nitrite to the treatment of angina pectoris he achieved a signal triumph in therapeutics. Not less was the triumph of the more gradual application of the nitrites in general to the treatment of vascular spasm. These were first well used by those who had witnessed their development and were familiar with their philosophy and limitations. Unfortunately the student coming later upon the field of medicine and finding the nitrites in general use for vascular disease, jumped naturally to the conclusion that they were the remedies *par excellence* and used them in a routine way as a matter of form in the treatment of these cases. The observation of this fact makes it useful at this time to emphasize the necessity for some conservatism in this matter. It is a trite saying that we should always treat the patient and not the disease, meaning by this that we must carefully recognize the exact physiologic and pathologic conditions present, and so influence them as to bring about the cure of disease. Patients differ widely in their behavior under the nitrites. For that reason every case requires physiologic study to determine the amount of drug necessary and how it should be applied.

There is no more important function of the physician than the early recognition of that tendency to degeneration and death that comes prematurely to so many of the human race. This shows most often in arterial changes one of the earliest symptoms of which is alteration of blood tension. The tension in the bloodvessels in health is maintained at an even point through the action of the unstriped muscular tissue in the walls of the bloodvessels. The heart is a part of the circulatory tubes, and differs only in arrangement and degree from the mechanism of the rest of the circulatory path. It contains unstriped muscular fiber as do the bloodvessels, and an arrangement of valves as do the veins. Its muscular action is rhythmic while the muscular action of the bloodvessels is only slightly so. Both are subject to the control of the nervous system. It is in the disordered action of all these muscles that the first signs of degeneration appear. The muscles in the vessels act badly, the muscle in the heart is irritated and the result is ten-

sion. To apply vasodilators without also instituting hygienic measures to reduce the irritability of the heart and restore the disordered or exhausted nervous system, is to overlook an important element in the problem of cure.

The necessity for the use of vasodilators is diminished in proportion to the intelligence and success attending these accessory measures. In Bright's disease there is probably some substance circulating in the blood that irritates the muscular coats of vessels and causes contraction. This, with the physiologic attempt of the heart to carry on the circulation, again brings about high blood-tension. When high tension antedates the onset of nephritis it may well be supposed that the tension has something to do with the production of nephritis.

A physiologic increase of blood-pressure is caused whenever there is nervous, muscular or physiologic exertion. Prolonged nervous strain, such as that met with in an exciting business career or in prolonged dissipation, keeps up a tendency to tension that is particularly apt to lead to arterial degeneration. Muscular action is less prone to produce damage and probably does so only in rare instances of long training and severe contests of strength. The reason for this is that exercise is accompanied by natural dilation of the arterial circulation, improved nutrition and relief afforded by perspiration. The physiologic activities of the body are usually accompanied by too slight a stimulation of the circulation to count for much in health, but are worth considering in disease. From this brief review of the natural causes of tension it may be quickly inferred that in a person suffering from abnormal tension it is specially important to do away with mental strain and responsibility. Such a person should not indulge in violent exercise but is benefited by slow exercise. Food should be moderate in amount, taken at frequent intervals. Sugar and alcohol should be done away with entirely if possible, and meat used in limited amount.

When the vasodilators are given it is to produce a definite physiologic effect which is capable of appreciation by the observer.

The dose required to produce this effect differs widely in different individuals and under different circumstances. In a large number of cases they are now so given that no effect whatsoever is produced. Crude therapeutic thought is responsible for this. The idea is picked up that the nitrites are good for kidney and heart-disease, and so they are administered with the hope that the patient may be benefited thereby. If improvement takes place the medicine receives the credit whether or not it has done its work. The word "conservatism" means more than caution, more than small dosing. It means the working out of the possibilities of the remedy and its application in such a way as to fulfil its broadest mission, not be wasted or abused—wasted when used in nonactive doses, and abused when used too often or in too great a quantity. With the vasodilators a careful regulation in doses is of vital importance, for their final action may be dilation and paralysis of the heart through a complete breaking down of that great power called inhibition that moderates all muscular activity.

* Read before the New York State Medical Society, January 20, 1901.

When nitrites are used it is also of the utmost importance that the preparation selected should be reliable. I have known patients to take tablets of nitroglycerin for a long time that were proved afterwards to be inert. When no benefit is obtained in conditions in which the nitroglycerin is clearly indicated this may be fairly suspected. Then one of the tablets may be given to a healthy person who should immediately feel the throbbing in the head due to the dilated bloodvessels and the stimulation of the heart. If no effect is felt a new preparation must be sought and then tested. The 1% solution of glonoin is probably more reliable but is not nearly so convenient for patients as the tablet.

Cases must be studied from time to time by the withdrawal of these drugs and by the substitution of other drugs of a different class. Particularly is it important in every such case to know from actual observation the effect of digitalis in such doses as bring about distinct physiologic phenomena.

But few diseases can be treated by specific measures and cardiovascular disease is particularly remote from such an ideal. What drugs accomplish is to control the circulation so that it shall tend to benefit the condition of the tissues, or prevent the condition of these tissues from working injury to the body as a whole. The management of cardiovascular disease is like the running of an intricate machine. The physician must study the machine itself and learn all its resources. He must know the use of every tool and the effect of the turning of each screw. It is no abuse of the privileges of the physician to study his cases therapeutically by testing from time to time the effect of different classes of drugs though he return after each trial to the original plan of treatment. It is the height of arrogance to assume that his inductive reasoning can plan for each case a permanent course of management. Such action will only lead to humiliation and disappointment. How exasperating it is when for a long period of time, on theoretic grounds, we have abstained from the use of such a drug as digitalis to find some time or other that our patient has taken it through the advice of the corner druggist and has received appreciable benefit from it. Of course, we know very well that the corner druggist had no right to experiment and that there might have been a miliary aneurysm to rupture in the brain and kill the patient, but perhaps the risk was worth taking after all.

There is a particular form of pulse in which nitroglycerin is not as valuable as a number of other drugs. This is a high-tension pulse with persistently rapid heart-action. In these cases I have sometimes seen the greatest benefit from the use of digitalis. Nitroglycerin has a twofold action in stimulating the heart and dilating the bloodvessels. Digitalis has a twofold action in slowing the heart and contracting the bloodvessels. Theoretically, digitalis would not act in these cases, but practically in a case of nephritis with a high tension and a rapid pulse, digitalis will often show its controlling action upon the heart in greater degree than any other of its effects, and in that way bring about a slower pulse with less apparent tension. At the same time digitalis will clear up congestion of the kidneys and cause a better secretion of urine.

Even when tension does exist in cardiovascular disease with nephritis it should be realized that some tension may be desirable. As time goes on, in such a case the greatest danger to be feared is a too great lowering of the blood tension with its accompanying congestions and effusions. In the presence of symptoms indicating disturbances of cerebral circulation, such as numbness or awkwardness of one of the extremities or slight difficulty in speech, the vasodilators are imperatively needed. Sodium iodid has also an undoubted power to control these conditions and to postpone paralytic attacks due to the plugging of bloodvessels.

A word as to the possibility of recovery from cardiovascular degenerative disease. The heart symptoms are those of myocarditis and the kidney symptoms those of chronic nephritis. The tendency of the bloodvessels is to become thickened. Every one knows that under ordinary circumstances a person starting with this form of disease generally becomes worse and finally dies. However, I do not believe that this need always be the case. With a properly planned regimen and the possibility of carrying it out, and with careful medication and other therapeutic measures the heart may recover its tone so that all symptoms of degeneration will disappear and the kidneys may settle down to do their work according to a particular plan, but well enough for the maintenance of health.

It is hard to prove the regeneration of kidney tissue, though the physiologic hypertrophy of one kidney when the other is removed leads to a belief in its possibility. Certainly there are many persons passing a large quantity of urine of low specific gravity and with a slight trace of albumin who maintain year in and year out all the other signs of health. Their hearts, bloodvessels and kidneys have readjusted themselves and though bearing the scars of disease are carrying on the functions of the body in a satisfactory manner. I have pictured this condition because it is extremely interesting to decide in these cases how much we should intervene with drugs to alter the heart action or relax the bloodvessels. It seems to me that in the absence of symptoms sodium iodid will accomplish the best purpose and that the use of the nitrites should be limited.

Smallpox Inoculation in Algeria.—M. Hervieux recently drew before the Academy of Medicine a very somber picture of the danger to which smallpox inoculation is giving rise in Algeria. According to a report by M. Trolard, this abominable practice is making headway more and more among the natives. They refuse vaccination, despite all the efforts of the medical men, and prefer direct smallpox inoculation performed by native practitioners, who inoculate with a lancet charged with virulose pus. Owing to this deplorable habit, which the French authorities try in vain to combat, smallpox is increasing rapidly among the Arabs, and the mortality is going up, to say nothing of the numbers of maimed and blind, who have to be looked after by the state, while, as a final result, the commercial relations of the colony are beginning to be imperiled. M. Hervieux argued that energetic measures must be taken, and proposed that the Academy should lay down a rule that inoculation should be made a penal offence punishable by a fine in every French colony. A discussion, however, took place, M. Chauvel saying that the Academy could not formulate penal laws without going outside its proper role, which was advisory and scientific. M. Gautier considered that a fine was an insufficient punishment, and suggested that compulsory isolation of smallpox patients, which, being at once a kind of imprisonment and a valuable method of prophylaxis, would have greater weight in the eyes of the natives. Finally, the Academy left the choice of the punishment to the Minister concerned, but insisted that smallpox inoculation ought to be sternly suppressed in French colonies.—*London Lancet.*

ANEURYSM OF ASCENDING AORTA OF GREAT SIZE: TREATMENT BY GELATIN INJECTIONS AND ELECTROLYSIS, WITH EFFECT OF COAGULAT- ING MOST OF THE CONTAINED BLOOD.

BY

W. W. JOHNSTON, M.D.,
of Washington, D. C.

R. D. W., aged 40; white; single; occupation, sugar-planter in the Philippines. As a boy he was strong and well developed; at college he engaged in athletic exercises, especially running. In 1884, 16 years ago, he went to the Philippines and engaged in sugar-planting. His life was very active and laborious, the greater part of the time being spent out of doors on horseback. His health improved very much and he gained in 5 years 50 pounds in weight. In 1893 he contracted syphilis and was treated with mercury for 9 months; the symptoms were few, and at the end of this time he considered himself cured.

In 1898, Spanish soldiers destroyed his property and arrested him and his mother on the charge of aiding the native rebels. He was treated with great cruelty and threatened with instant death. But after reaching Cibu, he was protected by the English Consul, who subsequently secured his escape to Singapore. The excitement attending these occurrences may have had something to do with the rapid growth of the aneurysm, for it was in this year that he felt frequent pain in the right shoulder and down the right arm; there was no suffering connected with the heart or with respiration. In December, 1899, a swelling appeared under the right clavicle; this grew rapidly and in March, 1900, had reached the size of an orange, occupying a good part of the right mammary region. He then



went to Hong Kong for treatment, and was in the Peak Hospital under the care of Dr. Alexander Rennel. The following extract from a letter written by Dr. Rennel exhibits his condition when he left Hong Kong in April last:

"The pulsation" in the tumor "is much diminished, but the size of the aneurysm is greatly increased, bulging now more toward the right side. He suffers aching pains, but dyspnea and severe cough are considerably less than one would expect. The treatment I have followed has been injection of gelatin

solution into the axilla every 5 days, and potassium iodid, 20 grains 3 times daily. The gelatin seemed to have a good effect in producing more solidity of the tumor when first used, but latterly I have not seen any benefit, and I do not think it is worth going on with. You will find his general health good, but will observe the great increase in the size of the tumor."

The voyage to San Francisco on a United States transport was undertaken in April. There was no great suffering at first; he took his meals in his cabin, and rested a great deal.



Thoracic aneurysm showing points of insertion of trochar in the effort to find the portion of the sac filled with fluid blood; the successful puncture was at x4.

Towards the last, dyspnea and cough annoyed him greatly, and on reaching San Francisco he was unable to leave the steamer, and was compelled to rest before continuing his journey. He thought that the tumor increased in size while traveling, and in view of the rapid growth after reaching here, I have no doubt that this belief was correct.

I saw him on May 26, the day after he reached Washington. Breathing was not labored, but he had a harsh, frequent cough that gave great distress. The lips were dusky in color; he lay usually on his right side with the head very little raised, and talked without difficulty. Nothing in his appearance or manner indicated that he was very ill. The appetite and digestion were good.

The right chest, anteriorly, was occupied with a tumor (see illustration) having the appearance of a large and distended mamma with tense walls. It reached from the left border of the sternum to the right axillary line, and above to the clavicle; its lower contour was some 6 inches below the nipple. The vertical measurement of the tumor from its highest point to the chest-wall was about 6 inches. The pulsation of the tumor was very forcible, and was the same over its whole area. There was no murmur and no thrill. The pulse was the same in both arms, and there was no edema of the right arm, and no pain. The pulse was 110 and over for the first 10 days; it gradually reduced in frequency, and on May 26 varied from 80 to 90.

The physical signs of the heart were not much altered; the impulse was feeble and displaced to the left, and the heart-sounds were weak. Over the lung, to the left of the aneurysm, there was loud, bronchial breathing; bronchial breathing was also heard over the right scapular region.

The patient was kept at rest, with a simple diet, and potassium iodid was continued for a short time. For the cough

codein and later morphia were given. The patient improved in the first 2 weeks; his cough lessened and finally stopped, and the pulse as stated decreased in frequency. The aneurysmal tumor increased in size, growing most rapidly toward the clavicle and the right shoulder.

The question of electrolysis of the aneurysm was discussed for some time, but it was not until July 10 that this was done by Dr. Finney of Johns Hopkins Hospital. Three unsuccessful attempts were made to reach fluid blood with a cannular needle 4 inches long, passed directly downward into the tumor. The points of insertion were made where the pulsation seemed strongest. In each instance the needle passed into solid tissue and there was no escape of blood. The fourth insertion, at a point near the shoulder, was successful, blood escaping in a jet when the needle had passed its whole length. Ten feet of silver wire was then unrolled from a spool and passed through the tube of the needle. A current of 10 milliamperes from a dry cell battery was then turned on and continued for 1 hour. The operation was attended with very little pain and this was only in the beginning. At the conclusion of the operation there was a noteworthy lessening of pulsation in the region of the last puncture. The pulse was 108 and the patient com-



Heart and aneurysmal tumor showing size of the tumor outside chest wall.

plained of no inconvenience. On July 12, 2 days later, the pulse was 102 and from this time it fell to 92 in a few days. There was no apparent inflammation in the neighborhood of the punctures.

During the latter part of July the patient had an intermittent fever, his evening temperature rising from 100° to 101.5°. Several large blebs formed near the sternal margin of the aneurysm. Two of these finally ulcerated through, revealing necrosed fragments of the ribs and discharging continually a thin bloody serum. This "weeping" continued more or less profusely until the time of his death. Later, little raised spots in the skin appeared over 3 places where the needle had been introduced at the time the wiring was done. These enlarged and ulcerated with remarkable rapidity, a thin bloody serum escaping continuously. Their dimensions varied greatly being at one time nearly healed and again quite large. Granulation tissue formed abundantly around the margin of these little ulcerations. At times the discharge from these openings became bright red in

color and quite profuse. A slight evening rise in temperature continued. August 15 the patient suffered severe pain in the aneurysm, right shoulder, and arm, accompanied by great loss of power in his right arm. A few hours later he felt a giving away in the aneurysm with a whirring noise; a jet of blood about the thickness of a darning needle escaped forcibly from one of the sternal ulcerations. This was controlled by pressure after the loss of considerable blood, but his condition seemed alarming for several days after from the shock, loss of blood and severe pain. At this time he rallied and seemed better in every way than he had been for months. August 20, pain, labored breathing and restlessness reappeared and he predicted another hemorrhage which occurred in the night from one of the sternal perforations and simultaneously from one of those on the dome of the aneurysm. Forceful jets of blood escaped from each, but were controlled with the same result as in the first hemorrhage. After this small hemorrhages recurred from one or several of the ulcerations at intervals of a few days. He gradually gained the use of his arm, overcame the depression of spirits following the first few hemorrhages and felt confident of recovery. These repeated hemorrhages at short intervals, however, began to tell rapidly upon his strength. The majority of the later hemorrhages proceeded from the point at which the wire was inserted in the aneurysm.

The patient died suddenly on September 26, from the sudden loss of about one pint or more of blood from the point of successful puncture.

The autopsy was performed by Dr. Glazebrook.

Necropsy.—The heart, arch of aorta, etc., were removed and examined. The heart was normal except for some thickening and induration at the base of posterior leaflet of aortic valve. The ascending aorta showed a large aneurysmal pouch; the transverse and descending arch were atheromatous. The aneurysm was nearly globular in shape and about 7 inches in diameter in all directions; it projected forward and toward the right, bulging between the first and fifth ribs; the second, third and fourth ribs were absorbed in much of their length. The right border of the sternum was involved in the sac, but the bone was not eroded. Next to the wall of the pouch there were 2 inches of red laminated clot, the next 2½ inches were filled with a ball of dense nonlaminated coagulum through which ran strands of fine silver wire; the posterior 2 inches was an open space with a thin lining of clot and also contained some silver wire which seemed to have passed through the posterior wall of the aorta. The primary branches of the arch were patulous. There were small portions of adherent lung. The trachea and esophagus were normal. The large amount of laminated clot showed that a process of cure had been slowly going on, while the more recent nonlaminated coagulum in which the silver wire was imbedded indicated clearly the effect of the recent electrolysis. Death was due to the blood-current making channels between the clot and the sac and finally making an exit through eroded spots in the outer wall.

Schools for the Deaf.—A substitute bill is before the Wisconsin Legislature which, if passed, will preclude any exercise of authority by the school-board or any municipal corporation in places where public schools for the deaf are located, and will put them under the State Board of Control; it will deprive the State Superintendent of Public Instruction of all power over and relationship to the day schools for the deaf and thus remove them entirely from the public school system, and put them in the same class with the State reformatory, charitable and penal institutions, to which they are not related and from which they should be kept separate. It also empowers the State Board of Control to discontinue any or all of such schools at its discretion.

POSTPARTUM METASTATIC PANOPHTHALMITIS,
WITH A CLINICAL AND PATHOLOGICAL STUDY
OF A CASE.*

BY

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Historical.—The suppurating ophthalmia complicating puerperal fever was described early in the nineteenth century in the works of Tenon, Jungken, Velpeau, and Himly. Since then it has been discussed by Jacob, Fischer, Arlt, Hasner, Pilz, Weir, Lee, Szokalski, Müller, Virchow, Nagel, Knapp, Wadsworth, Williams, Schmidt-Rimpler, Hosch, Schöbl, Mitvalsky, Herrnheiser, Kahler, Wagenmann, Litten, and others.

Fortunately postpartum metastatic ophthalmia is very rare in this country at the present day. Since the introduction of antiseptics in obstetric practice, infection of the parturient tract in civilized communities has gradually become less frequent, and when it occurs it is promptly treated in a rational manner. Formerly the mortality after childbirth in many institutions was from 5% to 10%. Today it is not over from 0.3% to 0.4%. However, the affection is still prevalent in some rural and uneducated communities.

Thirty years ago medical literature contained frequent references to metastatic suppuration of the eyeball after labor. In such an enlightened community as Prague, Austria, as late as the period between 1850 and 1870, puerperal infection with ocular complications was common in both hospital and private practice. Schöbl states that within this period he remembers a time during which he saw daily more than 20 cases of puerperal fever, of which 4 or 5 were complicated by metastatic ophthalmia. He also states that he has examined over 100 cases ophthalmoscopically, and beside many eyeballs that he had cut into sections in those days he had 17 or 18 well-prepared but intact specimens of metastatic panophthalmitis. As the adoption of antiseptic and aseptic methods in obstetrics became more universal, the number of cases gradually diminished, until now he states that he has not seen a case in his clinic for many years.

Symptoms and Clinical Course.—The time of occurrence is from the fifth to the fifteenth day after delivery, depending largely upon whether the metastasis follows infection through the lymphatics and bloodvessels near fresh wounds in the parturient tract, or through the open uterine sinuses, going directly into the circulation. Monolateral cases seem to be twice as frequent as bilateral, but as in the latter instance there are generally also bacterial thrombi in the internal viscera or brain, causing profound constitutional symptoms and usually death, it is likely that many cases of bilateral intraocular metastasis have been overlooked. In the bilateral cases one eye is affected within a few days, at the most, of the other.

In postpartum metastatic panophthalmitis there are, of course, the associate local symptoms, such as vulvitis, vaginitis, purulent lochia and pus about lacerations and

suture-openings. Persistent and extreme variation in temperature and pulse, with perhaps a chill, occurring within 48 to 60 hours after delivery, are all indicative of general puerperal septicemia. However, it should be recorded that postpartum ophthalmia may follow an apparently normal labor. A. Hill Griffith has reported 2 such cases, in healthy women, that were characterized by the presence in the fundi of large, rounded, bluish-white, flocculent masses like packed cotton-wool. There were no signs of external inflammation in either case and the eyeball slowly atrophied.

Unless the general condition is so grave as to prevent the complaint of subjective phenomena, an early ocular symptom is loss of vision. This may occur with obscuration of the fundus oculi before external signs of inflammation are noticeable. Usually there is injection of the globe and signs of iritic disturbance, with, perhaps, the formation of synechias. Slight hypopyon may appear in the anterior chamber. There is soon, however, the formidable picture of panophthalmitis—intense inflammation, chemotic swelling of the conjunctiva and lids, protrusion and immobility of the eyeball, and a whitish-yellow reflex from the pupil. There is intense burning pain in the eyeball and orbit and in the surrounding frontal, temporal and malar regions. The globe becomes a virtual abscess cavity, the sclera ruptures, the contents of the eyeball escape, and the orbit becomes infiltrated.

In some cases there is a less acute course, not involving the orbit, and allowing for a time an imperfect fundus-reflex. Such indolent cases are often almost painless, but eventually vision is entirely lost, and even though the sclera does not rupture, the eyeball becomes atrophied.

Diagnosis is based upon the panophthalmitis occurring within a few days of delivery, and the associate local and general symptoms of postpartum infection. Unless the vitreous remains clear enough to permit of ophthalmoscopic examination, it is impossible to decide whether the initial infection is a choroiditis, retinitis or chorioretinitis. In the chronic cases the diagnosis may be in doubt for a time, but it is eventually no less certain.

Etiology and Pathology.—In the early days, postpartum panophthalmitis was thought to be due to milk-metastasis. At present there is abundant proof of its bacterial origin, the septic emboli from the infected genitalia entering the bloodvessels of the choroid or retina. Heiberg was the first to demonstrate in these cases the presence in the choroid and retina of microorganisms. Since then, Roth, Leber, Beck, Litten, Hosch, Wagenmann, Mitvalsky, Schöbl, Herrnheiser, Kahler, Hirschberg and others have reported the discovery of microorganisms in rather large emboli in the intraocular bloodvessels and vitreous. Among the varieties found were *Streptococcus pyogenes*, *Staphylococcus pyogenes aureus*, pneumococcus, a new diplococcus and the leptothrix.

It should be added, however, that it is quite possible for a suppurative panophthalmitis to follow a nonseptic embolism of the central artery of the retina. A. Hill Griffith has seen one case, and quotes J. Adams, who has reported a case in which the suppuration did not appear until 2 months after the arterial blockage.

* Read at a meeting of the Philadelphia County Medical Society, March 13, 1901.

There is always a question of doubt as to the initial ocular lesion. Both the choroid and retina may be the seat of destructive inflammation. Heiberg discovered bacteria in both membranes. Schöbl, Herrnheiser, and Hoesch found the retina generally more involved than the choroid, and a retinitis much more frequently the initial lesion than a choroiditis or chorioretinitis of a similar character.

Hirschberg has seen a case in the early stage, in which, though cloudy, the vitreous was sufficiently transparent to permit an ophthalmoscopic view of retinal embolism and hemorrhages, and he confirmed postmortem the site and nature of the initial retinal lesion.

Leber and Schöbl emphasize the fact that cell-infiltration always begins in the nerve-fiber layer of the retina and spreads to the other layers and into the vitreous. This infiltration is greatest near the bloodvessels, and there is an accompanying perivascularitis and endovascularitis. In advanced cases the retina is detached and may be demonstrated only by a single shred of densely infiltrated retinal tissue and vascular debris. The choroid, vitreous, lens, cornea, sclera, and Tenon's capsule may show similar conditions in a varying degree to those found in traumatic panophthalmitis. It is very often impossible to demonstrate either emboli or microorganisms.

Prognosis as to recovery of the eye is hopeless. Even in the indolent painless cases, vision is eventually lost and the eyeball becomes atrophic. If suppuration has destroyed the contents of the eyeball and they have been mostly evacuated through a scleral opening, the globe immediately becomes very small—a condition known as phthisis bulbi—and usually remains quiescent and harmless, and may be allowed to remain in the orbit. If, on the other hand, the intraocular membranes though greatly altered are not entirely destroyed and the sclera is not extensively ruptured, atrophy of the eyeball results, causing a more gradual and moderate shrinking of the globe, but which on account of the tension on the intraocular membranes by contraction of the exudate, may give rise to repeated attacks of inflammation and even sympathetic inflammation of the sound eye; such an atrophic globe must be promptly enucleated.

The prognosis as to life is good in monolateral cases, uncomplicated by metastasis of septic emboli elsewhere in the body. Bilateral cases are generally attended with a fatal issue.

Treatment includes disinfection of the parturient tract with copious douches of mercuric chlorid solution (1:5,000, at a temperature of about 100° F.) 4 or 5 times a day. Special attention should be given to ulcers and fissures, cleansing them with hydrogen-dioxid solution, carbolic-acid solution, etc., and making applications of iodoform, boroglycerid, boric acid, etc. The bowels should be evacuated at once by a large hot enema. Constitutional alterative and tonic treatment is indicated to combat the febrile process. Alcohol and quinin may be administered. Nutritious and easily digested food should be given. Cold sponging and the administration of antipyretics may be resorted to. The surgical evacuation of pelvic abscesses may be necessary.

The chief local ocular treatment should be directed to

the relief of pain and reduction of inflammation. Instillations of atropin and the application of hot compresses are first indicated. These failing, the sclera should be incised between the tendons of the external and inferior recti muscles, and the pus evacuated. The opening in the globe may be packed with gauze and the cavity irrigated several times a day with a germicidal solution.

Even under the most rigid antiseptic precautions, enucleation during the active stage of inflammation is not free from the danger of purulent meningitis. The bloodvessels and lymphvessels of the orbit being extensively opened invite infection to the brain. Even evisceration of the eyeball has been followed by a fatal meningitis. However, this complication has been known to follow panophthalmitis when no operation was performed. Some ophthalmic surgeons advise the routine practice of operating at any stage of the inflammation; but in view of the possible dangers, and the perfect relief given by simple scleral incision, which may be followed later by enucleation, evisceration or implantation, this treatment has not been adopted by conservative ophthalmic surgeons.

CLINICAL HISTORY OF A CASE.

The patient was a well-nourished woman, aged 27 years, who was delivered of her first child on August 2, 1900. She had been in good health all through her confinement; but she was in labor 56 hours, and was delivered finally by means of the forceps. The day following delivery she was affected by severe pain in the abdomen, and diarrhea, which continued with a dozen or more evacuations daily for over a week. During this period there was high fever, at times accompanied by delirium and followed by falling-out of the hair.

On the tenth day after delivery the right eye became inflamed; although relieved of pain by atropin, hot and cold compresses, etc., ordered by her family physician and a local oculist, the inflammation of the eye became more violent and did not subside for 5 or 6 weeks.

The patient consulted a professional colleague for the first time on October 10, 1900. On account of pain in the affected eye and discomfort in its fellow, enucleation was advised, and the case was referred to me for operation.

When I first saw the patient on October 16, 1900, the right eyeball was atrophic and congested, but the cornea was clear and the iris was quite distinct, and at first glance apparently normal, although immobile, being bound down to an opaque mass in the pupillary space, resembling a calcareous lens. On the following day I enucleated the eyeball, and found the conjunctiva and Tenon's capsule tightly adherent to the sclera. There was a depressed triangular cicatrix in the horizontal meridian, 8 mm. from the sclero-corneal junction—a most unusual location for spontaneous scleral rupture.

A careful microscopic study of the enucleated globe was made for me by Dr. E. A. Shunway, at the William Pepper Laboratory of Clinical Medicine, and I append herewith his report.

PATHOLOGIC REPORT.

The eyeball measured 20 mm. in its antero-posterior diameter; 12 mm. in its horizontal; and 19 mm. in its vertical diameter (Normal measurements, 24.5 x 24 x 24 mm.). The corneal diameters were 11 x 10 mm. Eight mm. posterior to the limbus, in the horizontal meridian was a depression in the sclera, at the bottom of which was a circular opening 2½ mm. in diameter closed by a plug of granulation-tissue. The globe was hardened in alcohol of gradually increasing strength, and then cut in a horizontal meridian through this opening.

Macroscopically the eyeball appears to be undergoing atrophy. The anterior chamber is shallow, the pupil is occluded, the iris is bound down to the partly shrunken lens, and the vitreous cavity is filled with a mass of organizing tissue, which extends into, and plugs the opening in the sclera.

Microscopic examination shows these points in detail. All of the tunics of the eye have been the seat of a suppurative process, and the resulting exudate is undergoing organization, binding together contiguous structures, and distorting them almost beyond recognition.

Cornea. Bowman's and Descemet's membranes are intact, but are somewhat irregular, owing to the wrinkling of the cornea which has resulted from the distortion of the shrinking eyeball. The anterior epithelial covering is missing over a large part of the surface, but this is evidently an artefact, as there are no signs of superficial ulceration. The substantia propria shows a number of newly-formed bloodvessels, which are surrounded by round cells, and the connective tissue corpuscles between the lamellas are increased in number. The episcleral tissues are thickened from long-standing edema, the bloodvessels are dilated, and the tissues infiltrated with round cells. The anterior chamber is shallow, and is filled with an exudate rich in fibrin, in the meshes of which are a few leukocytes and red bloodcorpuscles.

Iris. The surface of the iris is covered with a thick layer of firmly organized fibrous tissue, which occludes the pupil, is adherent to the anterior capsule of the lens, and unites the periphery of the iris to the posterior surface of the cornea, thus blocking completely any communication between the interior of the eye and the outside through the ordinary lymph-channels of its anterior segment. The iris itself is densely infiltrated with round cells—mononuclear lymphocytes, polymorphonuclear leukocytes, and a number of large mononuclear mast-cells with coarse, basophilic (notably gentianophilic) granules. The stroma is condensed, the pigment-cells are destroyed, and the pigment is massed in irregular clumps. The bloodvessels are distended with blood and polynuclear leukocytes; their walls are thickened and show evidences of endarteritis. The posterior pigment-layer is irregularly proliferated and is loosely adherent to the lens-capsules, leaving spaces which are filled with bloodcorpuscles, blood-pigment, and edematous connective tissue cells.

The ciliary bodies have undergone the same changes as the iris, and the ciliary processes are embedded in a cellular exudate, by the organization and shrinking of which they have been drawn out into bizarre forms which are lined with tall cells from which the pigment has been almost completely removed.

The lens is cataractous, and is undergoing absorption. The capsule is swollen and the capsule cells have extensively proliferated, and show degenerative changes; the nuclei stain poorly, in many instances they are fragmented, and the cell protoplasm is filled with vacuoles. The posterior capsule has been eroded, and the capsule-cells are mixed with the cells from the exudate in the vitreous, in which the lens is imbedded. The lens-fibers are absorbing, and the center of the lens is occupied by degenerated fibers, Morgagnian droplets and by a large number of the vesicular cells characteristic of advanced cataract.

The sclera is much thickened, especially posteriorly, and shows the opening in the position already described. The edges of the opening are infiltrated, and are drawn inward, the opening being closed by a mass of young granulation-tissue, which is very cellular, but which shows many well-formed blood capillaries and many spindle-shaped cells.

The choroid can hardly be recognized as a distinct membrane, and its former situation is indicated by the lines of pigment-cells which are widely separated by, and embedded in the exudate which fills the interior of the eyeball. The old bloodvessels which persist, show very marked thickening of their walls, and proliferation of the endothelial cells lining their lumens. Both the ciliary bodies and the choroid have been detached from the underlying sclera and the spaces thus produced are filled with a mass of coagulated transudate, which contains blood-cells and a moderate number of edematous leukocytes.

The retina is represented by a small, folded mass of tissue near the posterior pole, and can be recognized by the lines of cells composing its nuclear layers, and by the stretched-out fibers of Müller; but no trace of nervous element can be

detected. Between it and the optic nerve entrance are the remains of an old hemorrhage. The blood corpuscles stain faintly, and show masses of blood-pigment partly in free clumps, and partly in the bodies of broken-down leukocytes.

The optic nerve is quite atrophic. It exists only as a thin, hypernucleated strand, and shows no connection with the disorganized retina. Its nerve-fibers have disappeared.

REVIEW.

The microscopical examination showed an eyeball which had undergone phthisis, as the result of an acute suppurative process which had disorganized most of its component parts, particularly those in the posterior segment, and had caused rupture of the sclera with a consequent loss of a considerable portion of its contents. The posterior location of this spontaneous rupture is worthy of special mention, as it left a shrunken globe with the anterior segment, on first inspection, comparatively unchanged. Such ruptures usually occur at or near the sclerocorneal junction.

The desideratums of microscopic study of the case were:

1. To locate if possible the initial ocular lesion.
2. To demonstrate septic emboli in the choroidal or retinal bloodvessels.
3. To demonstrate the existence of microorganisms in the eye.

In the advanced stage of disorganization it was manifestly impossible to determine surely whether the process originated in the choroid or retina. No signs of embolism could be found. Sections were stained by the Gram-Weigert method and examined carefully for microorganisms, but none were detected.

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A PRELIMINARY NOTE UPON HYDROCYANIC ACID GAS AS A DISINFECTING AGENT.

BY

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Experiments, which at present I shall report briefly, lead me to suggest that hydrocyanic acid gas may be found a reliable agent for house disinfection by boards of health, especially serviceable in maritime disinfection, and, alone, or in combination with other gaseous germicides, very effective against certain infectious diseases.

In bactericidal power hydrocyanic acid is inferior to formaldehyd, but formaldehyd is not more effective against diphtheria bacillus and the nonsporulating bacilli generally. It offers a slight advantage over formaldehyd for house-disinfection in that it is generated without fire. Reported experience does not indicate that formaldehyd generators are dangerous, but having narrowly missed burning a house in my own first disinfection with a Robinson lamp, I have constantly expected worse luck with lamps of any sort.

Hydrocyanic acid is somewhat more expensive than formaldehyd, and it is undoubtedly far more poisonous. The destructive effects of hydrocyanic acid upon animal life point to its usefulness in disinfection after plague, yellow fever and malaria. At quarantine stations formaldehyd has not found favor in the disinfection of vessels, the chief objection being that it is not very injurious to rats or other ship vermin. Hydrocyanic acid holds undisputed rank as the speediest of gaseous poisons. Indeed, the cyanogen compounds have a reputation so sinister that the proposition to employ the deadliest one in public health work is not likely to be received with enthusiasm. In books on toxicology, hydrocyanic acid and potassium cyanid always appear as the twin demons of sudden death, though no proof is asked or offered of their title to that terrible supremacy. Having inhaled the gas often and in considerable amounts without noteworthy discomfort, I have diminished somewhat my fears of its imputed energies, though its real power must always be respected.

In electroplating works, in photography, in engraving, and in various other industrial arts, enormous amounts of potassium cyanid are handled by working people of all grades; dangerous cyanids enter into the manufacture of certain explosives, and are present in aromatic substances in common domestic use; and yet there is no considerable literature of poisoning by cyanogen.

Since 1897, hydrocyanic acid gas has come into extensive use in the disinfection of orchards and of nursery stock, the dangerous gas being generated on a large scale by inexpert persons, but not a single fatal accident has yet been reported.

The gas has found a wide application in greenhouses, against the enemies of fruits and flowers. In order to avoid injury to plants some caution must be observed as to the amount of gas, as to period of growth of plants, as to surface moisture, and as to exposure to sunlight soon

after fumigation; but the precaution of 10 minutes' free ventilation of the fumigating room seems to be sufficient for the safety of those who are engaged in the work. It has been used in large flouring mills to eradicate the weevil and other insect pests. It has done this work without injury to the grain or flour exposed in fumigation. In South Africa, hydrocyanic acid fumigation is said to be employed to rid railway coaches of bedbugs, which are particularly troublesome in that climate. It has in a few instances been successfully used to kill the rats and mice in farm buildings and mills. Some of the earliest demonstrations of the usefulness of this gas to nurserymen and orchardists were made in Maryland by W. G. Johnson, State Entomologist; and through observation of his work I have been led to look into the effects of hydrocyanic acid gas upon bacteria.

The physical properties of hydrocyanic acid are pretty well known. The gas is lighter than air, and has an agreeable aromatic odor, quite familiar in the flavoring essence of bitter almond.

It is best generated by the action of dilute sulfuric acid upon potassium cyanid. The proportions are: potassium cyanid 1, sulfuric acid 1.5, water 2.25. Potassium cyanid suitable for this purpose costs about 32 cents a pound, and is 98% pure. Sulfuric acid of the best commercial grade, costing about 2 cents a pound in carboys, will do this work very well. The chamber acid used in fertilizer works is unsuitable.

The first step in making the gas is to dilute the sulfuric acid. This must be done slowly, and it is best to add the acid to the water. A good deal of heat is generated, and for this reason glass vessels should not be used for diluting the acid. Vitriified clay jars bear the heat very well. The whole amount of cyanid is put into the dilute acid at once. As the evolution of gas is very rapid, one must be ready to leave the spot immediately, or what is better, the cyanid, tied up in a bag, may be lowered into the acid by a cord passing outside the room.

The amount of gas used for plant fumigation, expressed in terms of cyanid, is about 25 grams per 100 cubic feet. For room-disinfection a greater amount is necessary.

In my first experiments the infected materials were enclosed in a 1500 c.c. hydrogen jar, and exposed to the gas for 24 hours. The organisms used were *B. typhosus* 5 times, *B. diphtherie* 7 times, *B. subtilis* 7 times, *B. coli communis* 4 times, *Staphylococcus pyogenes citreus* 4 times and *aureus* 4 times. The vehicles were glass rods; bits of linen, wet and dry; cotton swabs on iron wire, both wet and dry; cultures of the various organisms upon beef tea, plain agar, sugar-agar, or blood-serum. In all of these experiments, except 2, the amount of gas used was generated from 10 grams of potassium cyanid. Two experiments were made by exposing articles to the residual gas in the jar after the conclusion of a previous experiment.

Without giving the details of these observations it may for the present suffice to say that the resistant organism was *B. subtilis*, which was killed but once in 7 trials. *Staphylococcus citreus* was found alive 3 times, and *Klebs-Löffler bacillus* survived one experiment.

B. typhosus and *B. coli communis* and *Staphylococcus pyogenes aureus* were killed every time.

Iron wire, when wet, was attacked by the gas, and received a thin coat of Prussian blue. Paper labels on the test tubes exposed to the gas were stained brown. Some cotton which remained in the bottom of the jar through several experiments, took on a dark brown color, and the fiber became brittle. Cultures in unstoppered test tubes were inhibited or killed. Sugar agar in tubes took a reddish brown stain to the depth of half an inch or more. In this stained medium *B. subtilis* did not grow, though transfers from the stained area grew. *B. coli* did not produce gas in sugar agar when exposed to hydrocyanic acid gas, but transfers grew in a characteristic manner.

The single specimen of Klebs-Löffler bacillus which resisted the gas, was a beef tea emulsion from a 24-hours' growth on serum, dried upon a glass rod. Another specimen of the same sort exposed at the same time was killed. Linen infected with the surviving Klebs-Löffler bacillus in beef tea, was rendered sterile by 24 hours' enclosure in the jar, without the addition of any fresh gas.

The next experiments were made in a room of about 1,400 cubic feet capacity, without plastering, having a brick end, and 3 sides of plank, with one small hinged window, and one loose door. Infected materials were distributed to all parts of this room and exposed to the gas released from 600 grams of cyanid. Of 7 swabs and rods of *B. diphtheriae* but one failed to grow after 24 hours' exposure. Five specimens of *subtilis* all grew. Of 2 aureus rods one grew and one did not. One specimen of *B. coli* was uninjured. This trial indicated that the amount of gas recommended for plant fumigation is far too little to destroy bacteria under such conditions as this room presented.

Another distribution of infected articles was made and exposed to the gas from 1,500 grams of cyanid. There were 11 pieces of linen infected with *Staphylococcus pyogenes aureus*. Five of them were exposed in open petri dishes, the other 6 were left in the 2 test tubes in which they had been allowed to dry. The 5 in dishes were sterile; the 6 in the tubes grew aureus feebly.

Three glass rods with aureus, 3 with *B. coli*, 3 with *B. diphtheriae*, 3 with *B. typhosus* yielded no growth. Two pieces of linen with *B. diphtheriae* were exposed in open dishes, and 3 pieces were left in a test tube. All these were killed. Three bits of linen infected with typhoid bacillus were found sterile.

An experiment was then made in the same room with 1,200 grams of cyanid. Of 5 diphtheria rods 4 were killed, and 1, accidentally contaminated, was not tested. Four bits of linen infected with diphtheria bacillus exposed in open dishes were all killed. Several pieces of linen containing diphtheria bacillus were suspended in 2 test tubes, open end downward, from the ceiling. These tubes were poured with bouillon, and both grew diphtheria bacillus.

Five typhoid rods were all sterile. Four pieces of typhoid linen exposed in a covered petri dish, cultured separately, all grew. Typhoid linen, exposed in an open inverted test tube, grew.

Of 4 *subtilis* rods, 1 was sterile. *Subtilis* linen exposed in open tubes, mouth down, grew.

Of 4 aureus rods, 2 on the floor grew, 1 on a table grew, and 1 near the ceiling did not grow. Four bits of aureus linen in open dishes were sterile.

Three coli rods were killed. Of 4 sugar agar tubes inoculated with *B. coli*, 3 were suspended inverted near the ceiling over the gas jar, and 1 was kept as a control. The 3 exposed tubes showed no growth in 3 days after exposure. The control produced gas.

Another experiment was made with 1,500 grams of cyanid. Of 6 bits of typhoid linen, 3 wet and 3 dry, all were killed. Of 10 typhoid rods, 9 were sterile, and 1, accidentally contaminated, was not planted.

Four pieces of diphtheria linen, exposed dry, were sterile. Five diphtheria rods were sterile.

Of 10 pieces of aureus linen, 5 wet and 5 dry, all were sterile.

In all these trials media reported as sterile were kept from 3 to 5 days, and in cases of any doubt specimens were fixed and stained.

These experiments tend to show that, against organisms no hardier than *B. diphtheriae* and *B. typhosus* hydrocyanic acid gas is about as effective as formaldehyd, though a greater amount of gas is needed, and perhaps a longer exposure. One gram of cyanid per cubic foot of space is probably the correct proportion. No claims for great power of penetration can be made for hydrocyanic acid as against bacterial life. A gaseous germicide with great penetrating power is as yet a chimera. The failures to kill Klebs-Löffler, typhosus and coli bacilli in these experiments happened under just such conditions as would have led to failure with formaldehyd. The infected linen exposed in test tubes contained organisms protected from the gas at the points where the medium dried in contact with the glass, and such organisms would as certainly have survived formaldehyd fumigation, as the experience of the City Health Department of Baltimore shows. Such indeed was the result expected in these experiments, though it was thought that the hydrocyanic vapor, having much moisture and no tanning power, might perhaps penetrate better than formaldehyd.

Against animal life hydrocyanic acid has strong diffusive energy, as was proved in one of Johnson's experiments. A large tobacco warehouse was so thoroughly infested with insects that the owner was about to abandon both the stock and the building. Much of the tobacco was in hogsheads, and although these were not unpacked the infection was completely eradicated by a single fumigation with gas in less than half the proportion used in our experiments.

The need of a gaseous germicide which shall also be destructive of animal life is becoming more and more impressed upon sanitarians, and it seems not unlikely that hydrocyanic acid gas may to a considerable extent meet this need.

Testimonial to Dr. Babcock.—On March 27, the Wisconsin Legislature presented a bronze medal to Dr. Babcock in recognition of his service to the State by the invention of the milk tester. The presentation of the medal was a popular tribute to applied science as represented in the Babcock test, which makes scientific dairying practicable.

THE FOOD VALUE OF ALCOHOL, AND PROFESSOR ATWATER'S EXPERIMENTS AND TEACHING.

BY

JOHN MADDEN, M.D.,
of Milwaukee, Wis.

[Concluded from page 209.]

When we search for the points of resemblance between alcohol and the carbohydrates and fats we see that alcohol, like these foods, is oxidized within the body. This is the single point of agreement. Even in this point we must qualify our statement as to alcohol by saying that alcohol is thus oxidized when taken in small quantities.

When 2 or more objects are put in the same class the one requisite of classification is that these objects shall contain more points of similarity than of difference. Clearly, then, alcohol is not a food. On the other hand we might show that alcohol in its irritating, paralyzing, and destructive effects generally, is very like a certain class of poisons; that its resemblance to these poisons is much closer than its resemblance to foods with which Professor Atwater classifies it—probably five times as close.

Reference is made here to a few things which should be further discussed. That alcohol will kill* when taken in sufficient quantity is well known. Ten and one-third ounces have been known to produce death in an adult in good health. A much less quantity has been known to produce effects which have led to a fatal issue, acute Bright's disease being one of the most common disasters resulting from alcoholic poisoning.

Just here we wish to call attention to the complacency with which Professor Atwater discusses the probable results of taking large quantities. He says †: "It is thus reasonably clear that alcohol can provide the body with heat. It seems probable that it also yields energy for muscular work, but to prove this absolutely is not easy. The difficulty is to make experiments in such a way as to show conclusively that the energy used by the muscles comes from the alcohol and not from the other materials of either the food or the body itself. When a man takes beer, brandy, or other liquor with his ordinary food, the proteids, fat, sugar, starch, and alcohol are used together as fuel, and we cannot say just what is done with the energy of each. It is a case of pooling. If the experiment was made with lean meat and alcohol—that is, a list containing protein and no other fuel but alcohol—it might, perhaps, be more decisive, but it would probably be difficult to find a man who could do hard work day after day on such a diet without drawing upon the materials of his body, at least such experiments have to my knowledge never been carried out."

Suppose we undertake to give the subject of our experiments a sufficient quantity of alcohol to supply him with the energy he gets in the fats and carbohydrates of his ordinary food, what would be the result? Let us see:

Moleschott's dietary calls for: fats, 40 grams; carbohydrates, 400 grams. Now each gram of fat yields on

combustion 9,312 gram calories,* and each gram of carbohydrates yields 4,115 gram calories when burned. Moleschott's dietary would, therefore, call for a total of 2,636,280 gram calories. The fats yield:

$$9,312 \times 40 = 372,480 \text{ gram calories,}$$

and the carbohydrates:

$$4,115 \times 550 = 2,263,800 \text{ gram calories.}$$

$$\text{Total, } 2,636,280 \text{ gram calories.}$$

One gram of alcohol burned yields, in round numbers, 9,000 gram calories; therefore, we must give our subject 293 grams, or about 9.1 ounces of absolute alcohol, or 18 ounces or more of brandy or strong whisky. Taking Atwater's dietary the amount is even greater—9.7 ounces of absolute alcohol, or about 20 ounces of strong brandy or whisky. It would, indeed, "probably be difficult to find a man who could do hard work, day after day, on such a diet without drawing upon the material of his body." This quantity of alcohol, as a matter of fact, would be sufficient to keep almost any adult individual in a constant state of intoxication, attended by all the destructive changes produced by alcoholic poisoning with which we are, unhappily, so familiar if it were not immediately fatal.

The surprising element in this statement is the careless confidence with which Professor Atwater discusses the giving of these almost lethal quantities of alcohol. Perhaps it was written in a moment of carelessness; but can we excuse carelessness in one who undertakes the task of teaching all of our people upon this vitally important subject?

In what manner alcohol interferes with the normal gas interchange of the entire body, with the cell absorption of oxygen and excretion of carbon compounds, we shall not fully discuss here. A very clear and convincing exposition of this phase of the alcohol question may be found in Dr. A. Smith's "Die Alkoholfrage," p. 12. † Because of this interference with cell oxidation, Dr. Smith, with good reason, calls it a "respiratory poison." Indeed, it is the alcohol's affinity for oxygen which causes it to so unfavorably affect cell protoplasm, destroying the chemical balance and producing premature cell dissolution.

That glandular activity is temporarily suspended by moderate doses of alcohol, we have the evidence of the carefully carried-out experiments of Blumeneau, of St. Petersburg, and our own Professor Chittenden; that muscular efficiency was always decreased in the normal unfatigued muscle, we have the careful work done by Dr. Herman Frey, using Mosso's ergograph; and that mental capability was always lowered, we have more than 1,300 tests made by Professor Kraepelin.

One further criticism upon the experiments of Professor Atwater in his misinterpretation of the results he obtained when he sought to determine the heat producing power of alcohol. Relative to this matter he says: "When we come to examine the matter closely we find that although the temperature of the body falls considerably after very large doses of alcohol have been

*Taylor gives the fatal dose of pure alcohol as between 2 and 6 ounces; Blyth at between 2.5 and 5 ounces.

† Loc. cit.

*A gram calorie is sufficient heat to raise one gram of water one degree centigrade, and equals one one-thousandth of a kilocalorie.

† It can also be found in my own work, "Shall we Drink Wine?" p. 37-8.

taken, and especially under exposure to great cold, the effect of ordinary doses is slight and often imperceptible.

When, further, we take pains to calculate how much heat the body would have to lose in order to reduce its temperature as much as is done with a bottle of wine or 1 or 2 glasses of whiskey, we find that it will correspond to only a small fraction of the heat which the alcohol yields to the body."

This that I have put in italics is Professor Atwater's answer to those who claim that the excess in heat radiation after the ingestion of a quantity of alcohol is so great that it equals the total latent heat of the alcohol ingested. In other words, that when a quantity of alcohol is taken the amount of heat radiation is equal to the potential heat of the alcohol plus the normal heat radiation. "This cannot be so," says Professor Atwater, "because the temperature of the body is not lowered sufficiently to indicate the loss of so much heat." Now, if the human body were an inert mass of matter it would be proper to proceed as he has done to determine this question of increased heat radiation; but with the human body we cannot think that he has proved his point. The amount of heat radiated from the body on a winter's day may be twice or thrice that radiated on a summer's day, yet the temperature of the body remains the same, while, according to Professor Atwater, the temperature of the body should fall at once whenever the heat radiation increases above a definite rate; but physiologists know that there is a nervovascular mechanism which looks after the temperature of the body with great care, closing up the chief exit of heat and ordering the consumption of more fuel when the loss of heat is great, and throwing wide open the heat exit and ordering the consumption of less fuel when the radiation of heat from the body is at a minimum.

The test applied by Professor Atwater to determine whether there be increased radiation or not was to measure the total output of energy first with an ordinary food, and then with a food in which a part of the fats and carbohydrates were left out and an isodynamic quantity of alcohol substituted in their stead. Two pairs of experiments of this kind were carried out. In one pair the subject was at rest, and in the other he performed muscular work on a stationary bicycle. With the subject at rest when no alcohol was taken the quantity of food burned up had a potential energy of 2,277 kilocalories* and gave off in heat 2,309 kilocalories; and with the man engaged in active muscular exercise without alcohol the amount of fuel burned had a potential energy of 3,900 kilocalories, and gave off in energy (heat and work) 3,932 kilocalories. When a part of the nonnitrogenous food of the subject consisted of alcohol, when at rest the amount of food consumed had a potential energy of 2,269 kilocalories, and he eliminated 2,283 kilocalories as heat; and while doing work the income and outgo were 3,923 and 3,923, respectively.

It will be seen upon inspection of these figures that no more fuel was consumed and no more energy given off when the food contained alcohol than when it contained no alcohol. From this fact he concludes that the radiation of heat from the body has not been increased by

the ingestion of alcohol. His (Professor Atwater's) proposition is like this: If alcohol increases heat radiation the total quantity of heat radiated from the body during any given time after its ingestion must be greater than it is when no alcohol is taken. If the total quantity of heat radiated is greater, then more fuel must be burned to supply it; therefore, the ingestion of alcohol should be followed by an increase in the total output of heat and an increase in the consumption of food materials.

Now, these are by no means necessary conclusions. In order to have a greater amount of heat radiated, more fuel must be oxidized, therefore more oxygen must be at hand to effect the oxidation, and this increased supply of oxygen must come by increasing the respiratory rate, i. e., the number of respirations per minute; but alcohol does not increase the respiratory rate; indeed, when it is taken in considerable quantities the respiratory rate is decreased. Moreover alcohol, like all other narcotics, temporarily interferes with oxidation of food material. It is possible to conceive of a condition in which the rate of radiation is slightly increased above the normal while heat production remains the same. This would, of course, lead to a lowering of the temperature of the body temporarily; but this process could not go on indefinitely for it would, in a longer or shorter time, lead to so great an abstraction of body heat that death would result. We must not lose sight of the fact, however, that the abstraction of heat from the body, when the heat production is not disturbed, leads to an immediate diminution of its output by constricting the surface vessels and thus keeping as much as possible from radiating. We thus see that an increase in heat radiation would be normally followed by a compensating decrease, and the sum total of heat radiation would indicate no increase for the whole 24 hours. Indeed, we have good reason to believe that alcohol acts precisely in this manner, and that there may be a temporary but still decided increase in heat radiation which would not be shown by Professor Atwater's experiments. At any rate, the fact that the bodily temperature falls immediately after the ingestion of alcohol remains undisputed, and we must from that fact conclude that less heat is produced when alcohol is present in the system, or that the rate of radiation is greater, with the preponderance of evidence in favor of the latter proposition. We cannot, therefore, accept Professor Atwater's conclusion that alcohol is as valuable, from this point of view, as any other food.

The older physiologists and physicians believed that all food material, whether nitrogenous or not, must first become a part of the complex protoplasmic molecule before it can give rise to the production of heat or any other form of energy. This is known as the "Anabolic" theory, or conception of nutrition. Subsequently it was held that many materials, notably the carbohydrates and fats, were oxidized and gave rise to energy without being built up into the protoplasmic molecule. This was known as the "catabolic" theory, or conception of metabolism.

That anabolism does play an important part in tissue metabolism is admitted on every hand. Protein is built up into the complex protoplasm molecule, and this molecule is, during its functional activity, broken down into

* A kilocalorie is an amount of heat necessary to raise one kilogram of water one degree centigrade, and equals 1,000 gram-calories.

simpler chemical substances, the energy stored in its building up being at the same time liberated. Speaking of the advantages which the anabolic theory has over the catabolic in explaining certain phenomena of metabolism, Professor Kassowitz remarks: "But the greatest benefit, at any rate, is that the anabolic process certainly exists, because all newly formed protoplasm is originated at the expense of food, and all protoplasm waste is certainly the result of breaking down the protoplasmic molecule; while the katabolic process is only hypothetical. We have not the least actual proof that in the living organism albumen is ever resolved directly to urea or sugar to carbonic dioxid and water, without having previously formed a part of the constituents of the chemical union called protoplasm." What evidence Professor Kassowitz has to support this proposition we do not know. It is, however, generally asserted by physiologists that a certain portion of the peptone resulting from pancreatic digestion (antipeptone?) is split up by bacterial action into leucin and tyrosin and that a further change results in the production of urea, this change taking place in the liver. There is no room here for a complete discussion of this phase of metabolism, besides, it would involve so much that is technical that the general reader would be more likely to be puzzled than enlightened.

In favor of the anabolic conception are the mechanic and chemic facts of metabolism. Indeed, it is difficult from what we know of the forces concerned in tissue metabolism to explain metabolic changes as they occur in the body without admitting the anabolic conception as being correct. Destructive tissue changes we know occur under the influence of irritants called stimuli. These stimuli are mechanical, chemical, electrical, thermal or nervous. The last named stimuli are the cause of the greater part of destructive tissue change in the body. These are concerned in all mental processes, glandular activity, and muscular contraction.

Now, it is well known that a highly complex molecule, such as forms the animal protoplasm, is much more easily broken down than the comparatively stable molecules entering into the formation of albumen, sugar, and fat. It is held therefore, that while all these forms of energy mentioned above are sufficient to break down the protoplasmic molecule, they are not sufficiently intense to resolve the molecules of albumen or sugar or fat into their simpler elements. In other words, it is held by adherents of the anabolic conception of metabolism, that the normal physiologic stimuli, while amply able to break down and liberate the latent energy of the protoplasm molecule, are not sufficient to break down the different food molecules.

At the present time the katabolic conception of carbohydrate digestion is that this class of foods reaches the tissues as sugar (dextrose) and are there directly oxidized. Glycogen is a dehydrated sugar stored up in the liver-cells when more carbohydrate food is taken than is immediately needed for tissue consumption, and it is given off gradually, as needed, but it is first converted into sugar before being oxidized in the tissues. A more permanent way of storing an excess of carbohydrate food is in the form of fat. This storing also occurs when more carbohydrate food is taken than the tissues need as

a source of energy. Whenever the carbohydrate and fatty food is insufficient, however, the tissues immediately draw upon their reserve supply of fat for energy to carry on their work, and it is just in this place that the katabolic conception of food metabolism puzzles us the most. We are entirely in the dark as to how this stored fat is consumed. We know absolutely nothing about the manner of its absorption and oxidation.

Here, then, is the apparent inconsistency: While, according to the metabolic theory, a part of an apple we eat today reaches the tissues as sugar and is there directly oxidized, a part of it is stored as fat to be used, perhaps, months hence, in a manner about which we know nothing. According to the anabolic conception of metabolism, all substances which are merely oxidized within the body, and which at no time enter into any part of the protoplasmic molecule, are not nourishing and must be barred as foods, and especially shall they be rejected when they contain properties highly destructive to tissue protoplasm, as is the case with alcohol.

Theoretically any substance containing latent energy which may be converted into kinetic energy through the digestive processes might be called a food. Admitting this proposition without limitations, the greater the amount of energy, the greater the number of calories which a substance contains, and the greater the ease with which this energy is set free, the greater the food value of the substance.

Such substances as gunpowder, nitroglycerine, gun-cotton, and the like, containing an enormous amount of latent energy would be valuable as foods provided, (1) that the introduction of any one of them had no irritating effects upon the tissues with which they come in contact; (2) that the energy contained therein might be liberated in an orderly manner as needed by the tissues, all excess being stored for future use. Just in that degree with which any substance conforms with these conditions is it valuable as a food.

Testing alcohol by these requirements what do we find? In the first place, on all hands, it is recognized as an active protoplasm poison, so active, indeed, that less than a fourth as much as is necessary to furnish the tissues with fuel may be taken daily without tissue derangement being universally apparent, and but a very little more than enough to supply the tissues with their daily needs of fuel has been found sufficient to destroy life when taken in a single dose. Does it need a technical education to determine whether any poison so violent as this shall be called a food or not? It seems that very few facts in science admit a clearer demonstration than that alcohol is not a food. Its destructive properties alone are sufficient to at once and forever bar it from the lists of foods of any class. Suppose you were a traveler in a savage country among savage people, and you became hungry, as it is quite likely you would become, and your savage hosts should set before you a food, some species of banana if you please, telling you that it was a valuable and universally used food, but that you might not eat more than one-quarter enough to satisfy your wants, and that if you ate enough to supply the needs of your body quite likely it would kill you?

Would you not marvel that these people should call anything so dangerous a food? Would you, indeed, take any part of it?

Many poisons besides alcohol contain a large amount of latent energy which is easily set free in the body. Phosphorous, many ptomaines, and numerous other substances have both of these properties. Shall we say that these substances, too, are foods when given in small quantities; that is, in quantities too small to produce lethal effects or effects which are not greatly destructive to the tissues with which they come in contact? Shall we make of alcohol one-fourth of our nonnitrogenous food, of phosphorus a still smaller fraction, and of other oxidizable poisons other still smaller fractions, simply because in these quantities they do not kill nor do any great apparent damage? Surely there is only one answer to a question of this kind.

A CASE OF DOUBLE BLADDER: EACH WITH A SEPARATE URETER. A STUDY OF THE URINE FROM EACH KIDNEY.*

BY

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of Denver, Colo.

The existence of a condition apparently so rare as double bladder may be of more frequent occurrence than has appeared in literature. The case about to be reported escaped discovery for 28 years, regardless of the symptoms present, which should have led to its detection. Up to 1881, 2 cases only were recorded, these are found in Holmes' "System of Surgery." One of these occurred in a woman, and presented 5 bladders, 5 kidneys and 6 ureters (Molinetti). Uitzman (*Krankheiten der Harnblase*, 1890), reports a case of double bladder (vesica duplex) and a divided bladder (vesica bilocularis). Blasius described a case of double bladder in an adult, with a common urethra, the bladders being completely separated. Other cases have been reported by Schotz, Cattier, Molinetti and Vidal, although mostly in children.

The condition is somewhat difficult of diagnosis, as is evidenced by the fact that most cases reported have been found at autopsy. Modern methods of examining the bladder and studying the secretion of the kidneys may bring to light other cases similar to this, and I hope through my experience to be of some aid in their discovery.

The interesting features of this case are: The age which the patient reached before its discovery was made; the manifold diseases for which she was treated; and the excellent opportunity offered to study the action of both kidneys.

Mrs. E., aged 28, came to me January 13, 1901, with a diagnosis from another physician of incurable Bright's disease; I examined the specimen of urine she brought with her, and found it filled with pus; specific gravity 1.018. She stated that the bladder never felt empty after urinating. I had her void her urine, then passed catheter, obtaining about 60 cc. of a fluid

nearly pure pus. I diagnosed diverticulum of urethra, as the catheter could be passed through channel when directed upward and clear urine obtained. The patient then gave the following history.

At 2 months of age she had scarlet fever, and was seriously ill for 6 weeks, complete recovery following. At 10 months she began to show symptoms relating to the bladder. She frequently but not constantly had pain when passing urine. Her mother states that as a child the patient had incontinence of urine, continuing until 16 years of age. During this time any violent exercise would bring on severe pains in the region of the bladder and more or less incontinence. At the age of 12 she was injured by lifting large timber, resulting in severe strain of muscles of back; this confined her to her bed for nearly 3 months. At this time there was much trouble with the bladder. When 15 she was sent to live with a relative who made her do all the drudgery of housework. After 6 months she was taken ill with very severe pains in the region of the bladder radiating through the left side. She could not pass urine at all. In attempting, at the beginning of the attack, to walk a long distance toward her home, she was frequently compelled to stop until urine had dribbled away for some time. She could then continue walking. During 6 weeks illness, pronounced exhaustion from overwork, she was kept constantly under opiates and was practically unconscious throughout.

Up to 21 years of age she had 2 attacks of the same character each year (usually in August and December). These attacks always came on with severe pains in the pelvis, lasting from 7 to 10 days. It was during this period she discovered that during the most violent paroxysms of pain she could pass the finger into the vagina, and by pressing what she termed a large lump on the anterior wall, could squeeze out considerable matter, which escaped through the urethra. This was usually followed by instant relief.

At the age of 21 while in excellent health, she was taken suddenly ill. The symptoms were marked by intense pain in the region of the bladder, extending up the left side of lumbar region. There was a violent chill, followed by high fever. There was more or less stupor. Pus ran from the urethra almost constantly, and led to the diagnosis of an unusually aggravated attack of gonorrhoea. At this time patient claimed great relief from vaginal douches; she always directed the nurse to push the nozzle of syringe firmly against the anterior wall of the vagina. This was invariably followed by discharge from the urethra. The physician in charge changed his diagnosis from gonorrhoea to typhoid fever. This attack lasted 2 weeks.

Up to January, 1900, the patient had attacks similar to these antedating the one just narrated. At this time another severe attack came on, the diagnosis was then made of disease of the left tube and ovary. The constant presence of pus around the vulva led to a curetment, followed by a section. The left tube and ovary were removed and a ventral fixation was done. After these operations there was no abatement of symptoms. She has had 3 distinct attacks since, one of which again called for the diagnosis of typhoid fever. It appears that in each attack there was a large tumor felt by the patient, about one-fourth of the way up the vagina almost closing this channel. Whenever this mass disappeared it was preceded by an unusual flow of pus from the urethra.

January 22, 1901, I had Dr. Leonard Freeman see the case with me. A catheter was inserted and clear urine was drawn from the bladder. After emptying the same the catheter was withdrawn and then passed into the urethra with the curve pointing downward, and considerable pus withdrawn. We both agreed upon the diagnosis and advised operation for the purpose of closing the diverticulum.

January 24, the patient was prepared for operation. Upon further examination under anesthesia, the supposed diverticulum was found to extend far up the pelvis, behind the uterus, and as far along the rectum as the finger could reach. Urine began to trickle from the catheter, so a second catheter was passed through the urethra and directed upward, the urine that trickled from each catheter was preserved in separate bottles for examination. The specimens under microscopic exam-

* Read before the Denver and Arapahoe Medical Society, February 26, 1901.

ination differed so materially in character that but one conclusion could follow, a double bladder, each with a separate ureter. The question now arose as to the origin of the pus, whether it came from the kidney, the bladder, or both.

February 10, the patient was placed on methylene-blue, 1 grain, every 6 hours, and the following day both bladders catheterized at intervals with the following result:

Time	Healthy Bladder	Unhealthy Bladder
8:30 a.m.	124 cc.	10 cc.
12: m.	30 cc.	64 cc.
4:30 p.m.	95 cc.	7 cc.
8: p.m.	100 cc.	8 cc.
1: a.m.	88 cc.	4 cc.
Total, 24 hours.	437 cc.	93 cc.

There was a striking difference in the color of the urine drawn from each bladder; the quantity drawn from the healthy bladder being 5 times more than that drawn from the other. The total amount of 530 cc. was secreted in the 24 hours, being far below the normal.

On this same day, at 4.30 p. m., the patient requested catheterization, as she felt the diseased bladder filling up. The catheter was passed first into the healthy bladder and the urine drawn off, it was perfectly clear and dark blue. The catheter was then passed into the posterior bladder and a thick, light-blue fluid withdrawn. The lower bladder was then washed out and the catheter allowed to remain. The kidney secreted rapidly for a few moments and then ceased entirely. This urine was saved for examination. Microscopically, it was found to be loaded with pus, and contained many tubular pus-casts from the kidney. Diagnosis, surgical kidney.

February 14 the patient was ordered not to pass urine at any time, but to have the healthy bladder catheterized, after which she was to attempt to empty other bladder without assistance. The following table shows the results:

Time	Healthy Bladder	Unhealthy Bladder
11:30 a.m.	132 cc.	Not drawn.
4: p.m.	88 cc.	Not drawn.
8: p.m.	80 cc.	Not drawn.
12: m.	92 cc.	Not drawn.
8: a.m.	104 cc.	Not drawn, some pain.
10:45 a.m.	24 cc.	166 cc. preceded by intense pain.
Total in 26 hrs. 30 min.	520 cc.	166 cc.

This shows patient unable to void urine from posterior bladder. Since this last experiment the patient was put on urotropin 5 grains 4 times a day. Considerable pus but very little urine, not more than 30 cc., was drawn from the bladder every 24 hours, and the bladder washed out with a solution of creolin.

It appears then that the following has been gained in point of diagnosis up to the present time, February 26: Surgical left kidney with a dilated ureter and collapsed bladder. The following drawing represents the condition.

From a close study of the minute details of the case, many of which are not contained in this history, it appears that there was a congenital malformation, *i. e.*, a double bladder, each with a separate ureter, the dividing membrane being horizontal. The posterior bladder suffered by virtue of its position. At the age of 15, the orifice of the posterior bladder became closed, the long spell of unconsciousness causing enormous dilation; this was followed by dilation of the ureter, thus causing surgical kidney. The left kidney is

so far diseased that it secretes urine only at times, and when this secretion occurs the posterior bladder fills and unless this is withdrawn the bladder becomes overdistended, until becoming full to its limit, the urine is voided by virtue of its own pressure.

The condition preceding this calamity was evidently one in which the anterior bladder was closed by its sphincter, the posterior but feebly controlled by a sphincter. The posterior bladder walls had the power of contraction until the patient was 15 years of age, but always was more or less of an irritant. At the present time the posterior bladder, if not catheterized, will empty itself slowly, but not without prostrating the patient.

The question naturally arises as to whether or not the left kidney should be removed. Throughout 6 weeks' close observation no more than 685 cc. of urine have been secreted from both kidneys in 24 hours. Since February 26 the patient has been given urotropin, 5 grains 4 times a day, and has drunk large amounts of mineral water, this has been followed by an increase in the daily secretion of urine. The left kidney secreted urine somewhat clearer. The largest amount secreted during any 24 hours was on February 28: Right kidney, 650 cc.; left kidney, 220 cc. March 2 the patient took neither the urotropin nor the mineral water, having recognized the fact that when catheterization was inconvenient the kidney secreted much less, and she could go over 48 hours without any annoyance. The amount of urine passed in 24 hours was: Right kidney, 500 cc.; left kidney, 30 cc., an amount so far below the normal that no operation was performed, as it was evident the right kidney was not capable of secreting enough urine.

A very important question as to the positiveness of the fact as to any connection between the bladders was settled. On March 2 the anterior bladder was filled with a deep blue solution of methylene-blue, the posterior by a decinormal salt solution, and the patient directed to roll around, lift the hips high, walk and get into every conceivable position. The posterior bladder was then catheterized and no color appeared. The anterior was then emptied and the solution withdrawn. On the following day the blue solution was placed in the posterior bladder and the salt solution in the anterior. The result was negative. This to my mind seems to be conclusive evidence that the partition between the bladders is impervious.

But a single question of doubt arises as to the positiveness of the condition diagnosed. It may be possible that the ureter emptied into the urethra instead of the bladder, and in infancy became dilated. There is no history of constant dribbling of urine, which would follow were this the case.

That the condition was not caused by the ventral fix-



ation of the uterus is evidenced by the fact that the symptoms before and after the operation are identical, and each attack antedating the operation, when the details are closely followed, gives a line of symptoms which puts the diagnosis beyond a question of doubt.

The secretion from both kidneys will be closely watched. If, in the course of time the patient's life should be put in jeopardy, regardless of the small amount of urine secreted, the left kidney will be promptly removed. If, after the freezing point of the blood has been determined, it should be found normal, regardless of the small amount secreted, the operation will be performed.

April 28, the patient is much improved. During the past 2 months the posterior bladder was first treated daily by means of solution of creolin, the treatments being gradually diminished until the present time, weekly washings being all that is necessary to keep patient free from pain. She has gained in weight 15 pounds.

TRANSFUSION, INFUSION, AUTOTRANSFUSION.

BY

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of Johnstown, Pa.

Time was, and not very long past, when, to most practitioners of medicine, transfusion and its allied subjects were matters that were believed to have been relegated to that limbo where the ghosts of specifics, cure-alls, resurrection-operations, life-giving serums and bactericid toxins, jibber forever to each other of what they could have accomplished for humanity, if the said humanity had not persisted in following the laws of life, which of necessity lead to death. But later patient research and experiments demonstrate the importance of the subject and justify an enthusiastic acceptance of the theory upon which the modern practice is founded as promising relief in many of the most desperate cases of injury and illness which come under our care.

By *transfusion* we mean the introduction into the vessels of the body of fluid material, especially of blood taken from another body, also the act of causing a fluid to pass through the skin into the body; *infusion*, a pouring into, as distinguished from transfusion, the gentle injection of any other liquid than blood into a vein or subcutaneous tissue; and by *autotransfusion*, the application of elastic or muslin bandages to the extremities for the purpose of forcing the blood toward the vascular and nervous centers, emptying the vessels of the extremities into the vessels of the abdomen, lungs and brain, and keeping it there until the crisis has passed.

The vital importance of the blood to the human being is a fact that must have been one of the first to be learned by our ancestors. Ancient literature makes mention of wild hopes of renewed youth firmly attached to the operation of transfusion. It was proposed as a specific for almost every fatal disease. It obtruded into experimental medical practice at various times in our era. It is said that one of the Popes in the fifteenth century in his passion for life had the blood of 2 healthy

youths instilled into his veins, but the story says that he and his sacrificial offerings were gathered to their fathers in a few hours after the operation. In 1666 an English author published a work recounting his experiments on dogs, which placed the operation upon a firmer scientific basis than it had been before. In 1667 transfusion was successfully done in France and in 1668 in Italy. The success seemed to be so marked that the treatment immediately came into vogue, and as a result of the infatuation, it was soon so carelessly done and for such inadequate reasons, that failure and death were the almost invariable results. Opposition arose and in 1675 transfusion was prohibited in France by Act of Parliament. Thus the matter stood for a century and a half until, in 1815, it was again brought forward in London by Blimdel, who also published a treatise on the operation in 1824. His method was to collect the blood from the donor's veins in a cup and inject it by means of a syringe directly into the veins of the patient.

In 1828 the operation was somewhat refined by Diefenbach, who described the 2 methods as we now know them—the *mediate* when the blood is transfused by means of a syringe, the *immediate* when the blood of one person or animal is made to mingle directly with the blood of the patient or animal through a suitable communicating tube. He also introduced the use of defibrinated blood. Since that time the operation has been perfected and a number of elaborate instruments devised which are designed to render it safe by excluding air from the stream of blood as it passes into the vein of the patient, an accident which is almost immediately fatal. No instrument has yet been devised with which the operation can safely be performed. Notwithstanding the care and skill exercised in the operation, it has often been followed by a fatal result, and this, too, when whole blood, either human or animal, defibrinated blood or milk has been used. The formation of clots, the entrance of air and the formation of fatty emboli are the uncontrollable dangers that beset transfusion. If the blood of an animal is transfused into the vein of a human, a new and additional danger must be met. Such blood immediately dies in the human circulation; it becomes a poison, destroys the blood-cells of the patient and entails upon his organs the excretion of an abnormal amount of excrementitious matter. The temporary revivifying effects of an increased mass of blood cannot counterbalance the immediate and remote dangers which attend transfusion. After a careful study of the subject, Professor von Ziemssen rejects the operation and concludes: "I would, under no circumstances, subject a patient to the great dangers of intravenous transfusion."

During all these years the hope for ultimate success by means of transfusion was based upon a solid and seemingly incontrovertible physiologic reason. Transfusion was indicated in severe cases of hemorrhage. Death by hemorrhage was assumed to be due to the loss of the carriers of oxygen, the blood-cells. What prevention should be more certain than to furnish the dying body with a new supply of carriers of oxygen? But the expected result did not work out. There must be something in the conditions of the problem which was not understood. Goltz came forward with a physical

reason. "Death was due to the emptying of the pump-works." That the heart can only set the blood in motion when there is a certain amount of tension in the vascular system. It is not deficiency of blood-corpuscles, of carriers of oxygen, but deficiency of *fluid* that causes death. It is not the quality of the fluid injected but the quantity that is beneficial. This doctrine was soon put to the test of experiment. Dogs were rescued from death by the infusion of salt solution after being bled until moribund, and Schwarz in 1882 published his paper maintaining the same fact in regard to the human. But as early as 1830 the same important fact was almost worked out by Latta, of Scotland, and Magendie, of France, in their treatment of cholera. They reasoned that the excessive loss of serum by the bowels in cholera was the great factor in causing the algidity and subsequent death, and that if this serum could be replaced the patient's chances of recovery would be improved. It was easy to compound an artificial serum and infuse it into the thickened blood of the patient. The result justified the reasoning and made the subcutaneous or intravenous infusion of artificial salt-solution a legitimate means of relief in cases of cholera.

M. Schwarz has been accorded the honor of demonstrating the true reason why the infusion of a saline fluid is a safe and very useful remedial measure. That reason is "that the heart does not contract unless a sufficient quantity of fluid is poured into its cavities, and this fluid must be under a pressure sufficient to bring into play the contractile energies of the heart. Inject then into the venous system an alkaline liquid homogeneous with its serum, and reestablish the vascular tension, you will restore activity to the circulation and will prevent the production of fatal accidents." The solution he proposed for use is composed of 6 grams sodium chlorid, 20 drops liquor soda and 1 liter distilled water. The good results of saline injections have been so manifest that no surgeon could excuse himself if he allowed a patient to die from hemorrhage without making use of this means when possible to do so.

Infusion of the saline solution may be done in 3 ways: intraarterial, intravenous and subcutaneous. By the intraarterial method the solution is gently forced into a large artery by cutting down and introducing a canula, or through a large hypodermic needle inserted into the artery. There is no possibility of air reaching the heart by this method, for the solution must pass through the capillaries and everything of a dangerous character is intercepted. By the intravenous method the solution is usually introduced into the median basilic vein by means of a proper canula, tube and funnel. It is unnecessary to describe the operation, as it is comparatively simple. Neither is it necessary to say, at this day, that it must be done aseptically. The subcutaneous method may be carried out with the aid of a large hypodermic needle attached to the bag of a fountain syringe which is elevated sufficiently to give the required pressure, or by attaching the needle to a bulb syringe, or by the use of an aspirator. The needle should be inserted in the loose tissues of the chest walls, abdomen or inner surface of thighs. Under favorable condition it is possible to inject a quart of solution into the loose subcuta-

neous tissue. The subcutaneous method offers some advantages over the other 2 methods. It does not appear so much like an operation and the patient and friends will consent to it more readily. There is not pain enough to require the use of an anesthetic, and no danger, as the local disturbances disappear in a few days at most, and the operation may be repeated frequently. There is no sudden increase in the blood-pressure because the fluid is slowly taken into the circulation. The quantity that should be infused by either of the methods cannot be fixed definitely. Less than 1 pint, however, is of very little use in the case of an adult. In cases of extreme urgency one cannot attempt to carry out the refinements of the operation. Then a teaspoonful of salt in 1 quart of water that has been boiled, strained and at a temperature not exceeding 110° can be used with the precautions that are possible under the circumstances. I believe in such an emergency the cutaneous method is the better one, for, however hastily the operation is done, it could not be dangerous in itself.

Autotransfusion can only be considered as a good transient expedient, applicable until saline injections can be used, or to supplement the latter. The transfusion of milk is attended with all the dangers of the transfusion of blood and has been relegated to obscurity with it, since the superiority of saline injection has been demonstrated. For all practical purposes the infusion of saline solution alone deserves consideration as a therapeutic agent. It is indicated in the following conditions:

Hemorrhages, from whatever cause, and especially the obstetric hemorrhages.

Shock, with or without loss of blood.

Collapse, occurring in the course of any disease, particularly cholera, cholera infantum, typhoid fever, and especially in the collapse following severe operations.

Puerperal infection, in which the salt solution is given to increase the power of the tissues and blood to resist the action of the microbes, destroy them and assist nature in throwing off their effects. It should be given hypodermatically in 2-ounce doses, twice daily for some days. Good results have followed such a practice and it may be that other infectious diseases would be benefited by similar treatment.

Epilepsy and puerperal eclampsia, especially after a preliminary bleeding.

Uremic convulsions, both after bleeding and as a diluent of the blood, and to favor the elimination of urea by the kidneys.

In poisoning by coal gas or by narcotics, it is a powerful aid to elimination.

Anemia, in the different forms, to be followed by appropriate food and medication.

In all cases the treatment must be considered as the most helpful expedient that can be used to bridge over the gravest emergencies, and thus gain sufficient time in which the slower acting but more permanently useful remedies may exert their curative effects.

Unlicensed Practice.—A "nervopathist" who had been fined \$100 in Los Angeles for practising medicine without a license appealed to the Supreme Court. He found that body would not revoke the decision of the lower court.

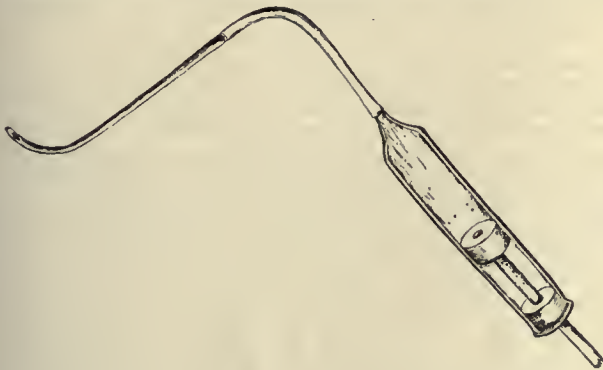
LITHOLAPAXY IN A CHILD FOUR YEARS OLD, WITH AN IMPROVED EVACUATOR.

BY

GWILYM G. DAVIS, M.D., M.R.C.S.,

of Philadelphia.

The patient was a male child 4 years of age. For 2 years previously he had suffered with symptoms of stone in the bladder. He urinated frequently and the stream at times stopped suddenly. He cried with pain when he urinated and grasped the penis. He never passed any blood. An examination with a sound showed the presence of a calculus. The patient was etherized and the bladder emptied of urine and injected with a couple of ounces of boracic acid solution. The meatus was cut and the lithotrite, a No. 18 French Scale Civiale instrument, introduced into the bladder. The urethra grasped the blades quite firmly as it was evidently distended to its greatest capacity. After the lithotrite had been introduced it was found to be still loose enough in the urethra to allow of its being rotated. The male blade worked perfectly freely. The stone having been found and crushed, an ordinary silver catheter, No 17 French Scale, was introduced. This was attached by means of a gum tube a few inches long to an ordinary 1-ounce glass syringe. The syringe, being filled with boracic solution, was attached to the rubber tube and its contents injected into the bladder. It was then lowered and the piston drawn back withdrawing some



of the contents of the bladder. The fragments followed the stream up the catheter into the syringe and settled on the piston. The syringe was then removed, emptied on gauze to strain out the fragments, and refilled with boracic acid solution and the process repeated until no more fragments could be obtained.

On the day following the operation the temperature rose to 101.4° and the prepuce was swollen. On the third day the temperature had fallen to normal and in a week the child was discharged. There had been no unfavorable symptoms nor even discomfort since the operation. The stone was an oxalate of calcium or mulberry calculus and weighed about 20 grains.

The case is of interest on account of the age of the child as showing the feasibility of the procedure employed, and also on account of the method used for removing the fragments. Vesical calculi are comparatively rare in this locality and few surgeons have a complete Bigelow's outfit for children. Of course a lithotrite of a suitable size is essential but the remaining apparatus is at every one's command and will be found perfectly efficient.

Medicine Chief Appointed.—Colonel D. Frank Powell, of Minnesota, has appointed a full blooded Indian to the position of Medicine Chief of the Winnebago nation. At a grand council of the chiefs and warriors soon to be convened the appointment will be confirmed. They will thoroughly test the new chief's fitness for the place and will make him write his name in blood on the register of the tribe.

CORRESPONDENCE

CORRECTION.

To the Editor of AMERICAN MEDICINE:—In the issue of May 4 the omission of the decimal makes me say that Dr. Kelly has 44% of secondary hemorrhages. That is an evident error; it should be .44%.
WILLIAM R. PRYOR, M.D.

UNAUTHORIZED USE OF SCIENTIFIC CONTRIBUTIONS.

To the Editor of AMERICAN MEDICINE:—In June, 1900, I published in the *New York Medical Journal* an article written without any idea as to its possible use as an advertisement to the firm manufacturing the product mentioned. It has lately been used in abstract in advertising pages in a manner that places me in a very embarrassing and unpleasant light before the profession. Is there no way to prevent such use of matter intended to have a scientific bearing only?

Sincerely yours,

CARLE LEE FELT, M.D.

Philadelphia, May 1, 1901.

[Authors have in the copyrights of the journals in which they publish, the means to prevent such use of their names and scientific work. Journals usually copyright for the purpose of protecting those contributing to their columns.]

SALINE INJECTIONS IN PNEUMONIA.

BY

CHAS. F. A. FRANCIS, M.D.,

of Brooklyn, N. Y.

Observing in Dr. William Crawford Johnson's article that saline injections were used first by Dr. Clarence A. Penrose in 1899, I would say that I advised the use of the chlorids of the serum and the sugar found there in their normal proportions in an article published in the *Medical Bulletin* of February, 1897. I am informed that Dr. F. P. Henry, of Philadelphia, made an extensive use of saline injections in 1892. The formula I recommended was as follows:

- ℞ C. P. sodium chlorid 46 grains
 - C. P. potassic chlorid 2½ grains
 - C. P. honey or grape sugar 3½ grains
 - Sterilized water ℥xvi.
- Place chemicals and honey in water and boil. Cool to 101° or 103°F.

TRAUMATIC RUPTURE OF EYEBALL.

BY

GEO. S. HULL, M.D.,

of Pasadena, Cal.

Carroll Scott, aged 2 years, and his brother, aged 4 (both very heavy children) collided forcibly while Carroll was descending a hill and his brother ascending. The brother held in his hand a pine stick 25 inches long, ¾ in. x 1 in. at the one end, cut off square, and ¼ in. x 1 in. at the other end. The larger end struck Carroll on the upper left eyelid at outer aspect. The lid was not cut by the blow, no blood being upon the stick. On examining the eye under ether about 18 hours after the accident the following conditions presented: The eyeball was shrunken about one-third on account of loss of vitreous. An irregular tear extended across the cornea and into the sclera, the rent beginning at inner margin of cornea about 2 mm. above base and running almost straight across the cornea to the outer margin where it curved upward extending to middle of outer margin. A branch of the rent ran into the sclera beginning below the middle of outer margin of cornea and running about 6 mm. into the sclera. The iris was badly entangled in the wound. On enucleating the ball it was found that the lens had been forced out with a portion of the vitreous.

It is certain that the blunt end of the stick did not strike the ball directly. The location of the rent so low down, when the blow was delivered upon the upper lid, may be partly accounted for when we remember that when the eyelids close suddenly for protection the ball is at once turned upwards.

PRACTICAL THERAPEUTICS

Under the charge of
A. A. STEVENS,
Assisted by
L. F. APPLEMAN.

Ichthyol in Smallpox.—Kamneff (*Therap. Monatsh.*, December, 1900, p. 682) reports having used a 12 to 20% ointment of ichthyol in the treatment of a number of cases of smallpox with most excellent results. Marked amelioration of all the symptoms occurs from the first day of its use. The duration of the disease is shortened and no marks are left on the face or elsewhere.

Dionin as a Sedative.—Krijevsky (*Paris University Thesis*, 1900) considers dionin superior to codein as a sedative, analgesic and hypnotic. Used hypodermically, in doses of $\frac{1}{4}$ to $\frac{1}{2}$ of a grain, the sedative effect becomes noticeable in about 15 minutes. Cough is favorably influenced both in acute and chronic conditions. No untoward effects have been noticed, even after long-continued use of the drug. The author considers that $\frac{1}{4}$ to $\frac{1}{2}$ of a grain in 24 hours is generally sufficient, and higher doses than $1\frac{1}{2}$ grains a day are seldom required.

Persistent Hiccough.—A method of treating persistent hiccough, which is not so widely known as it deserves to be, is the one first suggested by Laborde. It consists in drawing the tongue outward and upward, and subjecting it to rhythmic traction for from 12 to 14 times a minutes. Noir has recently reported 2 cases in which this treatment proved very successful. The first case was in a girl of 6 years, extremely nervous, who had paroxysms of hiccoughs of such severity that death from exhaustion was feared. Traction on the tongue, however, for a minute and half, immediately stopped the spasm and it did not recur. The second case was in a tuberculous patient with diabetes, who had been troubled with hiccough for several days. After all forms of medicinal treatment had been used without avail, traction on the tongue was tried and it proved completely successful. In 2 cases occurring within our own experience Laborde's treatment gave speedy relief.

Immediate Withdrawal of the Drug in a Cocain Habitue.—Norris (*Philadelphia Medical Journal*, February 9, 1901), reports the case of a dentist 30 years of age, who contracted the cocain habit subsequent to the local use of the drug in the treatment of hemorrhoids 10 years previously. When first seen at the hospital he was taking an average of 16 grains daily. Upon admission the cocain was abruptly withdrawn, strychnin sulfate, 1-30 of a grain, was given every 4 hours, and suphonal, 2 grains, repeated every 2 hours. The patient slept fairly well the first night; on the second he required no hypnotic. He complained of no craving for cocain, and stated that he felt quite as well as he did before beginning the use of the drug, and was allowed to leave the hospital 1 week after admission. The features of special interest are the sudden, complete withdrawal of the cocain without producing any of the distress so common after the discontinuance of a long-established drug habit, and that after 12 hours the patient experienced no craving for the drug.

Salt Solution for Intravenous Injection.—Carwardine (*Operative and Practical Surgery*), states that while the ordinary normal salt solution made extemporaneously with table salt may answer for emergencies, the surgeon should keep a bottle of sterilized salt solution more nearly resembling the composition of the blood plasma and of the same density:

℞ Sodium chlorid	200 grains
Potassium chlorid	12 grains
Sodium sulfato	100 grains
Sodium carbonate	100 grains
Sodium phosphate	3 grains
Distilled water	$\frac{1}{2}$ pint.

This is sterilized, and at the time of use its bulk is increased to 2 pints by the addition of boiled water.

Chloreton as a Local Anesthetic.—E. R. Rasely (*International Journal of Surgery*, April, 1901,) writes that in hundreds of minor operations he has used chloreton as a substitute for cocain. He claims that the drug produces complete anesthesia without depression or exhilaration. He employs a saturated aqueous solution along the line of incision. He believes that chloreton could be substituted with advantage for cocain in subarachnoid anesthesia.

Hemorrhoids.—J. P. Tuttle (*International Journal of Surgery*, April, 1901,) believes that in many acute cases of internal hemorrhoids we should have recourse to local and general measures rather than to operative procedures. Cold water enemas once or twice a day in order to produce smooth and easy movements of the bowels, and at the same time cause contraction of the bloodvessels, are very beneficial. At the same time injections of mild but nonirritating astringents, such as fluid extract of krameria, fluid extract of hamamelis, or fluid extract of pinus canadensis, will have a very soothing and curative influence. Suppositories of ichthyol, tannic acid and belladonna are often of great benefit, except where there is a mild degree of hemorrhage. Iodoform is also sometimes of much benefit, especially if there is an eroded condition of the parts. Resinous cathartics, such as podophyllin, aloin, gamboge, etc., irritate the parts and should not be used. Small quantities of saline laxatives, especially sodium phosphates before breakfast, followed after breakfast by the cold enema, will have a much better effect on the liver and the hemorrhoids as well, than any more drastic measures.

Adrenalin.—Mayer (*Philadelphia Medical Journal*, April 27, 1901) states that Takamine has isolated from the suprarenal gland the blood-pressure-raising principle in a stable crystalline form. He has named this adrenalin. It is a light, white crystalline substance, having a bitterish taste, only slightly soluble in cold water, but readily so in the presence of acids and alkalies. Various salts—sulfate, benzoate, hydrochlorid and tartrate—have also been made. A fraction of a drop of aqueous solution of adrenalin or its salt, in the strength of 1 to 10,000, blanches the normal conjunctiva within 30 to 60 seconds. It is a powerful astringent. Intravenous injections cause an enormous rise of blood-pressure. Adrenalin is 625 times stronger than the fresh extract, and about 1,000 times stronger than the fresh gland. The solutions slowly change color, becoming pink, brown, and finally muddy, but these changes do not appear to affect the action of the drug. The addition of a small amount of chloreton to the solution keeps it clear and retards the color changes. The author's solution was in daily use for a month and was still clear and active. The following conclusions are drawn: Adrenalin solutions supply every indication in rhinologic practice for which the aqueous solutions of the extract have been hitherto applied; they can be used in sterile form; they remain unchanged for a long time; a solution of 1 to 1,000 is very strong and is all sufficient for operative cases, and 1 to 5,000 or 1 to 10,000 for every purpose of local medication; they may be safely applied to persons of every age and of either sex.

Home Treatment of Tuberculosis.—Flick (*Proceedings of the Philadelphia County Medical Society*, March, 1901) states that no harm ever comes from telling a patient that he has tuberculosis. With a knowledge of his disease he becomes a good patient, whereas otherwise he would have been an indifferent one. He should be made to understand thoroughly that successful treatment means continuous struggle for a long time, possibly for a period of from 3 to 5 years. A tuberculous patient is not always cured when he appears to be cured, and treatment should be kept up for a long time after the patient appears to be well. Everything which the patient does must be passed in review by the physician. With many patients certain articles of diet will have to be stopped; as a general proposition, stimulants had better be stopped and also pastry of every kind. When the patient has poor digestion only one meal of solid food a day should be advised. In all cases large quantities of easily digested food should be commended. From 3 to 6 quarts of milk, and from 6 to 12 raw eggs

a day should be insisted upon to be taken. Vegetables, fruits and nuts should form part of the daily routine diet. Instructions should be given about the intervals at which food should be taken, the manner in which it should be kept and prepared. Eggs should be absolutely fresh. Milk should be sterilized. When forced feeding is not well borne, despite every care, pepsin, pancreatin, hydrochloric acid or diastase may be given. Abundance of fresh air, night and day, should be insisted upon. During the day the patient should rest in the open air, and at night he should sleep with the windows open. The body must of course be kept warm by clothing. There is nothing so poisonous to a tuberculous subject as rebreathed air. The old bugaboo of draughts need not be taken into consideration in planning for fresh air, so long as the patient is properly protected by clothing. When the disease is active absolute rest is necessary. In the incipient stage and in quiescent tuberculosis moderate exercise may be commended. A regular time should be prescribed for everything that the patient does. He should have 8 hours sleep and he should have it during the night. A single overexertion, one act of dissipation, or a few hours in a crowded hall may turn the tide of the case from recovery to fatality.

Treatment of Dysentery.—Symons advocates (*British Medical Journal*, April 13, 1901) douches of tannic acid, 30 grains to a pint of warm water, every 4 hours, hot hip baths, perhaps a little opium by the mouth, rest in bed, and a strictly milk diet.

Tropaeocain in Medullary Analgesia.—Schwarz (*Centralbl. f. Chirurgie*, March 2, 1901) reports 16 cases of medullary analgesia in which he employed successfully tropaeocain instead of cocain. The untoward effects—pallor, nausea, fever, headache and vertigo—were not observed. The amount of the drug injected did not exceed $\frac{1}{4}$ of a grain.

Exophthalmic Goiter.—G. R. Murray (*Practitioner*, April, 1901) states that thyroid extract not only fails to do good in Grave's diseases, but that it frequently does positive harm. Thymus gland may be given with safety. Opinions differ as to its utility. In one of his cases the patient took 3 dried thymus tablets each day for 9 months, and as a result the pulse rate, which varied from 132 to 143, gradually fell to 84, the goiter disappeared entirely, the tremor became much less, and the exophthalmos was diminished. In other cases improvement has also been observed, but not to such a marked extent. The inunction of red iodid of mercury ointment into the skin over the goiter, repeated sufficiently often to keep up slight redness, is useful. Of internal remedies belladonna is in general use. Tincture of convallaria in doses of 10 minims may be given with advantage 3 times a day when the pulse rate is high. Bromids are of service when there is excessive tremor or nervousness. Liquor arsenicalis, which may be combined with any of the above, and given in small doses of 3 or 4 minims twice or thrice daily for 6 or 8 weeks at a time, is in many cases of great value.

Thiocol in the Treatment of Pulmonary Tuberculosis in Children.—Kaplansky (*Merk's Archives*, March, 1901) reports several cases of tuberculosis in which thiocol was administered, and gives the following conclusions as to its use: (1) Creasote in some form must occupy the first place in the medicinal treatment of infantile tuberculosis; (2) among the derivatives of creasote or guaiacol, thiocol deserves the preference, and it will eventually become the remedy of choice; (3) the results of experiments on animals permit us to assume that thiocol exercises a direct antitubercular effect in the animal organism, and does not merely produce a favorable influence on the general nutrition and on certain symptoms of tuberculosis; (4) the experimental data, as well as clinical experience, justify us in giving thiocol a trial not only in pulmonary tuberculosis, but in other forms as well; as, for instance, in tuberculous pleurisy and peritonitis; (5) the administration of thiocol in all forms of tuberculosis is the more indicated because, on account of its solubility in water, and its absence of odor and taste, it is readily taken by children, and because it is perfectly innocuous.

THE WORLD'S LATEST LITERATURE

British Medical Journal,

April 20, 1901. [No. 2103.]

1. Medical Notes from the Imperial Yeomanry Hospital at Pretoria. J. W. WASHBOURN.
2. Reminiscences of the Welsh Hospital in South Africa (Springfontein and Pretoria). J. LYNN THOMAS.
3. No. 6 General Hospital, Johannesburg. ARCHIBALD WATSON.
4. Clinical Notes on the Wounded in South Africa. J. W. SMITH.
5. The Princess Christian Hospital in South Africa. GEORGE V. WORTHINGTON.
6. Veld Sores. ALEXANDER OGSTON.
7. Some Observations on Veld Sore. W. H. HARLAND.
8. Report on 295 Cases of Enteric Fever, General Hospital, Tin Town, Ladysmith. DAVID MELVILLE.
9. Enteric Fever in South Africa: Effective Sterilization of Excreta. Major H. A. CUMMINS.
10. Venesection in the Treatment of Gunshot Wounds of the Chest. Captain F. J. W. PORTER.

1.—Washbourn, in some medical notes from the Imperial Yeomanry Hospital at Pretoria, details some interesting observations on epidemic jaundice, enteric fever, dysentery, phlebitis, and certain undetermined fevers. [A.O.J.K.]

2.—Welsh, in reminiscences of the Welsh Hospital in South Africa, illustrates the methods of pitching marquees and claims for Keogh's peculiar advantages. The merits of a forceps-tourniquet and the telephone probe for locating bullets are detailed. [J.W.M.]

3.—Watson describes the disposition and management of the General Hospital at Johannesburg, and comments upon the cases treated therein. [A.O.J.K.]

4.—Smith, in Notes on the Wounded in South Africa, reports several cases of perforating wounds of the thoracic and abdominal cavities in which prompt recovery occurred. Wounds caused by expanding bullets or shells often suppurated, and in 1 case amputation was necessary. Erysipelas, septiemia, and hospital gangrene were practically unknown. Six cases of wounds of large joints recovered without infection. The almost uniform aseptic healing of wounds is attributed to the absence of serious oozing, and the sealing of small wounds by the sun and air before they became contaminated. When a bullet is lodged deeply and causes no trouble he advises that it should be left alone. [J.W.M.]

5.—Worthington describes the disposition and management of the Princess Christian Hospital in South Africa and comments upon the cases treated therein. [A.O.J.K.]

6.—Ogston discusses veld sores which are considered peculiar to South Africa and consist of a semitranslucent swelling of the epidermis with the formation of a blister, often multiple, of the size of a shilling in the center, which on rupture leaves an ulcer surrounded by a fiery red area. These occur on the arms, hands, legs and feet. He attributes this condition to the inoculation of a virus by the horse fly into an existing abrasion. The fluid from the primary swelling contains quantities of micrococci.

7.—Harland in some observations on veld sores describes their first appearance as a papule the size of a pin head, which increases in size and contains a clear yellowish serous fluid which in a few days becomes turbid. It usually ruptures spontaneously, leaving a painful scab-covered sore, from which seropus exudes. They are usually multiple, and appear on the back of the hand and fingers. Occasionally one large pustule covers the hand, and accompanying the dirty variety is a lymphangitis with glandular enlargement. Elevation of temperature, headache and constipation are often present. The treatment consists of rest, administration of a mild aperient, applications of borie or carbolic fomentations during the sloughing stage and a mild ointment later. The condition which is most common among the cavalry is attributed to the sting of the horse-fly. [J.W.M.]

8.—Melville makes a report on 295 cases of enteric fever treated in the General Hospital in Tin Town, Ladys-

smith. In 40% of the cases there was no rose rash; in 20% the rose spots were thickly scattered over the trunk and extremities. Diarrhea was present in only 5 cases; constipation was constant and difficult to deal with. In 2 cases there was violent maniacal delirium. Of the patients 30 had been inoculated with protective serum; in these cases the complications were more numerous, the duration of the fever longer, and the death-rate higher than in the uninoculated. Hemorrhage occurred in 17 of the total number of cases; perforation with peritonitis in 3 cases, all of which terminated fatally. Pneumonia occurred in 11 cases, thrombosis in 5 cases and relapse in 23 cases. Five cases were of the malarial type. There occurred 2 cases of typhoid toes. The low death-rate (2.38%) is attributed to the use of carbolic acid internally, 2 drops every 4 hours, to sponging with cold water, and to the excellent nursing. [A.O.J.K.]

9.—Cummins makes a second report upon effective sterilization of excreta in the hospitals in South Africa.—The method, which consists in boiling the excreta in a cauldron, was described in the *British Medical Journal*, November 10, 1900. [A.O.J.K.]

10.—Porter reports a case of gunshot wound of the chest in which he attributes recovery to venesection. There was a hemorrhage into the pleural cavity and the heart became too feeble to maintain the circulation through the undamaged lung. By venesection 10 ounces of blood were removed and the heart-strain relieved. The advisability of such treatment in cases of pneumonia in sthenic patients is suggested. [J.W.M.]

The Lancet.

April 20, 1901. [No. 4051.]

1. Carcinomatous Stricture of the Duodenum. H. D. ROLLESTON.
2. Autopsychorhythmia or Repetition Psychoneurosis, Morbid Rhythmic Forms of Automaticity and Rhythmic Forms of Mental Alienation. C. H. HUGHES.
3. Correspondence between Cholera and the Prevalence of Common Bacteria in Well Waters of Gujerat during the Famine of 1900. GEORGE LAMB.
4. When to Operate in Perforative Peritonitis. ARTHUR C. ROPER.
5. Recurring Attacks of Catalepsy alternating with Violent Mental Excitement. W. G. STONE.
6. On the Causation and Treatment of Profuse Epistaxis in People beyond Middle Age. GEORGE COATES.
7. Case of Recovery after Operation for Diffuse Peritonitis from Perforation of the Appendix. CHARLES A. MORTON.
8. The Open-air Treatment of Phthisis at Home: a Short History of a Case. F. WHINFIELD BARTLETT.

1.—Rolleston reports a case of **duodenal stricture due to carcinoma** in a patient of 50 who for 2 years suffered from abdominal pain, and vomiting on taking food, and was on admission to the hospital weak and anemic. The vomit contained bile, but no free acid. The urine contained a large quantity of creatinin, probably as a result of the patient's rapid wasting. Pyemia developed, the source of infection being a transfusion wound. Death from exhaustion followed. Necropsy showed a tight stricture of the third portion of the duodenum, due to malignant disease. Only 10 cases of primary malignant disease of the duodenum were found in 18,000 autopsies at Guy's Hospital. The disease may be limited to the first, second or third portion, that of the second being the most frequent. [J.W.M.]

2.—Hughes, describing a condition that he designates **autopsychorhythmia or repetition psychoneurosis**, discusses certain morbid rhythmic forms of automaticity and rhythmic forms of mental alienation, and illustrates his remarks by reference to the histories of a number of patients that have come under his observation. [A.O.J.K.]

3.—Lamb, as a result of an examination of the local water supplies, found a marked correspondence between cholera and the prevalence of comma bacteria in well waters at Gujerat during the famine of 1900. The comma-shaped bacteria were not the true cholera vibrio, although they belong to the same tribe of microorganisms. It is suggested that all curved bacteria thrive under similar conditions, and that the

discovery of comma-shaped bacteria, though not the true cholera vibrio, should serve as a warning as to the danger of cholera in the neighborhood. Of 25 wells treated with potassium permanganate 17 contained no comma-shaped bacteria; the remaining 7 contained them in small numbers. In one well not treated comma-shaped bacteria were found in numbers. No inferences are drawn from this observation. [A.O.J.K.]

4.—Roper, in discussing the question of when to operate in perforative peritonitis, states that the salient and early signs of perforation of a gastric ulcer are pain, tenderness, rigidity, presence of fluid and gas in the peritoneum, and collapse. These are followed later by a period of calm, with abdominal distention, increase of fluid and probably evidence of intestinal paresis. In appendicitis the following points are given as a means of determining the existence of an abscess: (1) The condition of the patient—the pulse, the temperature, and the aspect; (2) the condition of the abdomen; and (3) the presence or absence of a swelling. Each condition is considered in detail. If evidence of abscess formation appears, it should be evacuated as early as safety permits. In such a case a sudden fall in temperature without a corresponding improvement in pulse indicates a probable sloughing of the appendix. Operation is not advised during the early shock which follows perforation. The patient should be stimulated and the period of calm which follows waited for. [J.W.M.]

5.—Stone reports a case of recurring attacks of catalepsy alternating with violent mental excitement, occurring in a woman of 27. The patient suffered with marked menstrual irregularities and was much improved by dilation and curetting of the uterus. [A.O.J.K.]

6.—Coates, writing of the causation and treatment of profuse epistaxis in people beyond middle age, reports 5 cases of epistaxis occurring in persons beyond 50 years of age. The attacks were sudden in their onset, profuse, generally lasting from $\frac{1}{2}$ an hour to an hour or more, and tending to recur for several days. The sequence of events that led up to the epistaxis is said to have been essentially in each case and as follows: (a) long continued high arterial tension; (b) some sudden cardiac failure; (c) overfilling of the whole venous system, the weakened heart not being able sufficiently to empty the engorged veins against the high pressure in the arterial system due to contracted arterioles; (d) leakage from an overfilled vein. Treatment must be directed toward emptying the overfilled veins. This is best accomplished by acting on the capillaries and arterioles—with nitroglycerin, amyl nitrite, and later the more slowly acting nitrites, such as erythrol tetranitrite, or possibly even thyroid tablets. When the capillaries and arterioles are dilated and pervious, then comes the time for strychnin and strophanthus. In some cases plugging of the nares may have to be resorted to. [A.O.J.K.]

7.—Morton reports a case of diffuse peritonitis from perforation of the appendix, in which recovery followed operation. He refers to the distinction between diffuse and general peritonitis, and also to the fact that all recurrent cases of appendicitis cannot be postponed until the quiescent period as is illustrated in the case reported, in which 48 hours after the onset the symptoms were pain and tenderness, with general distention. Temperature below 100° and pulse 80. Because of the increasing distention and tenderness, operation was performed. A large quantity of pus was found, with a diffuse peritoneal involvement. Drainage was established and recovery followed. The case shows that a severe peritoneal infection may exist with a pulse and temperature almost normal and an absence of those signs which usually accompany septic peritonitis. [J.W.M.]

8.—Bartlett reports the result of the open-air treatment of tuberculosis at home—the patient being a woman of 38, with well marked consolidation and excavation of the left apex, commencing involvement of the right apex, and tubercle bacilli in the sputum. The treatment, begun in February, consisted of residence out of doors between breakfast-time and sunset, nutritious diet, creasote, and various symptomatic medications. At the end of a year, the patient was much improved—she was plump and had a healthy complexion: her cough and expectoration had almost disappeared; fever and night sweats had

ceased; and physical signs of commencing disease of the right lung had disappeared. [A.O.J.K.]

Journal of the American Medical Association

May 4, 1901. [Vol. XXXVI, No. 18.]

1. The Gyromele in the Diagnosis of Stomach and Intestinal Diseases. FENTON B. TURCK.
2. A New Operative Method to Expose the Seminal Vesicles and Prostate for Purposes of Extirpation and Drainage. A Preliminary Report. EUGENE FULLER.
3. Myasthenia Gravis Pseudoparalytica. (Asthenic Bulbar Paralysis.) J. T. BUIST and E. G. WOOD.
4. Limitations of the Laryngologist in the General Treatment of Nose and Throat Diseases. H. W. LOEB.
5. Absolute Increase of Measurement from the Anterior Superior Spine to the Malleolus as a Sign of Hysterie Hip Disease. JAMES JACKSON PUTNAM.
6. A Case of Transient Motor Aphasia, Complete Anomia, Nearly Complete Agraphia and Word Blindness, Occurring in a Left-Handed Man; with Special Reference to the Existence of a Naming Center. CHARLES S. POTTS.
7. The Pharmacology of the Nitro Sugars. C. R. MARSHALL.
8. The Classical Cesarean versus Porro Cesarean. GEORGE M. BOYD.
9. Ocean Climates: Their Effects and the Cases They Benefit. JOHN A. ROBISON.
10. Adhesive Rubber Dam for the Prevention of Possible Infection at the Site of Operation. J. B. MURPHY.
11. The Present Status of Spinal Surgery. SAMUEL LLOYD.

1.—The **gyromele** is a flexible steel cable, with spiral end, provided with a metallic pellet covered with wool, cotton or sponge, and fastened in a revolving apparatus like a drill, which is put in motion after introduction, causing vibrations which are perceived by auscultation and palpation, when the end is in close contact with the organ's wall. It is the only instrument which manifests itself as soon as it enters the stomach. The cardia can be located by gently withdrawing until resistance is met. Accidents are reduced to a minimum by its elasticity, flexibility, cushioned extremity and rotary motion. Cases are cited showing the exactness of diagnosis obtainable by it as to location and nature of lesions. The method of obtaining adherent mucus and bacteria from the stomach walls, after cleansing the lumen by a douche, is described. This is of the greatest diagnostic importance. **Exploration of the pylorus and duodenum** with aspiration of the contents is also described. The technic is minutely given, and the method of obtaining x-ray outlines by means of bismuth, emulsion, etc., is explained. [H.M.]

2.—The perineal and pelvic tissues are made tense by placing the patient abdomen downward and thighs straddling a Trendelenburg table which is then inclined sharply upward. A cotton tampon is pushed well up the cleansed rectum. Incisions are made on each side, extending from a little above the upper border of the coccyx just inside the body of the ischium, downward and slightly inward just within the border of that bone, passing the tuber ischii and ending about $\frac{1}{4}$ of an inch anteriorly to the anus. A transverse cut connects the converging ends, care being taken to avoid the sphincter. The left forefinger, ball downward, is inserted in the rectum, the thumb presses against this, while the hand exercises upward traction. The knife in the right hand dissects through the levator ani and visceral layer of pelvic fascia, keeping close to the rectal wall, using the inserted forefinger as a guide and thus avoiding damage to the urethra. Both forefingers are then inserted through the cut into the lymph space between the prostate and rectum and the path of the wound divulged. The loose rectal connections are stripped from bladder and seminal vesicles in the same way; the operation for which the incision was made is completed; and the walls united by deep sutures to avoid tendency to rectal prolapse, a space being left for drainages in the middle of the transverse cut. The indications for the operation with new methods of **treating disease of the vesicles** are touched upon. [H.M.]

3.—But 62 cases of **asthenic bulbar paralysis** have been reported, the first in 1877. Nothing is known as to etiology or

pathology. Some consider it toxic, and Buzzard's experiments tend to prove the disease is nervous and not a myopathy, galvanism causing prompt and vigorous contraction after exhaustion by faradism. There is no reaction of degeneration, no atrophy, no fibrillary twitchings, no sensory or trophic disturbances, no ataxia, bladder, or renal troubles. The special senses and intelligence are unaffected. Characteristic symptoms are **weak and rapidly exhausted muscles**, the tendency to affect not only the bulbar muscles, but those of the eye, and extremities, the occurrence of exacerbations and remissions. The disease is prone to attack the respiratory muscles, the majority of deaths being due to asphyxia. It is most likely to be mistaken for hysteria, neurasthenia, true bulbar paralysis or multiple neuritis. No specific treatment is known. Complete rest and general tonics are advised. A case is reported. [H.M.]

4.—In the few rare instances in which **general treatment** results in immediate local change in nose and throat as in rheumatic and syphilitic conditions, the laryngologist may appropriately conduct the general treatment, but under other circumstances he should refer the case to the general practitioner. A resume of complications is given to show the absurdity of any other course, also of the general treatment of general pharyngitis from the textbooks of numerous specialists. [H.M.]

5.—After allusion to the shortening of this measurement due to the erosions of tubercular disease, Halsted's explanation of the lengthening in the first stage is given. The **increase in hysterie hip disease** was noted in 1 case by Charcot, but is nowhere described as characteristic. The value of this sign in differential diagnosis lies in the fact that it rarely occurs except in the early stages of tuberculous disease, but lasts as long as the morbid condition in hysteria. It is more marked in women on account of the greater width of the pelvis. [H.M.]

6.—Associated with the **aphasia** was **left-sided paresis** of the muscles of the tongue and lower part of the face. The sudden onset pointed to embolus or hemorrhage. The patient could call the name of an object into consciousness and distinguish between correct and incorrect pronunciation. The most probable explanation of the inability to name objects is that there is a **naming center**, probably somewhere in the temporal lobe, possibly part of the superior temporal gyrus, and that a tract leading from this center to the center for the preservation of the motor memories of speech was damaged. This would likely run through the insula and thus be easily reached by a lesion that had, judging from the word blindness and motor paralysis present, involved the angular gyrus and extended subcortically in a direction to impair the function of fibers running from the centers for the lower part of the face and tongue to the internal capsule. [H.M.]

7.—The **nitrosugars** are really nitrate-esters, closely allied to nitroglycerin, etc., and having the same paralyzing influence on the unstriated muscle of vessel-walls, lowering tension, their action being slighter and more prolonged, however. They are much less stable than erythrol tetranitrate, and it is therefore doubtful if they will find a place in therapeutics. Their taste is very bitter. [H.M.]

8.—The classic **Cesarean** section is the operation of choice and the life of the infant alone under certain conditions indicates it, as, when not performed as a last resort, the mortality as shown by statistics is very low. It is indicated in many cases of pelvic deformity, eclampsia, placenta previa and prolapse of the cord. The **Porro** is mutilating and has a higher mortality. One case is reported in which 3 successful Cesarean operations were performed. The danger of subsequent operations is not an indication for the Porro. The latter has about the same mortality as hysterectomy for fibroids and should be performed only when the patient demands it, or on account of infection or neoplasm. [H.M.]

9.—**Sea air** is warmer, more aseptic, freer from dust and contains more ozone than land air except in the highest altitudes. The rising and lowering of the temperature is slower. The traveler is induced by these conditions to spend most of his time in the open air in enforced rest. Sea air is sedative to the nervous system, increases metabolism, weight, appetite and inclination to sleep and is **indicated** in many cases of disease

of the respiratory tract, scrofulous affections, anemias, neurasthenia, chorea and even rheumatism. [H.M.]

10.—Murphy describes a sterile adhesive rubber dam which will stand considerable traction without separation from the skin and is not affected by antiseptics or wound secretions. It may be applied to any part of the body, the incision and sutures are made through it and it is removed after the operation is completed. It is applicable also in suppurating and draining wounds to prevent erosion or eczema from irritating discharges. [H.M.]

11.—Statistics tabulated from 227 cases of traumatic injury to the spine show operative mortality to be only 31.89%. These figures leave no doubt of the advantage of the operative over the conservative treatment. The figures of a table of statistics inserted are decidedly against immediate operation. The latter should be delayed until it is evident the patient will not succumb to the direct effects of the injury. Some incomplete recoveries have been due to incomplete relief of compression from not removing enough laminae, leaving projecting bone or blood clots and failing to look out for compression from inflammatory processes. Care should be taken to note that the cord dilates to its full size and pulsation returns. The dura should be opened if discolored and any blood clot removed. Patients have survived the loss of large quantities of cerebrospinal fluid. When a portion of a displaced body or an articular process has to be removed supporting apparatus should be employed. Wiring may be considered. Operations in the region of the cauda equina come under a different ruling from those in which the medulla may be affected and do not differ from those done upon nerve tissue in any other part of the body. The article concludes with 4 previously unpublished cases in detail, and a synopsis of 120 other cases. [H.M.]

Boston Medical and Surgical Journal.

May 2, 1901. [Vol. CXIV, No. 18.]

1. Contusions of the Abdomen. CHARLES L. SCUDDER.
2. Observations on the Use of Antistreptococcus Serum in the Treatment of Puerperal Sepsis with a Report of 5 Cases. FRANK A. HIGGINS.
3. A Case of Cesarean Section in a Face Presentation, Complicated by Uterine Fibroid. EMMA S. CALL.
4. Notes from the Neurological Department of the Massachusetts General Hospital: Exophthalmic Goiter and Fright. E. W. TAYLOR.

1.—Scudder, in discussing contusions of the abdomen, details the signs of injury of each organ and outlines the treatment. Shock, hemorrhage and peritonitis are general conditions. Shock may be of nervous origin, or it may be due to hemorrhage or extravasation of visceral contents. The symptoms are: pallor, low temperature, nausea, cold extremities, irregular, compressible and rapid pulse, shallow respiration, anuria. Secondary shock suggests intraabdominal hemorrhage or visceral rupture. Intraabdominal hemorrhage is dangerous because of loss of volume of blood. The symptoms are shock, restlessness, thirst, sighing respiration, with evidence of fluid in the abdominal cavity, rapid, feeble pulse, and subnormal temperature. The symptoms of peritonitis are pain, tenderness, vomiting, abdominal distention and muscular rigidity. He concludes that cases in which there is but little shock, and those in which shock is profound, should not be operated on. Immediate operation is indicated in persistent, moderate shock, progressive hemorrhage and in peritoneal infection. [J.W.M.]

2.—Higgins reports 5 cases of puerperal sepsis treated with antistreptococcus serum. They were all in an extremely critical condition when the serum was used and only 2 recovered. From his observations in these cases he thinks we cannot fail to be disappointed in the results of the serum treatment, and also cannot but conclude that as a curative agent its power is limited to a very narrow line of cases. It has also impressed him that the serum has a marked depressing effect upon the patient, and is not to be administered to a very sick patient off-hand in large and frequent amounts, as the directions are given which come with the serum. When used, it is best endured by the patient and less depression follows, in doses of 10 cc.

repeated not oftener than every 12 hours until some result is observed. This is usually shown by a marked decline in pulse and temperature. Larger doses administered repeatedly may result in dangerous symptoms. He believes that the serum treatment has no place in the routine treatment of puerperal sepsis, that it should be used only in desperate cases after failure to obtain improvement by other and usually more efficient methods, and that if no improvement is shown after use for 2, or at most 3 days, and the injection of 40 to 60 cc., it should be discontinued. It is only in occasional cases of pure streptococcus infection that antistreptococcus serum is apparently of great value as a life-saving measure, while in the majority of cases of streptococcus infection, and in all cases of mixed infection, it is useless to expect the serum to cure the disease. [W.K.]

3.—Call reports a case of face presentation complicated by a fibroid in which the child was delivered by Cesarean section and the mother recovered. It was thought that an earlier operation might have saved both lives. [W.K.]

4.—Three cases of exophthalmic goiter following fright are reported. Careful investigation would doubtless show emotional disturbance as a precursor in many cases. The manner of development is not comprehended. The legal bearings of the relationship in accident cases is considered. [H.M.]

Medical Record.

May 4, 1901. [Vol. 59, No. 18.]

1. The Operation for Radical Cure of Inguinal Hernia, at the End of the Century, as I saw it Performed by Bassini, Lucas-Championnière, De Garmo, Coley and Broca. CAMPBELL FORD.
2. Varicella in Adults. ALVAH H. DOTY.
3. A Plea for the Conservation of Breast Milk in Whole or in Part. THOMAS S. SOUTHWORTH.
4. On Bandages for Nephroptosis. GEORGE M. EDEBOILS.
5. Version: Indication, Technique, Limitation. S. MARX.
6. Axis-Traction Forceps. EGBERT H. GRANDIN.
7. Cesarean Section. EDWIN B. CRAGIN.

1.—Ford describes in detail the clinic of Bassini and the technic of his radical cure for hernia. The variations of the operation as used by Lucas-Championnière, De Garmo, Coley, and Broca are then given. The uses of the several sutures suggested by Ford are explained. [A.G.E.]

2.—Chickenpox sometimes occurs in a typical form in adults. Three signs are of value in diagnosing it from smallpox. In the latter the true skin is involved, giving the shotty sensation and resulting in pitting. The vesicle is hard and resisting. In varicella the vesicles are superficial, and can be torn by sweeping the edge of the fingernail quickly and firmly over them. Occasionally a scar is caused by irritation, involving the deeper tissue. Smallpox eruptions come in one crop, chickenpox in successive crops, and the vesicles are not preceded by papules. The hands and feet are almost always involved in smallpox, rarely in chickenpox. What will pass for umbilication is sometimes found in varicella and syphilis. Constitutional symptoms are less reliable in diagnosis than the eruption. [H.M.]

3.—The normal breast milk is the best and safest nourishment for an infant. According to Southworth 97% of infant mortality from gastrointestinal disease occurs among infants not nourished exclusively from the breast. The official statistics of the German Government show that of artificially fed infants 51% die during the first year, while only 8% of those exclusively nursed perish during the same period. In view of such facts, and also of the increasing proportion of artificially fed infants due largely to the ignorance of mothers, Southworth considers it incumbent upon the family physician and the obstetrician to enlighten this ignorance. It becomes his duty to instruct the mother as to the proper diet, exercise, etc., necessary to promote the secretion of nutritious milk for her child; also the necessity for its regular nursing at proper intervals. He emphasizes the fact that there is very often a great lack of fluids taken into the system by the mother and that it is essential to drink water freely during lactation; or better still, milk, the gruels, and cocoa, which have definite food and milk

making possibilities. An extended experience has convinced Southworth that it is important to conserve the maternal milk even if it is not sufficient for the child, stimulating its increase by proper diet and supplementing by artificial feeding; as such a course is more conducive to the child's healthy growth than to be completely bottle-fed. Modifications of cow's milk are usually vastly superior to infant foods. [w.k.]

4.—Edebehls gives 3 special reasons why pads which make pressure upon the kidney should not be employed: (1) The kidney can not be held in place; (2) pressure would be harmful even if it were efficient; (3) because of the relation between movable right kidney and chronic appendicitis. Edebehls proposes surgical intervention for the cure of chronic nephritis. When the kidney is not movable he would simply denude it of its capsula proper and allow new vascular connections between the kidney and its fatty capsule. In cases of movable kidney, nephropexy is indicated when relief cannot be obtained from a simple bandage or corset. [A.G.E.]

5.—In the opinion of Marx the indications for true internal version are: Malpositions and malpresentations; contracted pelvis, either relatively or absolutely so; prolapsus funis or allied conditions; for all other unclassified conditions, such as placenta previa; except under very rare conditions, in all cases in which the head remains above the brim, the exception being in those cases in which there is present a uterine rupture or a very much thinned-out lower uterine zone showing plainly the contraction ring of Bandl. In technic he considers these rules of inestimable value: (1) Always be sure of the position and the presentation; (2) certify to the fact that the fetus is alive or at best is not in immediate grave danger. Unless an easy and rapid delivery will produce a living child, it would be far better to do an elective perforation than to subject the mother to any other operation which carries with it increased danger; (3) do your version as early as you can in the presence of an intact fruit sac; or, at least, as soon after the membranes have ruptured as possible; (4) always introduce the hand corresponding to the position of the fetal feet; (5) always turn the child in such a fashion as will keep nature's classic ovoid intact; that is, carry the foot along the abdominal plane of the fetus and not away from it. It is difficult to state the limitations of the operation of version, but with the average pelvis and average child, version should be performed when the head remains above the brim, and no operative measures short of perforation should be instituted in the presence of a dead or dying fetus. Version stands midway between forceps and Cesarean section and the field of symphysiotomy is becoming smaller and smaller. [w.k.]

6.—Grandin claims that the axitraction forceps can best be used to advantage in the following indications: Traction in the correct axis; traction with expenditure of the least effort on the part of the operator; traction with the least compression of the fetal head; traction with the least interference with normal mechanism (e.g., rotation); traction with the least consequent damage to the maternal parts. The cardinal principle in using axitraction forceps is that, while making traction, the traction rod must ever remain parallel to and almost in contact with the handles. Neglect or ignorance of this rule renders the axitraction forceps a very dangerous instrument. [w.k.]

7.—Cragin gives a brief abstract of 9 cases of Cesarean section with favorable results for both mother and child in all save 1, in which there was carcinoma of uterus and vagina. It is only when a woman cannot be delivered of a living child by forceps or version that a cutting operation comes into consideration. If then the mother and child are both in good condition, the question arises whether the operation shall be symphysiotomy or Cesarean section. Cragin would never use the former for a patient having a true conjugate of less than 7 cm., neither is it indicated in cases in which the parturient canal is obstructed by tumors either uterine or ovarian, nor in case of obliquely contracted pelvis with an ankylosis of one or both sacroilliac synchondroses. In all such, Cesarean section is the proper operation. Even in those cases in which symphysiotomy comes in direct competition with it, that is in which the true conjugate varies from 7 cm. to 9 cm., viewed from the standpoint of mortality, ease and rapidity of convalescence, and convenience of the

surgeon, Cesarean section deserves the preference. Cragin in the first 4 operations lifted the uterus through the abdominal wall before making the uterine incision; but on account of the length of the abdominal incision required, in the subsequent cases he incised the uterus *in situ* and delivered the child before raising the uterus out of the abdominal wound. If the uterus or appendages are infected or diseased, or the pelvic deformity is extreme, he prefers to follow the Cesarean section by hysterectomy. [w.k.]

Medical News.

May 4, 1901. [Vol. LXXVIII, No. 18.]

1. Medical Department of the University of Pennsylvania. CHARLES W. DULLES.
2. A Report of 24 Operations Performed During Spinal Anesthesia. WILLIAM SEAMAN BAINBRIDGE.
3. Some Sources of Error in Laboratory Clinical Diagnosis. THEODORE C. JANEWAY.

2.—Bainbridge reports the performance of 24 operations under spinal anesthesia from which he summarizes the following points, viz.: That cocaine is more satisfactory than eucain, as the effect is more potent, less evanescent and more complete. Anesthesia following the introduction of cocaine by lumbar puncture may extend to the upper extremities, eyes, mouth and throat. The preparation of the patient is as for general anesthesia, and the administration of moderate doses of bromide diminishes and often prevents the unpleasant effects. Anesthesia lasts from 30 minutes to 4 hours. In a few cases temporary motor paraplegia or vertigo occurs. Normal or diseased kidneys are not affected. Usually the tactile power, muscular sense and ability to detect heat and cold are unimpaired. A slight rise of temperature usually occurs after the operation, but circulation and respiration are but slightly disturbed. [J.W.M.]

3.—Janeway holds that clinical diagnosis cannot be made in the laboratory. Only the clinician with a judicial mind is capable of balancing all the facts. In laboratory diagnosis there are 2 sources of error, faulty technic and inaccurate reasoning. The errors may be inherent in the methods themselves or due to carelessness or ignorance in their application. Common mistakes in testing urine, sputum, blood and stomach contents with diagnostic inferences are considered in minute detail. [H.M.]

Philadelphia Medical Journal.

May 4, 1901. [Vol. 7, No. 18.]

1. Puerperal Polyneuritis and Poliomyelitis. JAMES STEWART.
2. Localization of Sound and Its Bearing on Hearing—Especially in Unilateral Deafness. B. ALEX. RANDALL.
3. The German Clinics of Today. JOHN C. HEMMETER.
4. Volvulus and Intussusception of Meckel's Diverticulum. JOSEPH MCFARLAND.
5. Deaths from Anesthetics. D. H. GALLOWAY.
6. Esophoria, or Latent Squint. FRANCIS VALK.
7. Strangulated Hernia. WALTER LATHROP.
8. Ammonium Persulfate Solution. A New Decolorizing Fluid for Staining Spores and Sputum. ROBT. L. PITFIELD.

1.—The history of a case of puerperal polyneuritis and poliomyelitis resulting in death is narrated by Stewart with a description of the autopsy and microscopic examination of tissues. The patient was 33 years of age and mother of 5 children. She experienced a gradually ascending paralysis which began with a sensation of numbness in the limbs about 2 months before delivery, and afterward slowly increased, causing loss of power and motion. About 6 months from the beginning of the trouble, the diaphragm showed signs of failure, symptoms of pneumonia set in and she died in 2 days. All the usual causes of neuritis were absent, such as lead, alcohol, acute or chronic disease, etc.; but she had suffered from very severe vomiting, and a number of cases of puerperal neuritis have been reported in which the severe vomiting was the only marked feature present. The postmortem examination in this case showed a normal cord, but the peripheral nerves were swollen and of

reddened yellow color and studded with black granular spots and degenerated fibers. Most cases of multiple neuritis of puerperal origin are instances of postpartum neuritis usually attributed to sepsis and show a degeneracy of parenchymatous tissue. [W.K.]

2.—Randall urges the importance of securing and retaining **binaural hearing**. When unilateral deafness is present, there is an inability to localize sound accurately, owing to the fact that one side of the brain has placed upon it a greater psychical effort in the reception and analysis of the impressions. [H.H.C.]

3.—The main features of the **German clinics** noted by Hemmeter, of Baltimore, are the treatment of each patient from an individual standpoint, the employment of a great variety of methods for the cure of disease and relief of suffering, of which diet and nutritional therapeutics are especially emphasized. He urges the need of a journal in America which shall be recognized as one of high scientific standard, dealing with the treatment of disease by physical methods and diet. The great increase in malignant diseases in this country is referred to, the expediency of a congress being suggested, to outline methods and means for their study and relief. [H.H.C.]

4.—McFarland gives in detail the postmortem findings in a man who died with symptoms partly attributable to intestinal obstruction and partly to uremia. A **Meckel's diverticulum** about 4 cm. in length was found rotated upon its long axis about ¼ of a circle, and then **invaginated for about 2 cm. into the ileum**, reducing the lumen of the intestine to ½ its normal size. [A.G.E.]

5.—Galloway states that **3 deaths from anesthetics** occurred recently in Chicago within 10 days. He cites several instances of carelessness on the part of anesthetizers, and says that few surgeons make any effort to remedy this state of affairs. The profession adheres too strongly to the belief that if a patient is taken off the table alive the anesthesia has been entirely successful. The responsibility for unnecessary deaths often extends to medical colleges, in many of which anesthetics are barely mentioned. [A.G.E.]

6.—The **conservative course in treating esophoria** is recommended by Valk. In detecting the condition he lays great stress upon testing the power of the eyes to move under the stimulation of the fusion force or duetion. Treatment is by glasses, prisms with glasses, tenotomy of the internal recti, or, best of all, shortening the external rectus. [A.G.E.]

7.—Lathrop gives the symptoms and **treatment of strangulated hernia**. He is opposed to the use of taxis except when operation is refused or a long wait is necessary. [A.G.E.]

8.—The following **formulas for a spore-staining solution** is given by Pitfield, a new decolorizing reagent, ammonium persulfate, being the chief ingredient.

R	Ammonium persulfate	5 grams.
	Alcohol, 95%	50 cc.
	Water	10 cc.

"To demonstrate spores, prepare a coverslip as usual, spreading it very lightly; fix in flame and then stain with boiling carbolfuchsin or Ehrlich's anilin water, gentian violet or fuchsin. The coverslip should remain in the boiling stain for at least a minute. Wash and drop on the solution of ammonium persulfate. At the end of a half minute wash in water and counterstain. The preparation will show red or violet spores, and bacilli stained with the contrast stain. In case the spores are not stained, repeat the staining process and decolorize for a shorter period and then counterstain." [H.H.C.]

The American Gynecological and Obstetrical Journal.

April, 1901. [Vol. XVIII, No. 4.]

1. The Treatment of Displacements of the Uterus, with Adhesions. F. H. DAVENPORT.
2. Causes of Dysmenorrhea. ALBERT M. JUDD.
3. The Causes and the Significance of the Obstetric Hemorrhages. J. J. CLIFTON EDGAR.
4. Osteofibroma of the Uterus. GEO. BEN. JOHNSTON.
5. A Case of Natural Ureterointestinal Anastomosis. C. A. KIRKLEY.
6. The Treatment of Cancer of the Uterus. J. WESLEY BOVÉE.

1.—In his article on the **treatment of displacement of the uterus with adhesions**, Davenport classifies the symptoms as follows: (1) those due to the original trouble, namely, the peritonitis, and (2) those due to the resulting displacement. He condemns the practice of "breaking up" adhesions by the bimanual manipulation, either with or without anesthesia; preferring abdominal section. In adherent uterus, with a mass on either or both sides of the uterus, he advocates placing the patient in Sims' position, and packing the vagina quite firmly with pledgets of cotton soaked in glycerin. This procedure should be repeated every 2 or 3 days, each time packing more firmly. After several treatments, pelvic massage should be added, and attempts made to dislodge the uterus. If the adhesions are very dense, and little can be accomplished by this method of treatment, a radical abdominal operation should be done; in this class of cases he prefers supravaginal hysterectomy to suspending the uterus. [Since suspension of the uterus has proved so successful in a large majority of these cases, hysterectomy in every case would certainly be too radical a procedure. F.C.H.]

2.—Judd has made a study of the **causes of dysmenorrhea** in 700 patients, and concludes his article as follows: Most cases of dysmenorrhea are due to congestive inflammatory conditions of the uterus and its adnexa. In a certain proportion of cases the neurotic condition is a larger element in the causation of the pain than the inflammatory condition. [F.C.H.]

3.—Edgar discusses the **causes and the significance of the obstetrical hemorrhages**, under the following divisions: (1) the metrorrhagia of pregnancy; antepartum hemorrhages. May be due to abortion or miscarriage; placenta previa; premature separation of a normally-situated placenta; ectopic gestation; traumatic or spontaneous rupture of the uterus; menstruation during gestation; the exanthemas; to conditions of the heart, liver and abdominal viscera producing obstructed venous return; hematosalpinx; fibroma, sarcoma and polypus of the uterine body, and polypus and epithelioma of the cervix. (2) the metrorrhagia of labor; partum and intrapartum hemorrhage. These are due principally to premature separation of a normally or abnormally situated placenta; to ruptures of the uterus or cervix; fibroid tumors, malignant disease of the genital tract or rupture of varicose veins; uterine inertia (especially occurring with a partial or complete separation of the placenta); lacerations of the genital tract; insufficient contraction of the lower uterine segment, in cases of low implantation of the placenta; partial or complete inversion. (3) Puerperal metrorrhagia proper, or secondary postpartum hemorrhages. Puerperal hemorrhages are those occurring from 6 hours after the third stage of labor until the completion of the normal period of involution, namely 6 weeks. The causes are general and local. Among the **general causes** are: mental emotions; disturbances of the general circulation; certain blood conditions, as extreme malarial poisoning, albuminuria and puerperal sepsis, and the acute infectious diseases. Among the **local causes** are: anything which interferes with the proper contraction of the uterus (as retained blood-clots, a secondary placenta); a distended bladder or rectum; retroflexion; inversion; fibroid and polypoid tumors; cervical lacerations; malignant diseases of the uterus and simple subinvolution. Other causes are: assuming the upright position too soon after delivery and too early sexual intercourse. [F.C.H.]

4.—Johnson reports a very interesting case of **osteofibroma of the uterus**, for which he did a panhysterectomy. The specimen was forwarded to Dr. William Welch for examination, who rendered a report about as follows: The tumor must be referred to embryonic remnants, and there is no objection to considering it as a teratoid formation, although not a very complex one. Besides the bone and smooth muscle, there is a great deal of peculiar embryonic connective tissue in the growth, partly mucoid in character, and partly more cellular, and this tissue is quite unlike any found in ordinary myomatous tumors. [F.C.H.]

5.—Kirkley reports a case of **natural ureterointestinal anastomosis**, following an abdominal section for bilateral pyosalpinx. The patient was evidently of the hemorrhagic diathesis. A drainage tube was employed, and was removed at

the end of 24 hours. On the fourth day, pus was present in the track of the drainage tube; the cavity was thoroughly irrigated and gauze drainage instituted. Although free drainage was maintained, the entire pelvic cavity appeared to be a pyogenic surface. On the fifteenth day fecal matter appeared in the discharge through the abdominal opening, and on the twenty-second day, urine. A secondary operation for closure of the fistula was deemed inadvisable, and after persisting for 2 weeks, urine ceased to escape, closely followed by the disappearance of the fecal matter. After the urine ceased to escape through the abdominal opening, it passed per rectum. Three years after the operation, he again saw the patient, and the urine was still escaping into the bowel. This time the uterus was everted. Had hysterectomy been practicable at first, it would have been far better for the patient, and it may yet have to be done, but so long as the patient can be comfortable, and with only the inconvenience of passing urine per rectum, the attendant complications and the unknown intraabdominal conditions make that operation somewhat uninviting. [F.C.H.]

6.—In this article on the **treatment of cancer of the uterus**, Bovée merely desires to contrast the various plans of treating the disease after it is discovered, and to call special attention to the advance surgery of it. He describes the various radical operations devised by Ries, Rumpf, Clark, Werder, Pryor, Chalot and Wertheim. He condemns the operation done by Chalot, and considers the operations of Pryor and Wertheim by far the most radical. Bovée prefers his modification, which is a combination of those of Werder, Ries and Pryor. [F.C.H.]

Münchener medicinische Wochenschrift.

March 19, 1901. [48 Jahrg., No. 12.]

1. Experimental Investigation of Hand Disinfection. PAUL and SARWEY.
2. Clinical Experiences with Intravenous Injections of Cinnamic Acid in the Treatment of Tuberculosis of the Lungs. KUHN.
3. The Therapeutic Value of Heroin and Aspirin. NUSCH.
4. The Treatment of Gonorrhoea with Protargol. NIESSEN.
5. The Technique of Lorenz's Reposition of Congenital Hipjoint Luxation. SCHLESINGER.
6. Treatment of Ileus with Atropin. SIMON.
7. A Case of Ileus Treated with Atropin. HÖCHTLEN.
8. The Treatment of Ulcer of the Leg. SCHULZE.
9. Max v. Peltenkofer. LEHMANN.

1.—In their sixth paper on their investigations of various methods of **disinfecting the hands**, Paul and Sarwey take up the use of sublimate, or, more properly, the mercuric salts. Their experiments concern chiefly the use of ammonium sulfid as an agent to counteract the injurious effects of corrosive sublimate on the hands after disinfection by means of solutions of that salt. As a general result of their investigations, they come to the conclusion that the methods in present use are too uncertain and too faulty, and that new methods must be devised in order to keep a noninfected operative wound germ-free and thus capable of healing with no more reaction than a subcutaneous lesion. [H.H.C.]

2.—Kühn has employed **hetol** (sodium cinnamate) after the method of Landerer in the treatment of **tuberculosis**. In all cases the results were slight, and could just as well be attributed to an improvement in the patient's mode of life as to the action of the drug. The treatment, which is carried out by intravenous injection, is, however, harmless, and further investigations are warranted. [D.R.]

3.—Nusch believes that **heroin** is preferable to morphin as a remedy for the cough of tuberculosis. He never observed disagreeable aftereffects, and does not think that it is more toxic than morphin. **Aspirin** is the acetic acid ester of salicylic acid. It is useful as an antirheumatic, antineuralgic, analgesic and antipyretic, and does not possess the disturbing effects of salicylic acid. The dose is .25 to .5 grams ($3\frac{1}{2}$ to $7\frac{1}{2}$ grains). [D.R.]

4.—In summing up the results obtained by the use of **protargol** in 244 cases of **gonorrhoea** in the Münich lazarette, Niessen finds that: (1) By this treatment the gonococci disappear from the secretion in acute anterior urethritis in about

the same length of time (3 weeks) as when treated with silver nitrate; (2) in $\frac{1}{2}$ to $\frac{2}{3}$ % solution the salt causes very little discomfort; (3) complications are less liable to occur than by use of silver nitrate; (4) in the mucous and serous stages in which gonococci are no longer present, astringents are better than protargol; (5) the protargol treatment does not shorten the course of the disease more than the best of the earlier methods. [H.H.C.]

5.—Schlesinger reports 6 successful cases of **reposition of congenital hipjoint luxation** by means of Lorenz's method. He advocates the use of a plaster cast to fix the limb in the position desired, after which at the most only 3 trials are necessary to reduce the dislocation. [H.H.C.]

6 and 7.—(See editorial).

8.—In the treatment of **leg ulcers** Schulze recommends an ointment composed of camphor, 2 grams (30 grains); zinc oxid, 15 to 20 grams ($3\frac{1}{2}$ to 5 drams); lard, enough to make 100 grams ($3\frac{1}{2}$ oz.). If this ointment is not well-borne, a solution of camphor in olive oil may be employed, made as follows: Camphor, 2 grams (30 grains); olive oil, 50 grams ($1\frac{1}{2}$ oz.), to which 40 to 50 grams ($1\frac{1}{2}$ to $1\frac{3}{4}$ oz.) of zinc oxid are added. Cloths are soaked in this and laid upon the ulcer. The dressings are changed 2 or 3 times a day. [D.R.]

March 26, 1901. [48 Jahrg., No. 13.]

1. The Etiology and Experimental Production of Cirrhosis of the Liver. MARCKWALD.
2. A Case of Mixed Liver Cirrhosis. ULLMANN.
3. Plasmon-Tropon. HESS.
4. The Influence of Coal on the Tubercle Bacillus. PAPANOTIRIU.
5. The Organs of Equilibrium and of Hearing in the Japanese Dancing Mouse. PANSE.
6. A Foreign Body in the Lung. SPIESS.
7. A Rare Case of Foreign Bodies in the Trachea. DIEHL.
8. The Natural Immunity of Tuberculous Families. REIRMAYER.
9. Report of the Medical Polyclinic in Munich in the year 1900. MORITZ.

1.—(Editorial.)

2.—A peculiar case of **cirrhosis of the liver** in a man of 53 who had been a life-long alcoholic. The symptoms were those of what has been called **mixed cirrhosis**; that is, cirrhosis in which, in addition to enlargement of the liver and spleen, and marked jaundice, there were signs of stasis in the portal circulation—acites, distention of the abdominal veins, gastrointestinal catarrh and edema of the lower extremities. Autopsy showed an enlarged, coarsely granular liver, of a greenish-yellow color; parenchymatous myocarditis and parenchymatous nephritis. Counting from the commencement of the symptoms until death, the disease had lasted only 6 weeks; although it might be inferred from the histologic picture, which showed the presence of an abundant old fibrous tissue, that the disease had begun earlier. The author believes that some other factor must have been added to the alcohol; perhaps an infectious or a toxic one. [D.R.]

3.—Experiments on dogs show that a mixture of **plasmou and tropon** is well utilized, and may bring about a retention of nitrogen in the system and an increase in body weight. The amount of unused nitrogen, as evidenced by an analysis of the feces, was determined in various conditions experimentally induced in dogs. After extirpation of the pancreas, the mean loss was greater than after extirpation with transplantation of that organ. [D.R.]

4.—It is generally accepted that miners and other workers in coal have a **greater resistance to tuberculosis** than persons engaged in other dust occupations, such as masons, sculptors, etc. In an endeavor to explain this phenomenon, Papanotiriu made some experiments to determine whether coal of different kinds has a direct inhibitory action on the tubercle bacilli. He found that this was not the case. [D.R.]

5.—Although the Japanese dancing mouse is apparently devoid of a sense of **equilibrium**, and performs unceasing gyrations, there is no noteworthy difference between its **organs of hearing and equilibrium** (semicircular canals and utriculi) and those of the ordinary house mouse. [D.R.]

6.—An unsuccessful attempt to remove a **button** from the **left lung** of a youth of 17 is reported by Spiess. The button was

inhaled over 6 years previous to the final attempts at removal, which consisted in the use of Killian's instrument modified to suit the case by Spiess. After tracheotomy the forceps was introduced a number of times and the foreign body felt in an abscess-cavity, but could not be removed because of contraction of the neck of the cavity. The patient finally died of hemorrhage and tuberculous infection. [H.H.C.]

7.—Diehl reports the case of a woman of 22 who, as a result of an attempt at suicide, was compelled to use a permanent silver tracheal canula. In changing the old for a new canula, the former, the shield of which had broken off, was aspirated, after which, in her anxiety, the patient thrust the new canula into the tracheal opening, thus pushing the old one still farther down. On the following day, during the preparation for tracheotomy, and while the patient was under anesthesia, a violent fit of coughing resulted in the expulsion of the old canula intact. [H.H.C.]

American Journal of the Medical Sciences.

April, 1901. [Vol. XXI, No. 4.]

1. Primary Splenomegaly. N. E. BRILL.
2. Enteroptosis. JAMES R. ARNEILL.
3. The Estimation of the Urinary Sulfates and of the Fecal Fat in the Diagnosis of Pancreatic Disease. DAVID L. EDSALL.
4. Premature Infants. VANDERPOEL ADRIANCE.
5. A Contribution to the Study of Fatty Infiltration of the Heart Secondary to "Subpericardial Overfatness." J. M. ANDERS.
6. Multiple Neuritis and Hematoporphyrinuria Following the Prolonged Ingestion of Trional. STUART HART.

1.—Brill reports 3 cases of primary splenomegaly occurring in a single family—a woman aged 34 years, a man aged 30 years, and a boy who died at the age of 9 years. The distinctive features of the disease in the living brother and sister are; The enormous enlargement of the spleen, that of the sister being the greater; the enlargement of the liver, that of the brother being the greater; the profuse perspiration and sudamina; the absence of anemia for more than 10 years after the disease had been established; the tendency to hemorrhage, manifested in the occasional oozing of blood from the gums in the sister, in an occasional epistaxis in the brother, and in the attack of hemorrhagic furunculosis in each; the peculiar brownish-yellow (nonicteric) color of the skin; the long duration of the disease; the feeling of comfort and ease, notwithstanding the enormous size of the spleen and the pressure upon the thoracic viscera; the yellow, wedge-shaped conjunctival thickening of each side of the cornea of each eye, that in neither case look like pinguiculas. At the time of reporting both patients showed a moderate reduction in the number of erythrocytes and a somewhat greater reduction in the hemoglobin—blood of the chlorotic type. It is believed that the symptom-complex is sufficient to separate the cases from cases of splenic anemia and to place them in a special group. A search of the literature, revealing the darkness in which the pathology of the spleen is concealed, discloses but 6 cases that B. believes are similar, if not identical, to the 3 he reports. He suggests that the disease, perhaps, has a relation to some perversion of visceral development occurring in families. Finally he discusses the enlargement of the liver occurring in the cases, and the relation of the affection to diseases variously described, splenomegalic hepatic cirrhosis, Banti's disease, and the like. [A.O.J.K.]

2.—Arneill, in a discussion of enteroptosis, insists upon the frequency of the association of ptoses of the different abdominal organs, stating that it is unscientific and unsatisfactory to select for discussion one dislocation, such as gastropotosis or nephrotosis, and thrust upon it, as is sometimes done, the dignity of a special disease. Basing his observations upon 80 cases from Dock's clinic, he speaks of the history, the methods of examination, the etiology, and the treatment of the affection. With regard to methods of examination, inspection often reveals a fulness below the umbilicus and a depression in the epigastrium. The various abdominal organs should be palpated in both the upright and recumbent position. In examining the stomach, the method of distention by generating carbonic acid

by means of tartaric acid and sodium bicarbonate is preferred. Of the 80 cases examined, 69 were women and 11 men. In 24 cases both kidneys were dislocated, in 33 cases the right kidney alone, and in 4 cases the left kidney alone. Stiller's phenomenon—the costal stigma or floating tenth rib (thought to be significant of neurasthenia and enteroptosis)—was present in 8 of 15 cases; in the remaining 7 cases, the rib had membranous attachments. In 69 of the 80 cases there was downward dislocation of the stomach. In a few cases there were both dislocation and dilation. Thirty-five of the 56 women had borne children; 20 had never borne children. The symptoms varied considerably. A number of the patients were simply debilitated; in a much larger class nervous symptoms predominated; and in others there were striking symptoms on the part of the stomach and kidneys. It is believed that there is no connection between enteroptosis and tuberculosis nor between enteroptosis and chlorosis. In some cases there seems to be a congenital predisposition to the disease; in other cases there is a lack of tone in the tissues that makes it possible for trifling causes to produce the enteroptosis. Of special etiologic factors the following may be mentioned: All conditions tending to diminish intraabdominal pressure, frequent child-bearing, ascites requiring tapping, operations for intraabdominal tumors, severe infective diseases and chronic wasting diseases that weaken the abdominal muscles and cause a disappearance of the fat, and straining at stool, a cause usually overlooked. As regards treatment, in the majority of cases operation is contraindicated. Abdominal bandages may relieve some cases; exercise and massage are useful. He has seen marked benefit from the use of tincture of nux vomica, increased gradually to 70 or 80 drops 3 times daily, combined with overfeeding. [A.O.J.K.]

3.—Edsall, writing of the estimation of the urinary sulfates in the diagnosis of pancreatic disease, as a result of personal observation and of study of the literature, concludes that if there be found no reduction in the ethereal sulfates, the result deserves little consideration; if, on the other hand, the ethereal sulfates are found much reduced, the other factors in the case must be considered. If there is diarrhea or gastric hyperchlorhydria, or if the patient is on milk diet alone, or any other diet which very largely reduces bacterial activity, a low ratio of the ethereal sulfates cannot be considered of great importance, nor can much stress be laid on a low, absolute value of the ethereal sulfates if the value for the preformed sulfates be coincidentally low. If, however, these factors are not present, and particularly if, with suspicion of pancreatic disease, factors that usually cause an increase of the ethereal sulfates be present, and yet the values be found low, the test would appear to be of distinct practical importance in diagnosis. As to the importance of fatty stools in the diagnosis of pancreatic disease, it is pointed out that poor fat absorption is of itself of no importance in the diagnosis of pancreatic disease if icterus be present. The importance of this statement is especially evident in view of the fact that in carcinoma—the most common disease of the pancreas—icterus is very common. With regard to the splitting of fats said to be much reduced in pancreatic disease, it is stated that it seems probable that a negative result of the test is not of much value, for such a result is subject to about the same considerations as obtain with regard to the ethereal sulfates. A positive result, however, as far as our knowledge goes, would seem to indicate pancreatic disease if diarrhea is absent. [A.O.J.K.]

4.—Adriance, basing his remarks upon an examination of 40 premature infants, discusses their anatomic and physiologic characteristics, considering their general features and the different organ-features seriatim. Of the 40 infants, 24 died; 11 of them, however, succumbed to infantile diseases of later life. A predisposition to unbalanced nutrition on the part of the infants, artificial feeding, and the unhygienic conditions of institution-life are large factors in the death-rate. As regards prognosis, the more premature the infant the more hazardous the outlook, few infants born before the twenty-ninth week being saved. The temperature has no prognostic value; attacks of cyanosis are not necessarily fatal; continued loss of flesh is discouraging and the sooner a steady gain is noted the better. As regards to treatment, the necessity of attention to details is

		Cases	Deaths
Tennessee:	Ducktown.....Apr. 20.....	Present.	
	Memphis.....Apr. 13-20.....	24	
	Nashville.....Apr. 20-27.....	14	
Utah:	Salt Lake City.....Apr. 13-20.....	17	
Philippines:	Cebu.....Mar. 12.....	5	1
	Manila.....Mar. 8-16.....	8	
Porto Rico:	Aguas Buenas.....To Apr. 10.....	4	
	Ciales.....To Apr. 10.....	1	
	Isabela.....To Apr. 10.....	4	
	Manati.....To Apr. 10.....	1	
	Ponce.....To Apr. 10.....	34	
	San Juan.....To Apr. 10.....	6	
SMALLPOX—FOREIGN.			
China:	Hongkong.....Mar. 8-23.....	23	10
Colombia:	Panama.....Apr. 15-22.....	5	3
Ecuador:	Guayaquil.....Mar. 2-23.....	3	2
Egypt:	Cairo.....Mar. 25-Apr. 1.....	2	2
France:	Paris.....Apr. 6-13.....	7	7
Great Britain: Eng.,	Liverpool.....Apr. 6-13.....	6	1
Wales,	Cardiff.....Mar. 6-30.....	2	
Scotland,	Dundee.....Apr. 6-13.....	2	
	Glasgow.....Apr. 12-19.....		6
Mexico:	Mexico.....Apr. 7-14.....		1
Russia:	St. Petersburg.....Mar. 31-Apr. 6.....	14	3
	Warsaw.....Mar. 23-30.....	5	5
Straits Settlements:	Singapore.....Mar. 2-16.....		1
YELLOW FEVER.			
Mexico:	Vera Cruz.....Apr. 6-16.....		1
PLAGUE—FOREIGN AND INSULAR.			
Australia:	Adelaide.....Feb. 23.....	1	
China:	Canton.....Feb. 28.....		Epidemic.
	Chan Tsin.....Feb. 28.....	“	“
	Fatahan.....Feb. 28.....	“	“
	Hongkong.....Mar. 8-23.....	22	21
Straits Settlements:	Singapore.....Mar. 7-16.....		2
Hawaii:	Honolulu.....Mar. 29.....		1
Philippines:	Manila.....Mar. 8-16.....	10	8

The following-named contract dental surgeons will proceed from Washington, D. C., to San Francisco, Cal., and report for transportation to Manila, P. I., where they will report for assignment to duty: HUGO C. RIETZ, WILLIAM H. WARE.

CHALMERS, Major THOMAS C., surgeon, Presidio, is granted leave for one month.

MCCALLUM, Captain FRANCIS M., assistant surgeon, is assigned to temporary duty with troops on the army transport Grant, to sail for the Philippine Islands.

PEED, Captain GEORGE P., assistant surgeon, Presidio, is granted leave for 1 month, to take effect on the day of muster out of the 25th infantry, U. S. volunteers.

STROMBERGER, HENRY H., acting assistant surgeon, will proceed to his home, Washington, D. C., for annulment of contract.

METZGER, Major JOHN A., surgeon, recently appointed, is relieved from further duty with the 35th infantry, U. S. volunteers, and will report for transportation to Manila, P. I., where he will report for assignment to duty.

WILLIAMS, Captain ROBERT E., assistant surgeon, recently appointed, is relieved from further duty at Fort McDowell, and will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

The following-named officers are detailed to represent the medical department of the army in the annual meeting of the American Medical Association to be held at St. Paul, Minn., June 4 to 7: Major TIMOTHY E. WILCOX, surgeon; Major CHARLES RICHARD, surgeon. The officers named will proceed to St. Paul, Minn., in time to reach that place on or before June 4, and upon the adjournment of the association will return to their proper stations.

The following-named officers are detailed to represent the medical department of the army at the tenth annual meeting of the Associations of Military Surgeons of the United States to be held in St. Paul, Minn., May 30 to June 1: Major JOHN VAN R. HOFF, surgeon; Captain ALFRED E. BRADLEY, assistant surgeon. Major Hoff will proceed to St. Paul, Minn., in time to reach that place on or before May 30, and upon the adjournment of the association will return to his station.

CURRY, Captain JOSEPH J., assistant surgeon, leave granted is extended 7 days.

CARLING, Captain JOHN, assistant surgeon, recently appointed, is relieved from further duty with the 35th infantry, U. S. volunteers, and will report for transportation to Manila, P. I., where he will report for assignment to duty.

STROMBERGER, H. H., contract surgeon, is granted leave for 1 month.

Changes in the Medical Corps of the U. S. Navy, for the week ended May 4, 1901:

LAW, H. L., surgeon, retired, detached from the recruiting rendezvous, Buffalo, N. Y., and ordered home.

WRIGHT, B. L., assistant surgeon, ordered to the Massachusetts, May 1.

RODMAN, S. S., assistant surgeon, detached from the Adams, May 11, and ordered to the Alert, May 11.

Changes in the U. S. Marine-Hospital Service for 7 days ended May 2, 1901:

CARMICHAEL, D. A., surgeon, to assume temporary command of San Francisco quarantine station—April 27, 1901.

WERTENBAKER, C. P., passed assistant surgeon, to proceed to Prescott, Arkansas, for special temporary duty—April 27, 1901.

GREENE, J. B., passed assistant surgeon, detailed for temporary duty in the Bureau—April 29, 1901.

HEISER, V. G., assistant surgeon, to proceed to Norfolk, Va., for special temporary duty, April 27, 1901. To proceed to Quebec, Canada, and report to the United States Commissioner of Immigration, for duty—May 1, 1901.

SCHLAAR, W. F., hospital steward, granted leave of absence for 26 days—March 29, 1901.

Changes in the Medical Corps of the U. S. Army for the week ended May 4, 1901:

KULP, Major JOHN S., surgeon, is relieved from duty in the division of the Philippines, and will proceed to San Francisco, Cal., thence to Fort Hancock. A delay of one month en route is authorized.

GILBERT, Major WILLIAM W., is granted leave for 2 months, on surgeon's certificate, to take effect upon arrival in the United States.

BLOCK, W. H., acting assistant surgeon, is granted leave for 1 month.

HORR, Captain E. F., assistant surgeon, is relieved from duty at Manzanillo, Cuba, and will proceed to Columbia Barracks, Quemados, Cuba, for duty.

GRAVES, Captain LEONARD K., assistant surgeon, now in Brooklyn, N. Y., will upon the expiration of leave granted him April 22, proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

SPARRENBURGER, Captain FREDERICK H., assistant surgeon, recently appointed, now in San Francisco, Cal., will report for transportation to Manila, P. I., where he will report for assignment to duty.

RAYNOR, Captain WILLIS J., assistant surgeon, is relieved from duty at Fort Washakie, to take effect upon the expiration of the leave granted him April 19, when he will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

MASON, Captain CHARLES F., assistant surgeon, will report to Lieutenant Colonel Calvin De Witt, president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination for promotion.

WILCOX, STARLING S., contract surgeon, now at Columbus, Ohio, will report at Columbus Barracks for duty, to relieve contract surgeon Najib Taky-nd-Dcen, who will proceed to San Francisco, Cal., and report for assignment to duty with troops en route to the Philippine Islands, and upon arrival at Manila will report for assignment to duty.

OHLINGER, LORIN B., contract surgeon, now at the U. S. general hospital, Fort Bayard, will report to the commanding officer of that hospital for duty.

SMITH, A. B., contract surgeon, is granted leave for 10 days.

SCHERRER, ELMER A., contract surgeon, is relieved from duty at Fort Grant, and will proceed to Fort Washakie, for duty.

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Pneumonia More Fatal than Tuberculosis, is the teaching of statistics. In New York, from 1890 to 1900, there were 56,092 deaths from pneumonia, and 50,490 from pulmonary tuberculosis, and in Chicago the relative figures are 25,228, and 22,957. The increased mortality from pneumonia is ascribed to influenza, which although also increasing the fatality of tuberculosis, does so to a much greater degree in the more acute disease, pneumonia. The fact that the first death from influenza in New York was reported in December, 1889, shows how suddenly the causes of death may change, and how quickly we must be prepared to deal with new and dangerous diseases. The report of the New York State Board of Health for the month of March shows that influenza has caused about 1,500 deaths, and that 76% of the deaths from acute respiratory diseases were from pneumonia. The fundamental condition underlying the rise and continuance of an acute infectious disease, such as influenza, is probably the tremendously increased amount of travel. Reinfection from new foci constantly occurs in places in which the disease is dying out, and every city or part of the country is bound up with all others by the railroads. The problem of disease in a high state of civilization becomes more than ever one of prevention, and yet how slow is civilization to recognize and act upon the fact. Millions for tribute but not one cent for defense, is the motto of the modern "statesman."

Physicians' Strikes.—We have long wondered when physicians, irritated by a hundred forms of popular ingratitude, would go on strike. While laboring heroically to prevent disease and thus committing professional suicide, we are constantly maligned, the lowest kind of protection is generally denied to us by the lawmakers and Government-protected quackery flourishes. But according to the proverb, even the worm will turn; and it has turned in Germany. The Sickness Bureaus (*Krankenkassen*) are the intermediaries whereby about 30,000,000 people obtain practically free medical service—of course at the expense of the profession. When the bureaus made the physicians into slaves by all sorts of demands, at about 15 cents a call, or \$75 a year, most naturally there was "a strike," or what the newspapers call a recurrence of the old question of "recognizing the Union." Fifteen cent fees for cases of obstetrics, or operations, was more than human nature, even of the long-suffering bureaucratic German type could endure.

The strange thing in all these cases is that the public does not recognize that the service obtained by such methods and prices can hardly be called medical. How can therapeutics be possible under such conditions? Physicians would be more than human who could keep such ludicrous relations from vitiating into extremes of abuse and degradation. It is as poor financial policy for the patient as for the doctor. We wish that the charges of "medical monopoly" by the hate-filled antis were truer or more possible of realization among us.

The Most Illogical Thing in the World is to sacrifice life itself in the fight for the luxuries of life. The Health Department of Chicago finds that during the week of high stock speculation in Chicago there was an increase of about 25% in the normal number of deaths of people 60 years of age and over. Money, of course, represents only the means of carrying on the business of life, and when the craze for it reaches such an intensity that it hastens death, it becomes a positive disease. In all the severe symptoms of the disease exhibited in the trust-formings, stock-waterings, and stock-speculations, our quiet professional world goes on with its beneficent work of healing, untouched, directly, we hope, by the furious greed of wealth that uses up life in the illogical chase for the means of living. It is fortunate if the gathering and analysis of vital statistics has become so accurate that the figures are able to point us to the origins of disease and the lessened deathrate. And yet there were always in our ears the warning axiomatic words, "What shall it profit a man if he shall gain the whole world and lose his own soul?" Disease and death are old teachers of morality. How slowly is the lesson learned!

The Relation of Gallstones to Acute and Chronic Cholecystitis.—The most interesting and perhaps the most important papers read before the American Surgical Association in Baltimore were those by Mr. A. W. Mayo Robson, of Leeds, England, and Dr. Eugene L. Opie, of Baltimore, Mr. Robson's especially from the clinical and operative side, and Dr. Opie's from the experimental. Opie has demonstrated that bile, when injected through the pancreatic duct into the pancreas, produces at once a very extensive acute hemorrhagic pancreatitis. Some of the animals died within 20 hours after the onset. In a few instances recovery took place. This demonstration seems to explain the cause of the

hemorrhagic pancreatitis when associated with a small stone in the diverticulum of Vater.

Anatomically we know that into this diverticulum both the common bile and the pancreatic ducts open. A small gallstone, smaller than the diameters of the diverticulum, may plug completely or partially the opening into the duodenum at the papillas, but on account of its smaller size it does not obstruct the orifices of the two ducts; so that the bile completely or partially dammed from the intestinal canal may pass from the common duct into the diverticulum and then through the pancreatic duct into the pancreas and produce acute hemorrhagic pancreatitis. Opie has proven conclusively that bile can produce such lesions, and without the aid of infectious agents. Clinically he has observed the same possibility in the patient operated on by Professor Halsted. This patient, admitted in a moribund condition, died a few hours after the exploratory laparotomy. Clinically the symptoms were intense epigastric pain, profound collapse, slight jaundice, and bile in the urine. At the autopsy there were found widespread, disseminated fat necrosis and a huge swollen pancreas with areas of hemorrhage within and without. In the diverticulum of Vater a small gallstone was found which plugged the orifice of the papillas, but did not prevent the bile from entering the diverticulum from the common bile-duct. The large pancreatic duct and some of its branches were bile-stained. This case seems to confirm Opie's experimental work. In the second case in the same clinic a similar pathologic condition was found, except that the patient had survived the hemorrhagic stage, and when death took place there was a large peripancreatic abscess. In the literature many cases of acute hemorrhagic pancreatitis have been associated clinically with a previous history of gallstone colic and at some of the autopsies gallstones had been found. It may be possible for the small stone to lodge in the diverticulum long enough to dam back the bile in the pancreatic duct, produce the hemorrhagic pancreatitis and then slip into the duodenum and be lost, so that at the autopsy the relation between the gallstone and the pancreatic lesion is lost sight of. Opie's experimental work and his one most positive autopsy-finding seem to prove without a question that a gallstone lodged in this position is one of the causes of hemorrhagic pancreatitis. Other causes there may be, but these are yet to be demonstrated. Surgically this relation should be borne in mind, so that at the operation for hemorrhagic or suppurative pancreatitis the gallstone in this position should be sought for and removed, whenever the condition of the patient will allow this procedure. Flexner, in his work on "Experimental Pancreatitis," published in the Festschrift to Professor Welch, in 1900, has demonstrated that many substances injected into the pancreas produce pancreatitis, and states (p. 745) "the element of infection plays an insignificant if not an entirely unessential part." The possibility that bile could be dammed back into the pancreas and produce hemorrhagic pancreatitis was not demonstrated or considered. Nor had Opie considered this possibility in his article of "Fat Necrosis" in the same publication.

The relation of gallstones to chronic pancreatitis is of

more practical surgical interest, because the condition is cured by proper operative interference. Both Robson and Opie have demonstrated both clinically and experimentally that a stone lodged in the common duct just above the diverticulum of Vater, or completely plugging the diverticulum, produces obstruction, not only to the biliary, but to the pancreatic secretions, which in the pancreas leads to chronic interstitial pancreatitis. This lesion in the pancreas gives it a hard nodular form, often mistaken for carcinoma. Clinically, it is associated with great loss of strength and weight. The disease is rapidly cured by the removal of the stone. Every surgeon is familiar with the rapidity with which the emaciated jaundiced subjects improve after the removal of the stone. In some cases the stone is not found at the operation. The stone or stones probably have passed into the intestine. Robson has demonstrated that such patients are relieved by cholecystotomy and drainage. This relieves tension, allows the absorption of the exudate and the pancreatic duct becomes patent again. The chronic interstitial pancreatitis disappears; the general health and condition of the patient improves. This explains instances in the experience of every abdominal surgeon. Such patients give a history of recurrent gallbladder attacks with more or less jaundice and more or less loss of flesh and strength. At the operation no stone is found to explain the symptoms. If the pancreas is palpated it is found to be hard and nodular, almost like in carcinoma, the bile dark and inspissated. If cholecystotomy and drainage for a few weeks is performed, the condition is entirely relieved. Robson reports cases which he thought at the operation might be carcinoma, relieved by this procedure. These observations would seem to indicate that we would better perform temporary cholecystotomy in all cases coincident with the removal of stones from the common duct.

The Proper Study of Mankind is the Child, might be taken as the motto of the modern educator. In advocating the establishment of a Physiologic Laboratory under our Government Mr. Arthur MacDonald says:

"Much money has been given and great interest manifested for the discovery of new chemical elements or the search for unknown planets. We erect statues and found art galleries at great expense. These things may not all be immediately useful. Indeed, the highest art spurns even the idea of utility; and yet when it is proposed to study a child thoroughly to gain an insight into its nature, to find the causes of its defects, so that we may protect it and help it to become a good citizen, the utilitarian cry is heard. The time has come when it is important to study a child with as much exactness as we investigate the chemical elements of a stone or measure the mountains on the moon.

"Our Government pays out millions to catch, try, and care for criminals, but gives very little to study the causes that lead to crime. The study of man, to be of most utility, must be directed first to the causes of crime, pauperism, alcoholism and other forms of abnormality. To do this the individuals themselves must be studied. As the seeds of evil are usually sown in childhood and youth, it is here that all investigation should commence, for there is little hope of making the world better if we do not seek the causes of social evils at their beginnings. The most rigid and best method of study of both children and adults is that of the laboratory, with instruments of precision in connection with sociologic data. Such inquiry consists in

gathering sociologic, pathologic, and abnormal data as found in children, in criminal, pauper, and defective classes, and in hospitals. Such experiments or measurements should be made as are of interest not only to sociologists, psychophysicists, and anthropologists, but also to physiologists and pathologists.”

The Increase of Smallpox in the United States.—

According to the Public Health Reports there have been the following numbers of cases of smallpox from December 28, 1900, to May 3, 1901, compared with those of the same period in 1900 :

State.	Cases.	Deaths.	Same period, 1900.	
			Cases.	Deaths.
Alabama.....	45	3	172	1
California.....	64	.....	3	.....
Colorado.....	1,763	.....	96	2
Connecticut.....	9	.....	.....	.....
Delaware.....	57	.....	.....	1
Iowa.....	26	.....	19	.....
Kansas.....	3,915	20	820	17
District of Columbia.....	51	.....	17	.....
Florida.....	113	.....	25	.....
Georgia.....	22	.....	198	2
Idaho.....	10	.....	.....	.....
Illinois.....	354	3	144	4
Indiana.....	557	4	138	.....
Indian Territory.....	216	.....	75	.....
Kentucky.....	59	1	125	1
Louisiana.....	206	44	2,671	373
Maine.....	1	.....	2	1
Maryland.....	26	.....	1	.....
Massachusetts.....	15	2	9	2
Michigan.....	55	3	27	1
Minnesota.....	2,753	3	464	5
Mississippi.....	4	2	303	9
Missouri.....	215	1	113	4
Montana.....	218	2	100	.....
Nebraska.....	654	4	45	2
Nevada.....	46	.....	.....	.....
New Jersey.....	46	1	17	.....
New Hampshire.....	334	.....	.....	.....
New Mexico.....	4	.....	4	.....
New York.....	581	106	22	1
North Carolina.....	854	3	510	2
North Dakota.....	60	1	.....	.....
Ohio.....	1,685	21	360	5
Oklahoma.....	690	.....	55	.....
Oregon.....	10	.....	7	.....
Pennsylvania.....	221	7	52	4
Rhode Island.....	10	1	.....	.....
South Carolina.....	10	1	18	.....
Tennessee.....	4,228	98	592	5
Texas.....	486	7	399	11
Utah.....	724	3	69	1
Virginia.....	328	4	219	21
Washington.....	38	.....	366	3
West Virginia.....	66	.....	95	1
Wisconsin.....	575	4	37	1
Wyoming.....	4	.....	12	.....
Grand total.....	22,344	349	8,388	498

These figures show plainly that somebody is at fault. That it is not the medical profession is demonstrable. Vaccination is protective, and the lessened mortality with almost three times the number of cases proves that we are treating the disease itself four times more successfully than a year ago. We fear that the Boards of Health, the law-makers, public lethargy, and the anti-vaccination cranks are to blame.

Blood-examination as an Aid to Surgical Diagnosis.—

The papers on this subject read before the American Surgical Association at Baltimore last week demonstrate the important place that the microscopic examination of blood has taken in the differential diagnosis of surgical lesions. Such examinations most certainly cannot be considered a fad. Although the number of observations are as yet somewhat meager, and as yet cannot be considered scientifically classified ; nevertheless they are sufficient in many conditions to be of most practical value, and if properly interpreted by

a surgeon who will take the trouble to become familiar with the results, they will undoubtedly guide rather than misguide him to an earlier diagnosis in many acute lesions, especially abdominal, which would prove fatal without this early recognition. J. C. DaCosta, Jr.'s paper was of great importance in that it presented clearly the anemia in appendicitis. This anemia, present in many cases of appendicitis, associated as it always is with a slight rise in the number of leukocytes, explains some of the cases of a slight leukocytosis out of proportion to the inflammatory lesion found at the operation. These observations demonstrate that at the first examination of the blood in appendicitis a red count and a hemoglobin test as well as a white count should be made, in order that the element of leukocytosis due to the anemia should be estimated before interpreting the full significance of the white blood-count. The paper written by Drs. Blake, Hubbard, and Cabot, of Boston, is of especial importance, and establishes pretty conclusively that there is no leukocytosis after simple fractures or uncomplicated fractures. These observations will, therefore, aid us in the early recognition of simple or compound fractures. The most important perhaps is their demonstration that the leukocytosis, after ether, with or without operation, or after the ordinary operative interference, with or without ether, is slight when present at all—from 12,000 to 15,000 and fleeting, 12 to 36 hours. The paper of DaCosta and Kalteyer dealt with a number of very careful and elaborate observations on the effect of a general anesthetic on the condition of the blood. Their experiments seem to prove that an anesthetic diminishes the hemoglobin, especially the hemoglobin carrying power of the individual red cell. This experimental work explains therefore, the danger of a general anesthetic in marked anemia, especially that form in which the hemoglobin percentage is very low. Bloodgood's paper dealt chiefly with the leukocytosis of appendicitis, peritonitis, and intestinal obstruction. The number of observations was not sufficient to allow him to make positive statements, but was sufficient for certain conclusions which so far have been of great practical value in his own experience. In the first 48 hours of acute appendicitis a high leukocytosis, above 18,000, especially a rapidly rising leukocytosis is, with very few exceptions, associated with grave inflammatory lesions of the appendix, such as gangrene, an appendix distended with pus, or beginning local or general peritonitis. In a few instances the rising and the high leukocytosis have been the chief or only positive indication for operative interference, and in each instance proved of great value, perhaps the saving of the patient's life. A leukocytosis, even up to from 20,000 to 25,000 is always associated with intestinal obstruction. This rise is rapid and early, and in many cases an indication of the lesion before the clinical signs are clearly established. In peritonitis, if the patient has any resistance, the leukocytes rise rapidly and high, even to 40,000, soon falling to normal or below.

Should Ambidexterity be Encouraged? — Is answered in the negative by a writer in the *American Journal of Insanity*, and upon the ground that, while

coarse movements may be performed nearly as well by one half of the body as by the other, accurate and expert movements require a higher organization of one-half of the brain than the other. Hence the more expert hand should be consciously still more and more specialized; making the ordinarily quiescent half of the brain assume control tends, it is said, to impairment of mental processes as well as inferiority of physiologic speed and dexterity. All of which we deny, both fact and theory being untrue. The writer has doubtless been misled by observation of the function of speech, which is single and in execution requires the control of a single center. We have but one voice, but we have two hands which in many cases at different instants may be put in action with the same dexterity. Many surgeons can operate equally well with either hand; many artists paint with either hand, and we have seen men who could write as well with the one hand as with the other. The critic of ambidexterity may reply that this is impossible with synchronous movements, forgetting that in the musician, and especially in the pianist and organist, there is the most marvelous expertness of both hands executing most complicated and entirely different functions, and at the same instant. The arguments against ambidexterity appear not only inconclusive but are squarely contradicted by facts. Surely also they are against a desirable freedom of the mind. Without the musician's ambidexterity life would be deprived of much charm. We should encourage "divided attention," and that large power of the mind over the body shown in the synchronous control of multiform activities.

A Hydrotherapeutic Institute for Philadelphia.

—Dr. Simon Baruch, of New York, read before the Philadelphia County Medical Society last week an extremely interesting paper entitled "The Lessons of a Decade in Hydrotherapy." In the discussion following this paper, it was urged by a member of the Society that there should be established in every important medical center and, if possible, in every town containing a sufficient number of physicians, a central therapeutic institute for the practical application of those remedial measures other than drugs that may be grouped under the term of "Physiologic Therapeutics." It was suggested that such an institution could be under the supervision of the local medical association, so that it should be managed on strictly professional and scientific lines. No patients should be received, except with written order from their attending physicians. It should afford facilities for hydrotherapy, for pneumatotherapy, for electrotherapy, for the application of massage and various kinds of exercises, for the use of heat and light—in a word, for the employment of all the physical agencies which are so important in treatment, and yet so much neglected. This neglect arises largely from the fact that while it is comparatively easy to write prescriptions for drugs, no one physician can thoroughly equip himself with the necessary apparatus for all the physical methods of treatment, or attain the highest skill in the manipulation of all such instruments; or, indeed, take the time to apply any one group of them in the treatment of every case in which they might do good. We

seek to reach the result in some other way; sometimes succeeding; often failing. At such an institute as has been suggested, skilled nurses and attendants, trained in the necessary manipulation, could carry out much of the treatment, and those applications requiring special medical education and technical dexterity could be entrusted to resident physicians or externes appointed for the purpose. Physicians could refer their patients to the institute with prescriptions for definite applications of water, light, heat, electricity, air, etc., as they are now referred to the drug store with definite prescription for drugs.

As a result of the suggestion made at the County Medical Society, we understand that a movement has been set on foot to make a beginning in this city by the establishment of facilities for hydrotherapeutic treatment open to any member of the profession, and that Dr. Baruch has been asked to become consulting physician and to make visits on stated occasions (weekly or as may be necessary) in order that the benefit of his knowledge and experience may be had for the installation of the necessary apparatus, for the training of the attendants and for the supervision of the numerous details necessary to insure the success of the enterprise at its beginning. The proposed plan, we understand, would be for the physicians to send their patients either with definite prescriptions for the applications to be made, or for preliminary testing and report of the patient's susceptibility and reaction to hydrotherapeutic measures in general. Upon the receipt of this report, with such suggestions as might seem desirable, or as the physician might ask for, the latter would then write a definite prescription, which would be followed out according to his order. If he preferred, he could personally supervise the applications.

The proposition seems feasible, and its execution would mark a decided step in advance, both in professional cooperation and in the direction of scientific therapeutics. We trust that the movement may be successful, and that it may stimulate a more general study of the nonmedicinal measures applicable for the relief of chronic disorders, and a better utilization of them by the rank and file of the profession.

In reply to our note concerning the melancholia following or ascribed to influenza, an astute correspondent wrote that treatment according to the uric acid theory would bring immediate relief. And in fact it did so. But inquiry of wise therapeutists elicits the qualification that the efficacy of sodium salicylate is by no means limited to rheumatic affections, or explainable on the uric acid hypothesis. In passing, it may be added that an excellent method of ordering the drug is as follows:

R
Sodium salicylate 4 drams
Compound tincture of cardamom 1 ounce
Elixir of orange to make 3 ounces
Take one teaspoonful in water after meals.

We read in the daily newspapers that a Frenchman has left 10,000,000 francs to the city of Rouen for the purpose of giving a prize annually as a marriage gift to two giants, the design being to improve the physical

stature of the race. This seems the silliest of all "rewards of vice," which much modern philanthropy is. Giants are usually diseased, the more certainly so the larger they are, and they are of less service to the world than people of ordinary size. Indeed, giantism is itself a disease. Then, too, the law of inheritance doesn't always work as planned by the foolish Count. His marriage prize would probably have the very opposite result from what he wished.

The Semeiologic Value of Dreams is the serioeomic theme of a discourse by two Frenchmen in the *Revue Scientifique*, in which the writings of others are also summarized. It seems that at least 131 authors have played with this Gallic subject. Fancy exhausts itself in a division of dreams due to established maladies, the dreams of malaria, those of circulatory origin, etc. One writer first proves an influence upon the waking state due to dreams, and then gravely advises the production of such dreams, by suggestion, as shall later prove beneficial!

Miss Dora Donald, superintendent of the South Dakota School for the Blind, at Gary, tells (*Bulletin of Iowa State Institutions*) of her success in teaching Linnie Haguewood, a deaf, dumb and blind girl, and in transforming her from a "selfish and irrational being" into an educated, self-controlled and self-supporting woman. Money was furnished by the State and by a private citizen for her education. The girl "lacks the imaginative genius displayed by Helen Keller." Miss Donald may well be proud of her work.

The *London Post-Magazine Almanach* has compiled a table with estimated losses of all the great fires of the last ½ century. No fire loss of less than \$500,000 is included. The two greatest fires, characteristically, were in the United States—that of Chicago, \$165,000,000, and that of Boston, \$70,000,000. The table foots up \$440,000,000, and if the small fires could have been included the entire loss would have been at least \$1,000,000,000. Has there been made any estimate of the number of lives lost by these fires?

Antichild-labor is becoming an important factor in the politics and industries of the South. The negro children are not allowed to work in the mills on account of their color, and they attend school while the children of the poor whites are slaving long hours in the mills. This strange reversal of the usual order of things is arousing great opposition and may lead to laws against all child-labor, which should have been enacted long ago. The women, fortunately, are carrying on the campaign.

The after-dinner speaking mania at medical banquets is at its height. What a pity it is that men who have nothing to say, and who do not wish to say it, are compelled to say it to men who do not wish to hear it. The worst sort of postprandial nonsense is that prepared in

advance. "Born of the occasion and mellowed by the charm of the hour," should be the ideal, and any man who speaks over five minutes or who indulges in obscenity should be hissed down instanter.

Under the guise of medicine-selling and bitters-traffic there is a deal of the worst sort of whisky-shop business done by apothecaries and by country stores. Many if not all of these pernicious "bitters" are sorry mixtures of cheap alcohols, wines, etc., with various disguising drugs, which quickly and surely destroy both body and soul of the unfortunate habitue. We are glad to see that the law of Maine prevents shipment into the State of these "medicines."

The United States Senate Committee have reported the results of their investigation as to the relative merits of the slow sand filtration of water and the rapid or mechanical filtration for the supply of Washington. The committee find that either system removes the bacteria, and that the slow method is the better for clear water, while the rapid method with a coagulant is preferable for turbid water.

An examination of the brains of two great mathematicians by Professor Retzius and Professor Möbius, leads to no definite location of the mathematical centrum. There was in both cases a shortening of the sylvian fissure. Whether this will finally be placed in the lateral parts of the frontal lobes, or in the parietal region, remains for future researches to determine.

There is a very general feeling that the repeal of the army canteen law was a bitter mistake. The repeal seems to be increasing drunkenness among the soldiers, and insubordination and disease. A total abstainer writes: "All the good the women wanted to do they undid, and all the good that was being done without them they have utterly ruined."

Chicago thinks of flushing the streets to keep them clean, while Milwaukee is about to abandon the method for a dry sweeping patent process which draws the dust and dirt by an air-blast into a chamber so that it is not blown or scattered about. If it works, the patentee of the machine should have his million dollar reward.

Dr. A. P. Grinnell, of Burlington, Vt., says that there are more than 3,300,000 doses of opium annually sold in Vermont by the general stores. This does not include that dispensed by physicians or sold in patent nostrums. This equals a half-dose daily for every inhabitant. Is this an indirect result of prohibition?

Some bacteriologist should investigate the trailing skirt of city ladies and tell us how many cases of tuberculosis and how many deaths are probably due to this disgusting fashion.

AMERICAN NEWS AND NOTES

GENERAL.

Utilizing Murderers.—The *American Journal of Sociology* proposes to advance medical science by using those criminals condemned to capital punishments as subjects for experiments instead of confining them exclusively to animals.

Rinderpest has destroyed all the cattle on the entire island of Masbate, the United States Philippine Commission report. The raising of beef cattle was the chief industry of the people and Manila formerly derived its supply of meat from there.

Antivivisection.—The opponents of vivisection in England are pleading for the abolition and prohibition of vivisection while the same class here are pleading for restriction. The Great Britain antivivisection act permits the practice unobserved, while the Massachusetts laws guards this point by the admission of any authorized agent of an incorporated society, to any place registered under the law for the practice of vivisection.

Army Dentists.—Provision has been made in the recently enacted bill by Congress for the appointment of 30 dentists in the army. They must serve for 3 years, and will receive a remuneration of \$1,800 a year. A candidate must be between the ages of 24 and 40, and must successfully pass an examination before a board of 3 examining surgeons appointed by the Secretary of War. The uniform of an assistant surgeon and the rank of first lieutenant will be given to those appointed.

Disease Disseminated by Flies.—Dr. L. O. Howard, of the United States Department of Agriculture, in a paper for the *Journal of the Washington Academy of Sciences* has shown the role played by flies in the spread of typhoid fever during the Spanish-American war. He has made a study of house flies in different States of the Union, and after the examination of 23,087 of them he concludes that the least carelessness in the disposal of garbage or foul matter renders the house fly an imminent source of danger.

Obituary.—CHARLES R. SOUDER of Atlantic City, May 7, aged 73.—HORACE L. HOWSE of Moss Point, Miss., May 3, aged 77.—E. STANLEY PERKINS of Philadelphia, May 6, aged 56.—GEORGE CYPRIAN JARVIS of Hartford, Conn., May 7, aged 67.—ABRAHAM DEYO of Gardiner, N. Y., May 5, aged 71.—W. W. BARNES of Farmersville, La., May 6.—MARTIN E. DOWNES of Magnolia, Del., May 9, aged 34.—GEORGE CHRISTIE McDERMOTT of Cincinnati, May 8, aged 53.—WILLIAM WALLACE WALKER of Schulenburg, Texas, May 6, aged 56.—DAVID SHEPARD HOLMAN, scientist and inventor, at Bangor, Me., May 12, aged 75.—ROBERT BOLLING of Philadelphia, aged 68.—GEORGE W. PEMBROKE of Friendship, Md., May 12, aged 58.—CHARLES RICE of New York, May 13, aged 60.—JAMES HAYES of Plainfield, N. J., May 12.—NORMAN ARMETT SMITH of Greenwich, Conn., May 12, aged 78.

Smallpox.—Many new cases are reported in New York City in widely scattered localities and an order to vaccinate all the police was executed. Two new cases have been found in Philadelphia the past week, and in Gloucester City 2 more deaths are reported. At Lamb's Creek, Pa., 7 cases are reported and many people exposed. At Rootstown, O., there are 50 cases; it was thought by the local physicians to be chickenpox until investigated by an expert. Smallpox has broken out in 15 places in Indiana. In West Superior, Wis., the local authorities will ask to have the lumber camps burned, as they are considered breeders of smallpox. In Berkeley, Cal., an outbreak is reported among the children of the State Institution for the Deaf, Dumb and Blind. It is reported widely prevalent among the Indians on the Western Reservations and raging at the Yorktown Agency, S. D., among the white population. About 100 malignant cases are reported among the Indians at Colgate, I. T., and the Indian bureau has shipped 1,000 vaccine points to that place. The existence and spread of the disease is confirmed at Sitka.

EASTERN STATES.

Plague Among Rats.—In Waldoboro, Maine, a soldier returned from the Philippines had brought with him some pet rats confined in a cage, all of which recently died of some strange disease. Several members of the State Board of Health diagnosed this disease as bubonic plague and had the rats and cage burned.

Gifts to Hospitals.—Miss Margaret P. Wright and Miss Henrietta Wright of Northampton, Mass., purpose building an annex to Dickinson Hospital, in that city, at a cost of \$10,000, as a memorial to their brother. Announcement is also made of a gift of \$5,000 to the hospital by Thomas M. Shepard for another annex to the hospital in memory of his father, the late Henry M. Shepard of Northampton.

Use of Narcotics in Vermont.—Dr. A. P. Grinnell, of Burlington, reports his investigations in regard to the consump-

tion of narcotics in the State of Vermont. In the regular drug stores and in 160 of the general stores there is sold 3,300,000 doses of opium every month, besides what is administered by doctors and in patent medicines. By dose, 1 grain of opium, $\frac{1}{2}$ grain of morphin, $\frac{1}{4}$ ounce paregoric and 20 drops of laudanum is meant. Some stores were not willing to state the amount sold and in these cases the physician put down zero, so the amount given would seem to be even less than the actual amount. In one town, barely represented on the map, $3\frac{1}{2}$ pounds of gum opium, 6 ounces of morphin, 5 pints of paregoric, 5 pints of laudanum and 3 ounces of powdered quinin were consumed each month.

NEW YORK.

Census Returns.—A census is reported to have been taken recently by an inquisitive reporter of a mile of Fifth avenue, New York, where rich men dwell, with the result of finding 15 children under the age of 12, an average of 1 child in 3 houses. A later investigation of the East Side tenement district showed 63 children in 1 house, more than 4 times the number in the whole Fifth avenue mile.

An Echo of Days Before "the Anatomy Act."—In Maple Grove cemetery, Hoosic Falls, south of the postoffice, there is a headstone upon which is the following:

Her body was stolen by fiendish men,

Her Bones anatomized;

Her Soul, we trust, has risen to God,

Where few Physicians Rise.—*Troy Times.*

The New York Academy of Medicine has received \$10,000 from Mrs. Sarah Barker Gibbs and Miss George Barker Gibbs for the establishment of the Edward N. Gibbs Memorial Prize Fund, the income to be awarded triennially to the physician of regular standing in the medical profession of the United States of America who shall present the best original essay upon the etiology, pathology and treatment of the diseases of the kidney.

Insurance and Christian Science.—At a late session of the New Jersey Grand Council of the Royal Arcanum the 200 representatives of the 117 councils in the State were opposed to the payment of the benefits due members, if they refused or neglected to procure medical aid when ill. Future candidates for membership in the order in New Jersey are not eligible unless they agree to obtain medical aid when ill, under penalty of forfeiture of insurance.

The Humane Society in Albany and vicinity is pushing forward successfully its work of preparing a new home and offices in connection with the house of detention for the temporary care of unfortunate and criminal children while awaiting trial for minor offenses, or those taken from brutal guardians, for the starving, the runaway or the lost, the suffering and homeless, pending the investigation in each case. About \$25,000 will be required, of which more than half has already been paid in.

Bequests to Hospitals.—The German Hospital of New York is the recipient of a bequest of \$1,000 from the late Colonel Henry Roehr. Joel Goldenberg has bequeathed the following: \$4,000 to the Montefiore Home; \$2,000 to the Presbyterian Hospital; \$5,000 to the Mount Sinai Training School for Nurses; \$3,000 to the Mount Sinai Hospital. He has also bequeathed the entire residuary estate to the Mount Sinai Hospital for the establishment and maintenance of a special ward to be in charge of his nephew, Dr. Herman Goldenberg. This ward is to be known as the "Joel Goldenberg Ward."

PHILADELPHIA, PENNSYLVANIA, ETC.

Dr. S. Louis Zeigler has been appointed a surgeon at the Wills Eye Hospital, in place of Dr. George C. Harlan, resigned.

Whooping Cough has been added to the list of contagious diseases by the Hygiene Committee of the Board of Public Education of Philadelphia. The disease will thus be a cause for exclusion from the public schools.

Rabies.—Dr. R. M. Waldron, deputized by the Pennsylvania State Board of Health to investigate a reputed outbreak of rabies in Rostraver township, reports its existence in the most virulent form all along the river and not only horses and cattle are affected, but sheep, hogs and even cats. A large number of cattle, horses and sheep have been killed. The trouble originated in a rabid dog.

Contagion in Books.—It is stated that since the incorporation of one of the public libraries of Philadelphia in 1891, about 10,500,000 books have been received, handed, and rehandled by employes of the institution and that not one has contracted a contagious disease. Since March 15 there have been reported to the library 492 cases of infectious disease; of these, 13 were in visitors to the library.

Sources of Tuberculosis.—The Women's Sanitary League has begun active measures against the practice of spitting in public places and overcrowding in street cars as pregnant

sources of tuberculosis. The members of the league will appeal to the legislature urging the passage of the bill now before it to prevent crowding in street cars, and the legislative committee of the league will ask City Councils to frame an ordinance against the spitting practice.

The Committee on the Nathan Lewis Hatfield Prize for Original Research in Medicine, of the College of Physicians of Philadelphia, has awarded to Professor H. F. Harris, M.D., Atlanta, Ga., the sum of \$500 for an original research, conducted at the instance of the committee, entitled "A Study of the Alterations Produced in the Large Intestine of Dogs by the Amoeba Coli, by Heat, and by Various Chemic Substances, with Notes on the Anatomy and Histology of the Viscus."

PENNSYLVANIA HOSPITAL.

One Hundred and Fiftieth Anniversary.—The exercises commemorating the one hundred and fiftieth anniversary of the founding of the "Mother of American Hospitals" were held in the new entrance hall of the hospital, May 11. Among the guests were many American physicians and not a few representatives of foreign societies and medical associations.

The address of welcome was delivered by the President of the Board of Managers, Benjamin H. Shoemaker. He spoke briefly of the first action taken to found the hospital and introduced as the speaker of the occasion Mr. John B. Garrett, a member of the Board of Managers, who delivered the **commemorative address**. This was historical in character, the progress of the hospital being traced from its inception to the present time. At the time of its foundation the Province of Pennsylvania had a population of about 200,000 and the city of Philadelphia 25,000. It was remarkable that, less than 70 years after Penn's treaty with the Indians and 25 years before the Declaration of Independence was signed, an institution for the care of the sick should be established, and, what was more remarkable for those times, that it should include provision for the insane. Benjamin Franklin was largely responsible for the inception of the institution but his name is not prominently identified with its early history. He states in his autobiography that in 1751 "Dr. Bond, a particular friend of mine, conceived the idea of establishing a hospital in Philadelphia (a very beneficent design which has been attributed to me, but was originally his) for the reception and care of sick persons, whether the inhabitants of the province or strangers." Dr. Bond, after vainly endeavoring to secure subscriptions for the new enterprise, appealed to Franklin who was more successful. A petition bearing 33 signatures was finally presented to the officials of the province. This petition contained neither Bond's nor Franklin's name but it was in the handwriting of the latter and he has always been considered the author. In it is a plea for the insane which is far beyond the general ideas of the time regarding those unfortunate individuals. From that time lunacy was regarded as a disease, although it was 40 years before either England or France recognized insanity as such and made provision for its treatment in hospitals. The wisdom of the founders is shown by the fact that the charter of the institution has never been changed except to widen the limits of the property.

May 11, 1751, the act incorporating the "Contributors to the Pennsylvania Hospital" was signed by Governor Hamilton and from that day the institution dates its history. In August of the same year subscriptions to the amount of £2,751 were reported, this making available £2,000 voted by the Assembly. The house of Judge John Kinsey on Market street below Sixth was rented for a temporary hospital. In 1754 the lot of ground on Pine street from Eighth to Ninth, on which the hospital now stands, was purchased. In 1755 the corner-stone of the new hospital was laid. The inscription on the stone (written by Franklin, who was the first clerk and second president of the Board of Managers of the institution) is as follows:

In the Year of Christ
 MDCCCLV
 George the Second Then Happily Reigning
 (For He Sought the Happiness of His People)
 Philadelphia Flourishing
 (For Its Inhabitants were Publick Spirited)
 This Building
 By the Bounty of the Government, and of Many Private
 Persons,
 Was Plousty Founded
 For the Relief of the Sick and Miserable:
 May the God of Mercies
 Bless the Undertaking.

In 1756 all patients were removed from the temporary hospital to the new building. In November, 1766, Dr. Thomas

Bond gave the first clinical lecture, this being the beginning of systematic medical teaching on this continent. In 1767 the remainder of the square from Eighth to Ninth streets was acquired, this giving an entire area of 4.3 acres.

The founding of the insane department marked a distinct epoch in the history of the hospital. A partial separation of the insane and of the sexes was begun in 1825 but the accommodations were inadequate. In 1835 a tract of 101 acres was purchased in West Philadelphia, buildings erected, and in 1841 the insane patients were removed thereto. Drs. Rush and Physick took charge of cases and thus took a distinct step in the specializing of medicine. This period also marks the beginning of a distinct advance in the treatment of the insane and in the results attained. The history of the insane department has been one of constant advance. A building for men was erected in 1859. Game rooms, gymnasium, reading room, natatorium, etc., have been added from time to time. The department now has accommodations for 270 men and 250 women. Mr. Garrett paid a warm tribute to the memory of Dr. Thomas S. Kirkbride, who was for a long time medical superintendent and from whom the department took the name of Kirkbride's Asylum.

The Pennsylvania Hospital has received no State or municipal aid for over a century. During its 60 years of existence the insane department has expended nearly \$8,000,000, and this without reducing the endowment fund in the least. The hospital proper has been remodeled and reequipped to meet the demands of modern medicine and surgery. The medical and surgical patients are in separate structures, there are 2 nurses' homes, the dispensary is a separate building, a mechanical and chemical filter with a capacity of 250,000 gallons daily has been installed, a garbage incinerator burns all the refuse, a laboratory of clinical medicine has been endowed, and numerous other improvements have been made. Four resident physicians and from 15 to 25 trained nurses are graduated yearly. Truly the "Mother of American Hospitals" is an institution of which the city, commonwealth and nation may alike be justly proud.

After the commemorative exercises were over the visitors made an inspection of the hospital buildings. A like inspection of the insane department will be made May 18.

SOUTHERN STATES.

Luther H. Reichelderfer has been appointed superintendent of Garfield Hospital, Washington, D.C.

Medical Inspection by the health authorities in the public schools of New Orleans has been prohibited by the City Council. The School Board had protested that the investigations were too severe.

Mosquitos.—South Carolina is waging war upon the mosquito by the use of petroleum in the stagnant pools. The authorities of Winchester, Va., are engaged also in the extermination of the mosquito.

The Mississippi Valley Medical Association announces a change in the dates of the next meeting from September 10, 11 and 12 to September 12, 13 and 14, owing to the fact that the first named dates conflicted with another Association meeting.

Effects of the Galveston Storm.—H. D. West, in a review of the medical aspects of this storm, states that 52 days after the storm, which occurred on September 8, 1900, there was a remarkable outbreak of typhoid fever, and by the following December the number of cases was 300. Strangely enough, by February but 29 cases of the epidemic remained. The cause of this unusual outbreak of typhoid Dr. West attributes to a contaminated water-supply and food infected through the media of flies. A remarkable feature of the occurrence was that it was virtually a house epidemic; in one family there were as many as 6 people ill at one time. Gastrointestinal catarrh was universally present after the storm, and this, no doubt, placed the people in a receptive condition. Scarlet fever, diphtheria, influenza and dengue were also present to a limited extent. An epidemic of smallpox was also threatened. Dr. West says that an immense improvement has since been made in the sanitary condition of the city, but he deplors the fact that the Legislature has refused to create a State Board of Health.

WESTERN STATES.

Blackleg and Anthrax are reported prevalent among the herds in San Joaquin and adjoining counties, Cal., and an epidemic is feared.

Free Instruction for the Blind.—The Social and Mutual Advancement Association, of Chicago, will give free lessons to the blind of the city, who have not yet learned to read embossed print.

The State Board of Medical Registration and Examination of Ohio, under the provisions of the Love law, has admitted 103 physicians to practise without requiring them to pass examination.

Diphtheria has broken out among the students and employees of St. Thomas' College, a Catholic Theological Seminary in St. Paul, Minn. Eight of the students have been sent to the City Hospital.

The Chicago Homeopathic Medical College has opened its doors to women. They will be admitted on an equality with male students. There is now no homeopathic college in the West that debar women.

Sweat-shops in Wisconsin.—The Soltwedel Antisweatshop Bill has passed both Houses. It greatly extends the list of articles which are forbidden to be made in rooms which are also used as living rooms.

Osteopathy Law.—The State Medical Society of Nebraska, in a recent meeting and contrary to the suggestion of the retiring President, Dr. McClanahan, by a nearly unanimous vote, put itself on record as bitterly opposed to legalizing the practice of osteopathy, and appropriated \$200 to fight the constitutionality of the law passed by the last Legislature giving that school a standing.

Gastric Ulceration.—A disease due to hasty eating and consequent abuse of the digestive organs by crowding too much work upon them in a limited time, was discussed at a recent meeting of the Chicago Medical Society, when Dr. Andrews stated that this disease, discovered and labeled as a distinct disease, about 5 years ago, is much more on the increase than appendicitis, and much more dangerous. It has increased 200% within its brief medical history.

Home for Epileptics.—Among the bills pending in the State Legislature of Illinois is one to found a State Home for Epileptics, of which there are estimated to be from 5,000 to 10,000. A large majority of these are confined in county almshouses and hospitals and in State hospitals for the insane where they are deprived of the opportunity to work for their own maintenance as many of them might do. The site is under consideration, but the decision has not been reached.

Investigation of the Plague.—Dr. Lewellys F. Barker, of Rush Medical College, who 2 years ago was sent by the Johns Hopkins University to study the plague conditions in India and China, and was appointed by the Government to investigate the plague cases in San Francisco, asserts that though experts are of the opinion that another great plague may soon develop, the world will never again be visited by such an epidemic as the "black death." Improved sanitary conditions remove this dread. An epidemic among rats, he states, has invariably preceded all the great plague epidemics in history. So far back as 800 years ago, Hindu writings verify this statement. Dr. Barker has himself noted this manifestation in India, and the same phenomenon has been noted in Japan.

Meeting of the American Medical Editors' Association.—The annual meeting of the American Medical Editors' Association will be held at St. Paul, Minn.; President's Address, Dr. Alex. J. Stone, of St. Paul; "Relative Value of Medical Advertising," by Dr. John Punton, of Kansas City, Missouri; paper, subject unannounced, by Dr. John V. Shoemaker, of Philadelphia; "Improvements in Medical Education," by Dudley S. Reynolds, of Louisville; "Some Thoughts on the Ethics of Medical Journalism," by Burnside Foster, of St. Paul; "Editorial Corps and Medical Journalism," by George F. Butler, of Alma, Michigan; "Relation of the Medical Editor to Original Articles," by Harold Moyer, of Chicago; and paper, subject unannounced by Dr. George H. Simmons, of Chicago.

Registering Births and Deaths.—A bill requiring reports of births and deaths and their registration and regulating the disposal of the dead has passed both Houses in Illinois and becomes operative January 1, 1902. This bill provides that the physician or midwife, and in case of their absence, the parent or householder, shall report every birth within 30 days after its occurrence to the county clerk, who quarterly shall certify the list received to the county treasurer, and each informer shall then receive 25 cents. It also provides that no one shall dispose of a dead body unless he has received a permit to do so, which permit shall bear date of issue, the name of the deceased, date and cause of death, the manner in which the body will be disposed of and the place of such disposal, the name of the person to whom the permit is issued, the name of the attending physician, midwife or coroner, and shall be signed by the official by whom it is issued. Fines or imprisonment will attend the violation of the law.

CANADA.

Woman's Appointment.—The Ontario Government has been asked by the National Council of Women to appoint a woman to the post of assistant medical superintendent on the staff of the new Coburg Asylum for females.

McGill University.—Sir William MacDonald, who has already contributed \$2,500,000 to the funds of the institution, has again announced that he will further subscribe to the extent of \$150,000. Of this amount \$75,000 will go to endow the chair of chemistry, \$62,500 for the chair of botany, and \$12,500 will be added to the chair of physics. Lady Strathcona and the Hon. Mrs. Howard will bear the expense of a new wing to the medical building which will be erected during the course of the coming summer. It will be 4 stories in height, and will be supplied with lecture theatres, museums, and chemical laboratories.

FOREIGN NEWS AND NOTES

GENERAL.

Death from Wild Animals.—English colonial reports for 1899 show that in that year tigers caused the death of 899 persons; wolves, 338; leopards, 327; elephants, bears, hyenas and crocodiles, 1,400, while venomous serpents destroyed 24,621 persons.

Sensibility of Plants to Poison.—Henri Coupin has presented to the Academie des Sciences a note of his recent work dealing with the sensibility of higher plants to minute quantities of toxic substances in a state of extreme dilution and the serious disturbance to the health of the plant. Copper sulfate was the most deadly substance discovered by him, 1/10000 of its weight in water being sufficient to react disastrously. Mercuric chlorid, 20 times less toxic than the copper sulfate, came next in toxic effect. One part of the cadmium chlorate in 10,000,000 parts of water, and 1 part silver nitrate in 1,000,000 parts of water were found deadly to plants. The question raised by their investigation is whether the character of the vegetation of a country is affected by minute quantities of such substances contained in the soil.

Obituary.—ARTHUR SAMUELS of Liverpool, April 21, aged 70. ARTHUR EDMONDSTONE WATSON of Torquay, April 26, aged 31. KARL LAUSENAUER, Professor of Nervous Diseases and Psychiatry at the University of Budapest, April 27, aged 53. He was influential in bringing about many reforms in the care of the insane in Hungary and in causing special departments for their care to be erected in connection with the large hospitals. JOHN E. W. CRUISE of New South Wales, aged 36. ROBERT HUNTER of Sydney, New South Wales. SAMUEL REYNOLDS of Victoria, New South Wales, aged 77. J. A. LORIMER of Farnham, England, April 27, aged 54. WILLIAM GALLETLY of Elgin, England, April 26, aged 46. JOHN CAVAFY of Hove, England, April 28. FRANCIS H. WARRURTON COTNAM of Southampton, April 19, aged 38. ARTHUR J. CUMMINGS of Exmouth, Devon, April 23, aged 83. VERTUE EDWARDS of Shottisham, April 23, aged 82. WILLIAM GRISTOCK of Abbotsbury, Croydon, England, April 23, aged 47. JAMES D. C. WHITING of West Dulwich, Surrey, April 23.

GREAT BRITAIN.

Contagion on Pencils.—To prevent the spread of contagion the medical directors of the London School Board insist that each child should have its own pencil.

A New Sign of Mumps.—In the *British Medical Journal* of April 13, 1901, Trosilian refers to the fact that it is difficult in children to discover the opening of Stenson's duct, whereas in several cases of mumps under his observation it was plainly visible as a bright red papilla.

Improved X-ray Tubes.—Smith, a Welsh electrician, is reported as the inventor of 2 x-ray tubes for which he claims superior advantages over the ordinary tubes, as they are not injurious, one of them tending to heal burns and wounds. One makes bones and not flesh visible on a photograph plate, while the other makes neither visible, the plate only showing foreign substances.

The study of the rats that infect the wharves, riverside premises and sewers, has been promulgated by the London County Council. The aim of the Council is to prevent the spread of disease, and therefore the conditions of the rodents are being closely investigated. If an unusual mortality is noticed among them a bacteriologic examination will be made. Up to the present time nothing alarming has been discovered, but the most stringent measures are being employed for their extermination.

A Crusade Against Poor Ventilation is being waged in London. The factory superintendents have been notified that they must see to it that the air of their workrooms is kept pure and fresh. The strongest opposition to the movement is expressed by the persons who would be directly benefited by the change. The habitual breathers of the impure air of the overcrowded, overheated workrooms assume, when told of proper ventilation, that the temperature must be kept at the freezing point. Therefore before the crusaders can hope to attain success in the movement they must explain fully to the superintendents and workers what is meant by proper ventilation.

CONTINENTAL EUROPE.

Professor Franz Nissl, of Heidelberg, has recently been awarded the Sömmerring prize of the Senckenburg Society for Natural History at Frankfurt-a-M., in recognition of his investigations of the structure of nerve cells.

Statistics of the French Universities issued by the French bureau of instruction state that there are 29,901 students of all nationalities, of whom 12,289 or nearly one-half are studying at Paris. Of this number 8,393 are students of medicine and 2,868 students of pharmacology.

Alcoholism in Moscow.—Statistics show that in the course of 10 years about 20,000 men and 5,000 women have been treated in the municipal hospitals of Moscow for the effects of inebriety.

Improved Sanitation Among Barbers has been demanded recently by Berlin officials. The Berlin Barbers' Union, at its quarterly meeting, agreed that their prices should be raised 50% in the future because of increased expense required in fitting their shops and extra labor required in executing the new demands.

The Greek Medical Congress will be held at Athens May 19 to 23, 1901. Members from all parts of the Orient and many of the chief European cities will be present. Among the topics that will be discussed are: Pulmonary Tuberculosis in Greece, Alcoholism, and School Hygiene.

In Memory of Bunsen, Kirchhoff and Helmholtz.—Academies and societies throughout Germany, personal friends, but not the general public, will be asked to contribute toward a fund to erect a monument at Heidelberg in memory of these scientists. A committee, composed mainly of physicians, of which Dr. A. Kussmanl of the University of Strasburg is the chairman, has been organized for this purpose.

The Association of Medical Men of the Seine have decided to open a central office to which their clients will send their bills and which will undertake to collect the money for a commission of 5% with a minimum of 50 centimes for expenses. A list will be kept showing the names of people who are known to be poor pay. Each doctor using the association will be charged an annual sum of 10 francs. It is not proposed to open the office until at least 300 subscribers are secured.

Pasteur Institute in Berlin reports during the year 1900 384 patients treated with a mortality of 0.27%. The percentage of mortality since its foundation in 1898 is 0.3%. A large majority of the cases come from near the Austrian and Russian boundaries from infected animals wandering over into the Prussian territory to find victims. Germany has rid herself of smallpox by compulsory vaccination and would be able to exterminate rabies except for the carelessness of her neighbors.

A Cure for Blindness has been announced by Dr. Heller, director of the Hohe Warte Asylum for the Blind, at Vienna. The cure is said to be successful only in a very limited number of cases, in which the organs of sight are perfectly formed, but in which the visual centers of the brain are said to be at fault, and can be educated and developed. The cure has attracted widespread attention in Europe, and has been denounced as nonsense and swindle by Professors Hirschberg and Schweigger in letters to the *Berliner Lokalt-Anzeiger*.

The Eighth Antialcohol Congress was held at Vienna, April 9 to 13, 1901. Many prominent physicians were present and took part in the proceedings. The efforts of the Congress seem to have been directed more to the promotion of temperance than of total abstinence. That the alcohol question is quite a different question in Europe than in the United States may be seen from the statement made by Dr. Hartel, minister of instruction at Vienna, that 50% of the school children in Vienna are accustomed to take alcoholic beverages. He also stated that the average consumption per person in Austria is: 9 liters of liquors, 18.9 liters of wine, and 65 liters of beer; figures which seem almost incredible to an American.

Giulio Bizzozero, Professor of Pathology at Turin University, died April 12, 1901, aged 55. He was well known among scientific investigators from his studies of the blood, bone-marrow, and from the introduction of many valuable methods in microscopic anatomy. He first described blood-plagues and showed their relation to blood coagulation. His handbook of clinical microscopy attracted much attention when it appeared and is still one of the standard texts on this subject; it has been translated into several foreign languages. Bizzozero was born at Varese in Lombardy. He studied medicine at Pavia, where he graduated in 1866, and afterwards did special work with Virchow at Berlin and Frey at Zürich. He was a privatdocent at Pavia until 1872 when he was called to Turin as Professor of Pathology.

Child Exchange.—A plan devised by some charitable women for furthering the proper development of children has been adopted in Berlin, and a society has been formed among the families of certain German and Austrian states, England and Norway. The object of the society is to give the children of large cities an opportunity to spend part of their vacation at some small town in the country or at the seaside among new surroundings in the fresh air, while the country children see the sights of the large cities. The physical gainer by this exchange will be for the most the city children, but the intellectual profit for the country children will be as great, and their bodies are usually sound enough. By this system of exchange the vacation is not a source of expense to parents, except for traveling expenses, and it is believed that many children will be assured a pleasant and profitable vacation who would otherwise be unable to get away from home. The president of the society is the proprietor of a well known bookstore in Berlin.

SOCIETY REPORTS

XXX CONGRESS OF THE GERMAN SURGICAL ASSOCIATION.*

HELD AT BERLIN, APRIL 10, 11 AND 12, 1901.

[Continued from page 193.]

Extirpation of the Larynx: WERCKMEISTER (Zittau) presented a patient upon whom he had operated 2 years previously, removing the entire larynx because of carcinoma. The patient made a good recovery from the operation and had remained perfectly well since.

Operation for Traumatic Separation of the Lower Epiphysis of the Femur: SCHUCHARDT (Stettin) presented a boy upon whom he had operated for this injury. The result in this case was excellent.

Excision of Tissue by aid of the Esophagoscope for Diagnostic Purposes: GOTTSSTEIN (Breslau) advocates excision of small bits of tissue for microscopic examination in cases of tumors of the esophagus. By this means early diagnosis is possible, and when the procedure is carried out with the aid of the esophagoscope the danger is slight and the advantages great. Gottstein has never seen bad results follow.

The Operative Treatment of Suppuration in the Posterior Mediastinum: V. HACKER (Innsbruck) had the impression that up to the present time suppurations about the esophagus in the posterior mediastinum had almost invariably resulted fatally. He reported a case in which suppuration followed ulceration and perforation of the esophagus. The pus had burrowed very deeply, but it was evacuated through an incision in the neck, and a good recovery followed.

Pneumonia and Celiotomy: HEULE (Breslau), from his observations in the Breslau Clinic, was led to believe that pneumonias more frequently followed abdominal operations than operations on other parts of the body. To determine this point he experimented with animals, and found that those exposed to cold recovered much more slowly than those carefully protected; lung affections invariably followed and using cold solutions to flush the peritoneal cavity a pneumonia followed the next day. To obviate this danger so far as possible it has been the regular practice at the Breslau clinic to protect the extremities of the patients, to warm the operating table and to use hot solutions in flushing the abdominal cavity. Since this regime was adopted in 1899 there has been an increase in the number of celiotomies, but a decrease in the number of pneumonias. While the irritating effect of the anesthetic, the inspiration of foreign material and the frequent presence of infection is often the cause of pneumonia, Heule believes that the loss of bodily heat is more often at fault.

Discussion.—KRÖNLEIN (Zurich) believes that the use of a poor quality of ether may be responsible for many pneumonias. He does not use special measures to prevent the loss of bodily heat, yet he has had but 1 death from pneumonia, occurring in a man of 77 who had undergone a severe operation.

KÜMMELL (Hamburg) has had 40 pneumonias and 11 deaths out of 1,070 celiotomies; 4 of these were other pneumonias. The patients affected were for the most part in very poor general condition and had some inflammatory trouble in the air-passages before operation. The position in bed should be frequently changed with patients in whom a tendency to lung trouble is suspected, and they should be allowed to sit at the earliest possible moment.

STEMPEL (Breslau) believes that fat embolism is a frequent cause of lung trouble following operation, particularly with very fat patients. He reported a case in which he found a large fat embolus in a branch of the pulmonary artery after an abdominal operation.

New Uses for the Mikulicz Tampon: SAMTER (Königsberg). While the tamponade was originally designed for use in packing off large spaces, Samter believes that it may be of advantage in many abdominal operations, particularly those about the stomach and gall-passages, to support sutures, arrest hemorrhage, etc. He reports a case of fecal fistula which was healed by the use of the tampon.

The Mechanism of Acute Dilatation of the Stomach: KELLING (Dresden) has made a series of postmortem examinations to determine the cause of postoperative dilatation of the stomach. In many cases he found a passive valve-like closure arising from folds in the duodenum. The stomach may, by gross errors in diet, be filled beyond its capacity for emptying itself. Absence of motility may be caused to some degree by the anesthesia. Gastroptosis is a predisposing cause. In the treatment of these cases of acute dilatation Kelling is decidedly opposed to the performance of gastroenterostomy indiscriminately. We should first try to make a diagnosis as to the cause of the difficulty, and then strive to remove the cause. Very

*Reported specially for AMERICAN MEDICINE by Martin B. Tinker, M.D., University of Berlin, member of the German Surgical Association, with grateful acknowledgment of the aid of Dr. Wohlgenuth, authorized reporter for the German Medical Press, and the members of the Association who kindly furnished abstracts.

often jejunostomy is preferable to gastroenterostomy for the vicious circle of regurgitation of bile and pancreatic juice follows the latter operation in a certain number of cases.

Hyperemesis Lactantium: Report of a Case Arising from Pyloric Spasm, Cured by Stretching the Pylorus: MEINHARD SCHMIDT (Cuxhaven) discussed the causes of hyperemesis in young children, and expressed the opinion that the trouble arises, not as frequently from stenosis caused by congenital hypertrophy as is generally believed, as from spasmodic contraction of the pylorus. He reported a case of hyperemesis in which he overcame the tendency to spasmodic closure by stretching the pylorus with forceps.

Discussion.—LONKER (Bochum). The case just reported should not be confused with cases like that which he reported at the meeting a year ago. In that case there was really closure of the pylorus from a large congenital overgrowth of muscle fibers which perfectly justified gastroenterostomy. Hyperemesis was not the only symptom in this case; there being so much obstruction that this prevented food from entering the intestine and thus interfered with defecation.

BORCHARD (Posen) mentioned 2 cases of acute dilation of the stomach following operation out of the 11 operations on the stomach which he had performed. The cause of trouble in both of these cases was interference with the ability of the stomach to empty itself because of adhesions and a weakened musculature.

Uranoplastic Operations: v. EISELSBERG (Wien) discussed various operations which have been proposed for closing defects of the palate. His results after the operations which are in general use have not been encouraging, a defect frequently remaining. To overcome the difficulties in some unusually bad cases v. Eiselsberg has resorted to some very ingenious procedures, which he illustrated by means of drawings and photographs. In one case he dissected up a flap of skin and muscle from the forearm, skingrafted the raw surface of it and after the graft had taken well he freshened the edges of the graft and the defect and sutured the tongue of tissue into place so as to close the palate. In another case he made use of part of the vomer and inferior turbinate bones to partly close a bad defect. In a case of saddle nose with defect of the palate he freshened the left little finger and sutured it into place so as to close the defect and support the nose. The results in these cases were brilliantly successful.

Discussion.—WOLFF (Berlin) believes that while such extensive operations may occasionally be helpful they are unnecessary. He advocates operation in 2 stages: first dissecting up the flaps and chiseling off the pterygoid bone, as suggested by Billroth. Then after better circulation in the flaps has been established the flaps are sutured.

v. EISELSBERG believes that in spite of operation in 2 stages many defects will be left.

CZERNY (Heidelberg) completes the operation at 1 sitting; he operates with the head of the patient hanging over the end of the table, uses silver or silkwormgut sutures, often chisels the pterygoid bone free and has fistulas remaining in about a fourth of his cases.

Resection of the Elbow for Ankylosis: WOLFF (Berlin) showed a patient who had a very useful strong elbow after resection. Skiagraphs showed the partial formation of new joint surfaces through the callus thrown out, but as the head of the radius lacked support it projected almost through the skin.

Discussion.—v. EISELSBERG mentioned a case in which he operated for double ankylosis of the elbow following scarlet fever. On one side he obtained a movable joint; on the other side the callus caused ankylosis but at a right angle so that a useful arm resulted.

SCHIEDE (Bonn) reported successful resection of the elbow for ankylosis following typhoid fever.

KOCHER (Bern) after resection, sometimes leaves the bones in a dislocated position until connective tissue has formed over the fresh ends of the bone, then places the bones in corrected position and begins passive motion early. This prevents bony ankylosis and gives a freely movable joint.

Treatment of Ankylosis of the Patella: CRAMER (Wiesbaden) reported a case in which he freed an ankylosed patella and interposed a flap of muscle as suggested by Helferich to prevent recurrence of bony ankylosis.

The Treatment of Fractured Patella: WOLFF (Berlin) presented a patient upon whom he had operated for fractured patella, using a modified form of Malgaigne's hook with poor result. He then resorted to Helferich's osteoplastic method. The patient walked with a decided limp and did not ascend stairs readily. In spite of this Wolff considered the result unusually good.

A member of the association whose patella had been broken 15 years previously and who had been treated without complicated apparatus or osteoplastic operation, demonstrated to the society by running rapidly up the stairs that even by simpler means good functional results may be obtained.

Amputation Stumps: BUNGE (Königsberg) discussed the causes of painful stumps. While unwilling to state definitely that bone-marrow is sensitive he believes that it is certain that medullary callus is very sensitive and may become very painful. To prevent the formation of this painful medullary callus

he advises scooping out the bone-marrow for a distance of about 3 cm. from the end of the bone. Another sensitive tissue is the periosteum and this should also be removed from the lower end of the bone. If the skin becomes adherent to the bone it may give rise to pain, hence large skin flaps should be made which should not be allowed to come in contact with the bone. Bunge showed a boy whose leg he had amputated some months previously, removing the marrow and periosteum carefully from near the end of the tibia but not from the fibula. The tibia was not in the least painful on pressure but the boy winced when pressure was made over the end of the fibula.

Discussion.—BIER (Greifswald) while recognizing the value of Bunge's experiments, believes that in most cases his method of using the osteoplastic flap to cover the end of the bone gives a natural bony limit, and should be preferred. The osteoplastic flap method is not suitable for use in case infection is present, however, and considerably more time is required to amputate in this way than by the usual method.

The Parasite of Carcinoma: NILS SJORRING (Lund, Sweden; a guest) has found in carcinomatous tumors small protozoan-like bodies with amoeboid movements. In stained preparations, concentric layers can be seen. By injecting these bodies into white mice he was able to produce epithelial-celled tumors exactly resembling carcinoma in structure. Microscopic preparations were demonstrated.

Discussion.—ISRAEL (Berlin) considered the bodies seen only bits of tissue, such as may be seen in improperly prepared sterile media, with nothing that could be certainly called protozoa.

GUSSENBAUER (Vienna) stated that he had seen these bodies years previously, but had never considered them of any importance.

JÜRGENS (Berlin) said that Sjørborg had demonstrated these bodies at Aix-la-Chapelle as the cause of sarcoma. He did not consider them of any importance.

A New Method of Reducing Luxations: HOFMEISTER (Tübingen) mentioned Stimson's method of reducing luxations by means of continuous traction with weights, and showed a somewhat complicated system of pulleys and weights which he uses to accomplish the same results as are obtainable by Stimson's simple sand bags and bandage.

Operations for Habitual Dislocations and Old Dislocations: HILDEBRAND (Basel) reported reducing an old dislocation of the jaw by prying and pushing the condyle of the jaw into place, after dividing the zygoma, and without the necessity for opening the joint. In a case of habitual dislocation of the shoulder he found the edge of the glenoid cavity broken off; after forming a new cavity, there was no further trouble.

Bloody Reposition of Old Dislocations of the Hip in Adults: PAYR (Graz) uses Kocher's incision; he avoids chiseling off the insertion of muscles as far as possible, adopting Mikulicz suggestion to chisel off the trochanters only in cases with slight shortening. The operation is a severe one and the greatest care in asepsis is demanded, particularly after the tissues have been injured by violent attempts to reduce the dislocation without operation. A heavy curved bladed knife was shown which is used in scooping connective tissue out of the acetabulum; a very large elevatorium which is used in breaking up adhesions and a powerful lever for prying the head of the femur into place. After the dislocation is reduced and the wound closed, extension or a plaster-of-paris fixation bandage is applied. At the end of the third week passive motion is begun. In cases of traumatic origin recurrence is not to be feared. Payr has operated in 5 cases; 3 traumatic and 2 pathologic; 1 patient died; 1 recovered with a perfectly stiff joint; there was a limited amount of motion in 1 case and almost normal motion in 2 other cases.

Discussion.—SCHEDE (Bonn) operated in one case of double traumatic dislocation of the hip. He found it necessary to separate all muscle attachments in order to get rid of their contraction which was preventing reduction.

DREHMANN (Breslau) considers chiseling of the trochanters a measure of the greatest importance and has never had difficulty in uniting them with the shaft afterward.

Resection of the Entire Humerus: ROTER (Berlin) presented a patient whose entire humerus he had removed by disarticulation at the elbow and shoulder, thus saving a useful forearm. He dissected out the main nerves and vessels except the musculospiral nerve, 20 cm. of which he was obliged to resect because of its close connection with the bone. These were saved together with the skin and subcutaneous tissue. The forearm was attached to the shoulder by suturing what remained of the capsules of the elbow and shoulder joints. The musculo-spiral nerve had completely regained its function 9 months after the operation. Before the operation the growth was thought to be a sarcoma but it proved to be an osteofibroma; the specimen was shown. It included the entire arm except the skin, main nerves and vessels. The patient showed her perfect ability to use her forearm and hand.

KATZENSTEIN (Berlin) showed 2 patients suffering from spina bifida occulta. In both cases the lumbar region was affected. A young man had paralysis, atrophy and outward rotation of the right leg. A boy of 17 had severe sensory and trophic disturbances of both lower extremities. The symptoms appeared late in both cases (at 11 years old and 15 years old, respectively), probably because in some way, as the

patients developed the dura, water made traction on the spinal cord.

Contractures Resulting from Kneejoint Inflammation: HEUSNER (Barmen) presented 2 patients. In the case of one of these he divided all tendons and transplanted the biceps tendon, suturing it to the patella. The contracture in flexion was relieved, but later bowlegs developed, Heusner believed, because of the tendency of the biceps to produce outward rotation as well as extension. In the second case he transplanted the biceps tendon to the outer side of the patella and the semitendinosus to the inner side of the patella, with a perfectly satisfactory result.

Multiple Cirroid Angioma of the Sole of the Foot: STEINER (Berlin) presented a young woman from whose foot he had removed this newgrowth. The tumor appeared when she was a child, and for 3 years it was treated with compression, and no increase in size was noted. Rupture of one of the vessels then occurred, necessitating excision of the tumor. A flap of skin and subcutaneous fat was turned down into the sole from the back of the foot, and the defect was covered by skin-grafting.

Coxa Valga: REICHARD (Magdeburg) presented a patient in whose case he considered this diagnosis certain, because of the low position of the trochanter, which was 12 cm. below Nélaton's line.

LEVY-DORN (Berlin) demonstrated apparatus for protecting the hands of the operator while using the x-ray apparatus.

Discussion.—HOFFA (Würzburg) considered Reichard's case not one of coxa valga, but of infantile paralysis.

Congenital Dislocation of the Hip: JOACHIMSTHAL (Berlin) demonstrated 5 specimens of congenitally dislocated hips, 2 of them double sided. In all the specimens the acetabulum was present, but it was smaller and flatter than normal, and triangular in form. On 3 of the peloes a new cavity for the head of the bone had been formed externally and above the acetabulum. The head and entire upper end of the femur was atrophied in all cases, and the head flattened. The angle of the neck to the shaft was that of coxa vara. Joachimsthal then presented several patients whose congenital luxations he had reduced some time previously without operation, and showed the corresponding skiagraphs of the joints. The results were excellent.

Extirpation of the Pancreas for Carcinoma: FRANKE (Braunschweig.) Resection of the pylorus was performed in the case of a woman of 65 for a benign growth causing stenosis. A year later a tumor was felt and on opening the abdomen the pancreas was found to be affected. The disease was limited to the head but the entire gland was removed, the operation being accompanied with much difficulty because of the injury of the great vessels. Sugar first appeared in the urine 18 days later, the amount reaching 3%, but the stools were not fatty, there was no diarrhea or other symptoms. The patient died 6 months later and at the necropsy extensive metastases in the mesenteric glands were found. A second case was reported in which only partial removal was possible, the tumor being adherent to the vena cava. The patient recovered from the operation but died of volvulus later. In a third case exploratory laparotomy was performed but the operation was not carried further because metastases were present in the liver. The first symptoms of carcinoma of the pancreas is severe abdominal pain; cachexia develops rapidly; gastrointestinal disturbances are not important, nor is icterus which was formerly supposed to be one of the earliest symptoms. Early diagnosis is extremely important. If general practitioners would send their cases early, radical operation would be possible. In no case has death resulted from the operation itself. In doubtful cases exploratory celiotomy is justifiable.

Discussion.—KORTE (Berlin) mentioned a case which was accompanied by stasis of the bile and cholecystitis. The tumor was encapsulated, but the hemorrhage at removal was severe and the patient succumbed a short time after operation. A case was also reported in which the patient died of diabetic coma. At the necropsy most of the creas was found healthy only the tail being diseased.

HILDEBRAND (Basel) inquired whether it was certain that the entire organ had been removed in Franke's case. Franke replied that the entire organ was removed and no trace of a supplementary pancreas was found after careful search.

A Fetal Inclusion in the Mesocolon: AHRENS (Bonn) reported the case of a girl who from childhood had a distended abdomen. When she was 8 years old this disappeared and the cause was thought to have been rickets. When she was 16 years old, however, the tumor appeared again in the left side and reached the size of a man's head. Hydronephrosis was suspected and a lumbar incision was made, and a tumor discovered in the folds of the mesocolon. On puncture, brownish fluid escaped; the entire amount was found to be 4 liters. The kidney was perfectly normal. After removal, a Mikulicz tampon was inserted, and in 3 weeks the patient was well. Examination of the specimen proved it to be a secondary stomach of hour-glass form, 26 cm. long and with a well-developed cardia and pylorus. Histologic study of sections of the wall showed that it had the structure of the stomach; pepsin could be demonstrated. In the mucous membrane were several ulcers, and hemorrhage from these was evidently the source of the fluid contents of the tumor.

The Pathogenesis and Treatment of Keloids: GOLDMANN (Freiburg i. B.) has found in studying these newgrowths that there is an absence in them of the elastic tissue-fibers of the skin. He compares keloids with aneurysms which arise from loss of the elastic coat of the arteries. Contrary to general belief he has also found medullated nerve-fibers in these tumors. In the treatment he advises excision and closure of the defect by transplantation.

A Method of Closing the Intestine: RINDFLEISCH (Stendal) in his title refers to his method of closure of the intestine without suture. What he really did in a case of gangrenous hernia was to invaginate the gangrenous intestine and suture the serosa.

The Surgical Treatment of Acute Appendicitis: REHN (Frankfurt a/M.) Quite contrary to the views of most members of the Congress, as expressed at previous meetings, Rehn has found himself driven by experience to resort more and more frequently to early operation in appendicitis, and by so doing he has decidedly reduced his mortality. There is an almost universal fear of opening the abdomen, but had his cases been treated in this way the mortality would have been enormous. In most difficult cases Rehn has performed transperitoneal operation 180 times; 134 patients recovered, 46 died. In 35 cases there was a bad peritonitis. The worst cases are accompanied by subphrenic abscess, and from this cause alone 27 patients died. There were no deaths in 24 operations undertaken before suppuration had occurred. Out of 33 cases with acute gangrene there were 22 recoveries. Rehn does not believe in waiting for operation in the interval, but operates immediately and considers it less dangerous than to wait. We should have less fear of peritonitis arising from infection at the operation in these cases. The presence of bacteria alone by no means makes it certain that there will be peritonitis. Much depends on the variety of organism, its virulence in the particular case and the number of organisms present. In operating, Rehn advises a free incision, opening directly into the peritoneal cavity, walling off with gauze, resection of the appendix and intestinal suture, free flushing with salt solution and suture of the abdominal incision with drainage. Opium should be used with great caution, as it obscures the clinical picture. The factor of greatest importance is that the favorable movement for operation be not allowed to pass.

The Treatment of Appendicitis: ROTTER (Berlin) lays great stress on the importance of opening Douglass pouch, not by the transperitoneal route but through the rectum or vagina. He does not share Rehn's beliefs as to the tolerance of the peritonium. He divides his cases into 2 groups: of 530 cases recently under his observation only 196 were operated upon and of this number 109 had diffuse peritonitis; his mortality rate was 19%. In an earlier series of 213 cases, 55 were operated upon; 26 had diffuse peritonitis; in this series the mortality rate was 31%. Of the patients upon whom he operated by the transperitoneal method 3 died. In 61 cases in which the abscess was opened from below the mortality rate was only 10%.

Early Operation in Acute Appendicitis: SPRENGEL (Braunschweig) entirely agreed with Rehn in his views as to the necessity for early operation in appendicitis. He mentioned the case of a patient whom he was treating expectantly and who died very suddenly from perforation. Study of this case seemed to indicate that early operation would have saved the patient. This led Sprengel to consider whether it would not be better to operate early in all cases, for the severest symptoms may appear suddenly in any case in a few hours. At present if allowed to choose, Sprengel always operates within the first 24 hours.

The Treatment of Acute Appendicitis: RIESE (Britz) recommended Doyen's method of treating the stump by ligating the base, resecting, inverting into the cecum and burying the sutures. (This method was advocated and used by Dabarn, of New York, at least 5 years before it was described by Doyen.)

Discussion.—BAUMGÄRTNER (Baden-Baden) advises vaginal examination of women suspected with having appendicitis and believes that oöphoritis will often be found instead of appendicitis.

HIRSCHBERG (Frankfurt a/M.) believes that Rehn's method of transperitoneal operation is adapted only for the treatment of cases in large city hospitals.

KÜMMEL (Hamburg) does not agree with Rehn and Sprengel, but prefers conservative treatment in appendicitis. In 1,042 cases treated in the Hamburg-Eppendorf Hospital there has been a mortality of but 1.6%.

RIEDEL (Jena) had collected from general practitioners, statistics of 1,000 cases and the finds that in 50% of the cases the patients come to the surgeons sooner or later. Riedel now advocates operation within the first 24 hours and considers the dangers of such early operation very slight.

KORTE (Berlin) believed that it is extremely difficult to determine in just what cases early operation is necessary and was inclined to favor conservative measures.

SPRENGEL prefers to operate in some cases in which operation is not of urgent importance, rather than to take the risk of waiting.

REHN thought that Rotter in his statistics had confused encapsulated abscesses with diffuse peritonitis.

AMERICAN THERAPEUTIC SOCIETY.

ANNUAL MEETING HELD AT WASHINGTON, D. C., MAY 7, 8
AND 9, 1901.

[Specially reported for AMERICAN MEDICINE.]

The Progress of Therapeutics.—Dr. REYNOLD W. WILCOX, New York, delivered the presidential address (the president, Dr. HORATIO C. WOOD, Philadelphia, being absent through illness). The paper will appear in a future number of AMERICAN MEDICINE.

The first paper on the program was read by Dr. FRANCIS P. MORGAN, Washington, and consisted of **Suggestions Concerning the Use of the Metric System in Prescription Writing.**

The Chairman reported that the new pharmacopeia would give the average doses for adults expressed in the metric system with the approximate equivalent expressed in the old system enclosed in brackets. He added that the work of the Revision Committee was rapidly approaching completion, a practical agreement having been come to as to the substances that were to be removed from the list and also as to the claims of the large number proposed for admission—the restrictions imposed by the convention being always borne in mind.

Proposed Bureau of Materia Medica and Therapeutics.—Dr. F. E. STEWART, New York, read a paper on the **Relation of the Pharmacist to the Physician and the Relation of Pharmacy to Materia Medica and Drug Therapeutics**, which will appear in a future issue of AMERICAN MEDICINE. A resolution submitted by Dr. Stewart was referred to the Judicial Committee, on whose recommendation a special committee was afterwards appointed to consider and report upon the proposal to establish such a bureau as was advocated in the paper.

A paper on the **Inertness of Petroleum Compounds when Given Medicinally** was read by Dr. ROBERT REYBURN (Washington). The paper, with the accompanying discussion, will appear in a future issue of AMERICAN MEDICINE.

Heart Disease Therapeutics: Dr. THOMAS E. SATTERTHWAITE (New York) introduced the consideration of this subject by reading a paper on the **Therapeutics of Chronic Heart Diseases and Their Complications.** He remarked that, notwithstanding all the recent advances in cardiac therapeutics (and the changes of the last 10 years had been revolutionary), physicians who gave particular attention to these diseases were less and less disposed to cry up special remedies for special affections. This was particularly true in regard to valvular diseases, where they now attached less importance to abnormal sounds and more to the attendant phenomena, and especially to the character of the lesions behind the sounds. The gravity of a lesion was not always measured by the intensity of the murmur. A loud and harsh murmur was not incompatible with an average length of life, whereas a valve might be almost occluded, as in mitral stenosis, without giving any recognizable auscultatory sign. With the best opportunities and the largest experience, one might not always be able to distinguish between a functional and an organic murmur. Single valve lesions were the exception rather than the rule, and there were frequently complications which made it additionally difficult to make a diagnosis from auscultatory signs alone. Summing up the changes that had recently taken place in treatment, he said that the idea of complete rest had been superseded by rest alternating with bodily activity; venesection had given place to determination of the blood to the surface by means of resistant exercises and carbonated baths; hydrogog cathartics had been replaced by stomachics and mild laxatives and diuretics, and heart stimulants by general nerve stimulants, or sedatives, alteratives and nutrients, while drugs of the digitalis group were utilized chiefly for their diuretic action in renal complications, mainly parenchymatous, nephritis or abdominal dropsy. Drugs of the digitalis group, including strophanthus, convallaria and adonis, were always uncertain and therefore always dangerous, and should only be employed either when other remedies were inadmissible, or in liver or kidney complications for brief periods, or where nothing more was possible than a short prolongation of life.

Discussion.—Dr. SOLOMON said he thought digitalis should be still recognized as occupying a position in the front rank in the treatment of chronic heart disease, and as to the complaints about the uncertainty of its action, he said that there were certain preparations on the market which had been so tested as to be thoroughly reliable. The question of the standardization of drugs was important in this connection.

Dr. E. M. HOUGHTON, Detroit, said the effect of some physiologic tests he had been making was to upset the commonly accepted idea that drugs of the digitalis group tended to produce gastrointestinal irritation. His experiments were still in progress; when they were completed he would be prepared to report on them in detail.

Dr. J. N. HALL, Denver, reported 2 cases of **Aneurysm Successfully Treated by Wiring and Electrolysis**, and a paper by Dr. ELI H. LONG, Buffalo, on **Principles of Cardiac Therapeutics in Recent Valvular Disease**, was read by the secretary, the author being unable to be present.

A practical demonstration of the **Therapeutic Value of Hypnotism** was given by Dr. FRANCIS H. MINER, Washing-

ton, the subject upon whom he operated being a boy of 17, who had been a typical cigaret fiend, but who had been cured by means of suggestion under hypnotic influence. Replying to Dr. Solomon, Dr. Miner said that until the public was educated on the subject, hypnotism could not be used without endangering the doctor's reputation. Dr. Solomon reported some interesting experiences of his own in hypnotism, and Dr. T. L. COLEY, of Philadelphia, and the chairman (Dr. WILCOX) discussed the modifications of view which had taken place on the part of the eminent French neurologist, Charcot. Dr. Wilcox added that he would never hypnotize patients, first because of the peculiar reputation it gave a doctor, and secondly several patients who had come under his observation after being hypnotized had shown vitiated will power. Dr. MINER asked whether the chairman thought this was the result of the hypnotism or that the will power had never existed. Dr. Wilcox admitted that the will power probably never existed to any extent.

Trade and Scientific Names of Drugs: Dr. A. C. BARNES called attention to the fact that the next 2 papers on the program referred to drugs which were spoken of under their trade names, namely chloreton and heroin. While not desiring to interfere with the reading of these papers, which stood in the names of 2 able and competent men, he said it would be more consistent with the aims and objects of the society if the drugs were given their scientific nomenclature. The meeting concurring in this view of the matter, Dr. E. M. HOUGHTON, Detroit, who read the paper on chloreton, spoke of it as **aceton-chloroform** or **trichlor-tertiary-butyl alcohol**. After describing the chemical process by which the product was made, he quoted a variety of reports showing its usefulness as a hypnotic, local anesthesia, antiseptic and analgesic. Dr. Barnes said that as it was evident that chloreton was a drug that had come to stay and was destined to cover a wide field of usefulness, it could not be too generally made known to the profession. There were reasons why it should have the distinctive name of chloreton, and therefore he thought the society should take action on a suggestion previously made by Dr. Stewart and request the manufacturers of the drug to donate the name to science. The chairman said this was a matter that might properly be referred to the Judicial Committee, which was accordingly done. The author of the paper on **Heroin**, Dr. SMITH ELY JELLIFFE, New York, not being present, the paper was not read.

A paper demonstrating the **Therapeutic Value of Alcohol** was read by Dr. SOLOMON, Louisville.

New Office-Bearers.—The election of office-bearers resulted as follows: President, Dr. Reynold W. Wilcox, New York; first vice-president, Dr. Howard H. Barker, Washington; second vice-president, Dr. Thomas E. Satterthwaite, New York; third vice-president, Dr. Leon L. Solomon, Louisville; secretary, Dr. Noble P. Barnes, Washington; recorder, Dr. William M. Sprigg, Washington; treasurer, Dr. John S. McLain, Washington; curator, Dr. George C. Ober, Washington. It was agreed to hold the next annual meeting in New York on the second Tuesday in May and 2 following days.

XIX GERMAN MEDICAL CONGRESS.*

HELD AT BERLIN, APRIL 16, 17, 18 AND 19, 1901.

[Continued from page 213.]

THIRD SESSION.

The Recuperative Power of the Heart as Measure of Its Ability: MENDELSON (Berlin) observed the effect of various amounts of work on the frequency of the pulse. He found in health that (1) in the case of moderate exertion, the slightly increased rate returns at once to normal when the work ceases; (2) after greater exertion (reckoned as 200 to 500 kilogrammeters) the pulse-frequency falls, returning to normal during the next 2 to 3 minutes; (3) still greater exertion is followed by increased pulse-rate which, either directly, or after a period of diminished frequency, returns to normal. Mendelson explains the slowing of the pulse as an expression of the inability of the heart during the normal diastole to cover the increased metabolism during systole. All hearts show these 3 stages, depending on the relation between anabolism during diastole and catabolism during systole, and the wider the limits of the stages the greater the functional ability of the heart. In hearts, lesions which clinically seem well compensated the amount of work which the heart can do, and during diastole cover the expenditure of systole may be very little.

Discussion.—KRAUS (Graz) emphasized the complexity of the question, and denied that return to the previous pulse-rate need necessarily mean a return to a similar condition of metabolism.

BAELTZ (Tokio) maintained that the proof of complete recuperation after a certain effort was ability to repeat the work without further injury to the heart. He cited the case of the Japanese runners, who will cover 60 to 70 miles in a day, end-

*Specially reported for AMERICAN MEDICINE by Dr. Chas. P. Emerson with grateful acknowledgment of indebtedness to Prof. Ewald, editor of the *Berliner Klinische Wochenschrift*, for his assistance in the preparation of this report.

ing with normal pulse, and able to repeat the exertion on the following day.

Artificially Produced Hyperemia as a Therapeutic Measure: RIER (Greifswald) (read by special invitation) employs hyperemia in the treatment of many inflammatory conditions. In the case of a diseased joint he loosely applies a tourniquet above the joint to hinder venous circulation, and tightly bandages the limb below the joint. In the case of the arm the bandage begins at the tip of the fingers (each having a separate bandage). The inflamed area is left uncovered between the tourniquet and bandage. There must be a "hot congestion" produced. The joint must feel hot and be of a red or bluish-red color. Never should the compression be enough to produce a "cold congestion" of bluish color. The white (lymph) congestion is dangerous. If pain is not at once diminished there has been some error in the application of the method. He advised this procedure in tuberculosis of the joints (in which case he does not claim it will render an operation unnecessary). He has obtained good results in gonorrheal joints and in acute articular rheumatism; also in pyemic joints and in erysipelas, but no results in lues or carcinoma of joints. The results were particularly good in subacute gonorrheal rheumatism.

BIER ascribes the beneficial action of this treatment to several factors. (1) It raises the bactericidal power of the tissues. Animal experiments showed that of 69 animals so treated and then inoculated with otherwise fatal doses of anthrax cultures, 51 recovered. (2) Venous stasis is conducive to connective tissue, perforation and formation of scar tissue, which may be important by encapsulating infected areas. (3) It aids in resolving exudates, best seen in chronic articular rheumatism. Since the absorption is hindered (proven by the delay of a tuberculin reaction tested on the treated limb) BIER recommends combining the treatment with massage, the bandage being removed once or twice a day and the joint massaged. In the case of chronic rheumatism thus treated pain and stiffness rapidly disappear.

Active Hyperemia was also recommended, produced by heat, especially hot air. The limb should be heated by as hot air as can be endured for 2 hours daily. In this case BIER gave reasons to show that it is not the heat but the hyperemia resulting which does the good. Like the passive hyperemia, the active aids in resolution in all chronic joint troubles, and quiets pain, but unlike the former it promotes absorption as experiments showed, hence it is to be recommended in many cases as superior to massage where there is blood or other exudate present, and is especially good to remove edema. The bactericidal action of the active hyperemia is very doubtful. Hot air is excellent in neuralgia, and in still other conditions. Neither active nor passive hyperemia improved the nutrition of atrophic limbs.

Discussion.—MÜLLER (Würzburg) reported his examinations of the blood of limbs thus treated. Hyperemia (artificial) increases the count of the red cells, even to 6,000,000 per cmm., and the Hb in proportion, while the serum diminishes, since it is pressed into the lymph spaces. Among the chemical changes are diminution of O, increase of CO₂ and an interchange of sodium and potassium salts between serum and corpuscles, probably one also of organic constituents which may explain the beneficial results. In answer to a question Bier replied that in a case of chronic articular rheumatism he had employed the treatment steadily for 4 years.

Paroxysmal Arrhythmia: Hoffmann (Düsseldorf) considers these attacks of paroxysmal cardiac arrhythmia (tachycardia) which have sudden onset and abrupt termination and which last a few hours or days, as very different from the continuous arrhythmia seen in myocarditis. The analysis of the pulse curve and auscultation show the cause is the insertion of extra systoles in the rhythm and the speaker gave evidence from experiments on frogs' hearts to show that these extra beats originated at the venous ostia. By short electrical stimulation of the large veins of the frog's heart resulted similar attacks during which the frequency of contraction was just doubled.

Discussion.—GERHARDT (Strassburg) by registering venous pulse on men confirmed Hering's results; as in the pulsus bigeminus the auricle may beat before, with or after the ventricle.

The Effect of External Stimulation on the Deeper Vessels: HINTZ (Erlanger) found that heat or cold applied to the skin of the chest can change the temperature of the pleura several degrees. Chemical stimuli, iodine, alcohol, mustard, produce pleural hyperemia which can raise the temperature there through a few tenths of 1 degree. Hintz measured the temperature by thermoelectrical apparatus.

The Value of Iodine as a Vasomotor Drug: GUMPRECHT (Weimar). Experiments on rabbits showed that iodine had no effect on the heart nor vessels, unless in large doses when it acted as a poison. Observations on men by means of the Riva-Rocci apparatus were also negative, especially in arterial sclerosis. The speaker, therefore, was inclined to doubt its much praised clinical value.

Discussion.—ASHER (Bern) cited Barbera's experiments showing that iodine had some action on the heart through its accelerator and depressor nerves. HINTZ (Erlanger) called attention to the increased permeability of the vessels following its use.

B. LEWY (Berlin) claimed its value (after long use) in arrhythmia of the heart was well established.

Intestinal Fermentation.—Dyspepsia: STRASSRUOER (Bonn) reported further work done by SCHMIDT and himself using the former's (Schmidt's) fermentation test for proving the functional ability of the intestine. They believe that on a standard light test diet there will normally be no carbohydrates in the feces. The detection of these by the fermentation test is evidence of disturbed intestinal digestion.

They describe a new symptom complex to which they give the name Fermentation Dyspepsia (Gährungs dyspepsie), whose only objective symptom is the character of the stools which always give the fermentation test. The feces are yellow, frothy, very acid, and smell of butyric acid; mucus is usually absent, bile often. Subjectively there are "dyspeptic" disturbances and pain in the region of the umbilicus. In such cases the metabolism experiments showed diminished digestion and absorption of the food, especially of the carbohydrates, as their charts already showed.

Discussion.—EWALD (Berlin) considered the fermentation test untrustworthy. He thought the microscopic examination of the feces gave more information concerning both starch and albumin digestion. ROSENHEIM (Berlin) doubted that the figures on the charts exhibited were striking enough to be of diagnostic importance. He thought milk should be omitted from the Schmidt standard diet since it is so poorly digested by many persons.

The Fat-splitting Ferment of the Stomach: VOLHARD (Giessen) was able to demonstrate the presence of a fat-splitting ferment in the stomach. This may be extracted by glycerin from the finely chopped gastric mucosa of the pig's stomach. It is found only in the fundus mucosa, none in that of the pyloric region. Its independence of bacteria may be demonstrated. Its action depends more on the condition of the fat, *i. e.*, whether emulsified or not, than on its nature. Since the acid gastric juice prevents emulsification the sphere of action of this ferment is limited to the previously emulsified fat of the food. The action of the ferment does not vary proportionally to the time allowed, nor to the amount of fat present; its action is always incomplete, the maximum in the case of yolk of egg being 60-70% of the entire amount.

Discussion.—ELLINGER (Königsberg) confirmed Volhard's statements.

ALBU (Berlin) mentioned the fact that in motor disturbances of the stomach more fat acid is present after a given period of digestion of milk than in a normal stomach, and suggested that in such cases the conditions for fat-splitting were more favorable.

BIAL (Kissingen) and NAUNYN (Strassburg) also took part.

The Reason for the Failure of Free Hydrochloric Acid in Carcinoma of the Stomach: REISSNER (Nauheim) found that the amount of HCl of the gastric juice during health and disease after a test breakfast ran parallel to the total Cl. The one exception to this rule is cancer of the stomach in which case there is an increase in the fixed chlorides which is indicative, when present, of ulceration. The ulceration causes neutralization of the secreted HCl as well as diminution of the secretion.

Leukocytosis in Clinical and Experimental Hydrophobia: COURMONT (Lyon) reported the first observation on the leukocytosis in hydrophobia of man, dogs, rabbits and guinea-pigs. There is an increase of the polymorphous nuclear neutrophils from the very first. Their percentage may reach even 95. This continues till the death. He considers the diagnosis should never be made if the leukocytosis fails.

The Serum Diagnosis of Tuberculosis: COURMONT (Lyon) explained that the reason why the agglutination test for the diagnosis of tuberculosis had in Germany fallen into disrepute as untrustworthy, was because it is necessary to test repeatedly the pathogenicity of the cultures of tubercle bacilli to be sure they are still suitable for use, since the success of the test depends on the virulence of the culture. Observing this precaution the results obtained at Lyons justified the claims previously made for the method by Arloing. In a long series of observations made of animals at the Lyons slaughter houses the diagnosis was confirmed in all but one case. BENDIX (Berlin) agreed with the speaker as to the accuracy of the results if a virulent culture be used.

The Extent of Starch Digestion in the Mouth and Stomach of Man: MÜLLER (Würzburg) ascribes to the ptyalin of the saliva a much more extensive action than has hitherto been considered the case. He reported the experiments made in conjunction with 2 other observers (Hensay and Daicher) from which they concluded that the action of the saliva is not inferior in extent to that of the pancreatic juice. After a meal of bread from 60-80%, even 100% of the starch is rendered soluble in the very brief space of 5-10 minutes. Although the maximum of amylolytic action occurs in subacidity, yet the rapidity with which it takes place renders it to a great extent unaffected by the HCl even in cases of hyperacidity. The end product is chiefly dextrose, hence fermentation does not as a rule occur in the stomach. Müller spoke also of the importance this rapid action of saliva upon the starch has for the motility of the stomach, the digestion of vegetable proteids.

Discussion.—MOUTZ (Munich) agreed with Müller concerning the gastric starch digestion with hyperacidity. The HCl

Inhibits starch digestion only when there is insufficient albumin present to bind it (the HCl).

VOLHARD (Giessen) confirmed Müller's results by a series of quantitative determinations on the extent of gastric starch digestion, and agreed concerning the importance for starch digestion of the formation of bound HCl.

FOURTH SESSION.

Demonstration of a Preparation of "Idiopathic" Dilation of the Esophagus: STRAUSS (Berlin) demonstrated a preparation from a 29-year-old patient. In the lower part of the esophagus was a sac-like dilation, 30 cm. long and 15 cm. in breadth. There was no anatomic stenosis; the patient suffered also from gastrica aepsia and motor insufficiency. Strauss discussed at length the theories advanced to explain such cases, and suggested the importance of postfetal faulty development. He also emphasized the importance of lesions of the mucosa of the esophagus in producing spasm of the cardiac orifice. Strauss also demonstrated instruments of value in the diagnosis and treatment of malformations of the esophagus.

Demonstration of Multiple Periostitis: v. JAKSEH (Prag). This was a very interesting case of multiple periostitis associated with a condition of the blood strongly suggesting leukemia. The patient was a young girl. Skiagraphs were shown to prove that the process on the bones had in part healed during the course of the disease. During the development of the disease the bone-changes were accompanied by a steady increase of mononuclear neutrophilic leukocytes (v. Jakseh did not use the term "myelocyte" in describing or referring to these cells) and a decrease in the polymorphonuclear leukocytes. Toward the end there were many nucleated reds, 400 per e. m. m., and many red cells showing polychromatophilic degeneration present, while the eosinophiles increased from 600 to 1,000 per e. m. m. The patient died from the anemia. At the necropsy were found splenic tumor and leukemic degeneration of the bone-marrow. The case is interesting from the point of view of diagnosis, since the development of the nodes ran parallel with the blood changes. It is desirable that in cases of leukemia the bones be examined for nodes by the x-rays method, and that the blood be examined in all cases of periostitis. The case presented may represent a new type of leukemia.

Demonstration of a Case of Diaphragmatic Hernia: STRUPPLER (Munich). The first symptoms followed 3 months after a trauma which the patient, a young man, received 6½ years ago, and consisted of discomfort in the chest after eating. The diagnosis should be made from the physical signs and the skiagraphs. The stomach, surrounded by omentum and intestine, is evidently located in the center of the left half of the thorax, reaching to the middle of the scapula.

Demonstration of a case of Diaphragmatic Hernia: HIRSCH (Leipzig). This case was very similar to that reported above. In these cases the skiagraphs, showing the position in the chest of a stomach tube filled with mercury, were of particular interest. In this case it reached the third rib.

Demonstration of an Apparatus for Measuring Blood Pressure. FRANCKE (Munich). This apparatus consisted of an arm rest which held the wrist quite fixed, and a pad which could be pressed down against the radial artery until a pulse indicator just beyond it showed the pulsations to be obliterated. The pressure exerted by the pad could then be read off in mms. of mercury.

Syphilis of the Lung. HAUSEMANN (Berlin) presented preparations from 3 cases which he considered showed the lesions of lues of the lung. He spoke of the difficulties in the way of making such a diagnosis which he believes can be safely made if the following conditions are satisfied; unmistakable luetic lesions of other organs, and fresh gumma-like masses in the lung in which tubercle bacilli cannot be demonstrated, either microscopically or by inoculation of animals. In 1 case the nodules (gummata) were present on the pleura. He showed specimens demonstrating the later history of the gumma in which stages it presents nothing characteristic. He considered that certain specimens showed the coexisting lesions of lues and tuberculous. (The specimens from the 3 first mentioned cases contained many tubercular nodules, many of which were caseous, some 1 cm. in diameter, round and isolated. The gross lung showed on brief inspection no marked newgrowth of connective tissue.) [This communication was received with considerable applause.]

A Method of Determining the Exact Size and Position of a Foreign Body by Means of the X-rays: LEVY-DORN (Berlin). This method is claimed to allow the correct representation to be made on the skin of a foreign body, or of the position of the internal organs by vertical projection of the shadows. The apparatus was exhibited.

A Case of Giant Cell Degeneration of the Hematopoietic Organs with Unusual Blood Conditions: MICHAELIS (Berlin). The case was that of a woman 50 years of age who was admitted to the hospital 10 weeks after an attack of influenza. The patient was cachectic although well nourished. The spleen was much enlarged, lymph glands not palpable. Blood examination: Leukocytes 1:220 of the reds; 75% lympho-

cytes, 7% neutrophile myelocytes; a few nucleated reds found early, none later. There was no hemorrhagic diathesis. At the necropsy the spleen was enormous and soft, lymph-glands not enlarged. Bone-marrow red, not soft, no other bone changes. Microscopically the bone-marrow contained an increased number of giant cells, which were also abundant in the lymph-glands, blood, spleen and liver. The latter 2 organs showed also some small round cell infiltration. Michaelis considered the diffuse disease of the bone-marrow as primary.

The Spread of Epidemic Cerebrospinal Meningitis: JÄGER (Königsberg i. Pr., who is high in rank as a military medical official), reported a recent epidemic of this disease in the German army. He emphasized the importance of the disease and the methods of its diagnosis. He considered certain of the North American States, New York and Massachusetts especially, as the foci where the disease is epidemic, that the United States bears the same relation to this disease that India does to cholera, and that it is to the United States that Germany owes her epidemics of meningitis.

FIFTH SESSION.

Intermittent Hepatic Fever on Urea Formation: MÜNZER (Prag) follows Charcot in considering *fièvre intermittente hépatique* as a distinct disease. In the etiology of some cases *Bacillus coli communis* is possibly important, perhaps in those cases which show no leukocytosis between the paroxysms. The speaker confirms Regnard's observations on the diminution of N excretion in many cases during the febrile paroxysm, but considers it of little importance, and explained by the inanition and retention of the N, since proteid metabolism does not, during the paroxysm, differ essentially from that in the intervals. He denies to the liver any specific urea-forming function. The most of the urea may be formed there, but the function is one possessed probably by all tissue cells. Clinically, in no disease of the liver has a hindrance to the urea formation been proven, hence one is not justified in considering cholemia as the expression of an intoxication by the nonexcreted forerunners of urea.

ROSENSTEIN (Leyden) cannot consider intermittent hepatic fever as a separate disease. Febrile paroxysms occur in many hepatic diseases, among others hypertrophic cirrhosis. By no means should they be considered as indicating a purulent process.

The Operative Treatment of Hypertrophic Liver Cirrhosis: HIRSCHBERG (Frankfurt a/M.). The case reported was that of a man 51 years of age, who for several years suffered from a disease which Hirschberg diagnosed as hypertrophic cirrhosis of the liver. The condition of the patient grew so serious that operation was decided upon, on the ground that it is in this disease the congestion of the liver with bile which produces the destruction of the liver cells, and the fatal outcome. Since the obstruction to flow of bile is in the smaller ducts within the liver, the object of the operation should be to provide the bile with a means of escape through the liver substance. This was accomplished by establishing a biliary fistula by incising the swollen, sensitive right lobe deeply at one point, (an incision the depth and width of the finger), and packing the incision with gauze, which was removed in 5 days. At first a large stream of bile escaped, which gradually diminished till the sinus closed on the thirtieth day. No pus escaped. It is nearly a year since the operation, the patient has gained about 25 pounds and is in good condition.

Discussion.—NAUNYN (Strassburg) does not consider the prognosis in either the atrophic or hypertrophic liver cirrhosis as hopeless. Either may heal spontaneously. According to him there is but one constant physical sign in cirrhosis, and that is the increased consistency of the liver. Since this failed in the above case, Naunyn is inclined to doubt the diagnosis, and considers the case possibly one of infectious cholangitis.

ROSENSTEIN (Leyden) also doubted the correctness of Hirschberg's diagnosis, since jaundice failed and gastric disturbances were present early. He had never seen a healed case. Rosenstein separated sharply the cases of enlarged liver with and without jaundice. For the hypertrophic cirrhosis of the liver described by Hanot, jaundice is an essential symptom. The cases without jaundice result in a contracted liver. Hanot's type not so, and do not show the symptoms of congestion as do the former. The hypertrophic cirrhosis cases all have fever at some time during the disease, but not during the entire course.

HIRSCHBERG replied that he should hold fast to his diagnosis until another was proved correct. He added, in reply to EWALD's question, that only *Bacillus coli communis* grew from the bile in his case.

Acute Myelitis: v. LEYDEN (Berlin) presented the clinical side of the subject. Historically, the clinical picture was known long before the lesions were understood at all well. At first, all cases of paraplegia were attributed to myelomalacia. About the middle of the last century, inflammations without softening were recognized, although the distinction then made has proven too sharp. The present classification is: (1) Inflammatory softening, the result of severe inflammation; (2) hemorrhage (hematomyelia), neither clinically nor anatomically to be separated from the first. The myelitis may be further subdivided into (1) transverse, (2) disseminated, (3) poliomyelitis (which should not include the degenerations following cachexia, diabetes, pernicious anemia, etc.), (4) compression

myelitis following caries of the vertebra, which have clinically a similarity to acute myelitis, which is true also, but in a less degree, of the inflammatory processes accompanying tumors of the cord.

In the etiology infection is most important. Primary infection is proven only in the case of myelitis, and the organisms most important are the Diplococcus intracellularis of Weichselbaum and the Streptococcus. The majority of cases follow such infectious diseases as influenza, typhoid fever, and lesser diseases, as tonsillitis, also puerperal infection and hydrophobia. Some cases recover; some are the starting points of a chronic disease. Another cause is (2) trauma, not so much local as general concussion. Such cases form transitions between myelitis and hematomyelia; the lesions present here are usually disseminated foci; (3) poisons, such as alcohol, lead, arsenic, carbonmonoxide, are rarely causes, and the myelitis usually subsides; (4) fright and anger have also been stated to have caused acute myelitis. In the causation of chronic myelitis tuberculosis, lues and gonorrhoea are important.

The symptoms vary according to the regions affected.

The course varies in different cases. Some cases are so acute as to warrant the name myelitis acutissima, but more often the course is more gradual, reaching its maximum intensity after several days. It may progress upward, presenting the serious picture of acute bulbar paralysis, although even this may subside; or transversely; or downward, causing paralysis of the bladder and rectum, bed sores and even gangrene of the extremities. Some of these cases subside, but leave impaired function.

The treatment of such cases is not as hopeless as was formerly supposed, since it has been proven that such exudates and hemorrhages may be absorbed. Some cases die, some are the starting point of a chronic disease, some—and the cases are not rare—recover. The treatment should be symptomatic, since in the case of lues alone have we a specific remedy.

REDLICH (Vienna) presented the pathologic side of the question. The lesions were classified by Leyden-Goldscheider according to their development as transverse, diffuse, disseminated, and poliomyelitis, but these forms show many transitions between the poliomyelitis and the disseminated form, and between the latter and the transverse and diffuse. The large foci are constantly accompanied by softening, either in the sense of edema or hyperemia; or, on the other hand, of true necrosis. Hence the question is a much more difficult one for the pathologic anatomist.

Poliomyelitis, when fresh, is a true inflammation with the lesions located chiefly in the vessels, especially the anterior and central spinal arteries. In some cases Charcot's idea may be correct, that the process is essentially a degeneration of the bene-cells. Closely allied to this form, and also occurring chiefly in young children, is a form of multiple disseminated myelitis with the foci limited to the gray matter.

In the other forms of acute myelitis, 2 types of histologic lesion predominate. The first is acute degeneration of the nervous elements, swelling of the fibers and axis cylinders, occurring in isolated or multiple foci, or in the periphery of other lesions; the second is necrosis of all the elements except, perhaps, the vessels remain intact. These areas correspond usually to vascular areas. Meningitis may accompany any form of myelitis.

It is hard to define myelitis, since it is not yet decided in the case of the nervous system, just what constitutes an inflammation. Mayer claimed that the essential element was the vascular changes, but this is not supported.

Virehow held the very broad view that the results of an irritation constituted inflammation. Bruns included under the term the results of infection and intoxication of the nervous system. A compromise seems necessary, and hence we assume that the same irritant may cause inflammation or degeneration, either of which may predominate. Without dispute is the inflammatory character of poliomyelitis and the related forms of multiple myelitis. Softening, due to embolus or thrombosis is possible although, as yet, unproven, and in most cases must be considered the consequence of inflammation. All transitions exist between softening and inflammation.

Myelitis, as a rule, accompanies an infectious disease. The truly infectious forms correspond quite closely to those with predominating vascular changes.

Bacteria have only rarely been found in the cord, but when introduced they disappear quickly—within 14 days—hence this may explain the rarity with which they have been found. Lumbar puncture will throw much light on this question. In many cases the causal factor may be the toxins rather than the organisms themselves. This is in accord with the fact that poisons, exposure to cold, and trauma have also been claimed as causes of acute myelitis, also that as a rule the myelitis follows rather than accompanies the infectious disease.

STRÜMPPELL (Erlangen) disagreed with the last speaker's definition of myelitis, which he (Strümpf) defines as the active reaction on the part of the tissues of the cord to overcome, or repair the injury done by an injurious agency, whether bacteria or toxin. The best method of studying the disease is by lumbar puncture, and this is not wholly satisfactory, since we cannot obtain directly the products of the diseased foci.

Myelitis may be produced by bacteria or toxins. He stated a case in which lumbar puncture gave a purulent fluid rich in staphylococci, as evidence of the former method, and one

of acute disseminated myelitis with sterile clear fluid as an illustration of the latter method. In these toxic cases the localization of the lesions is often striking. In one of his cases, following erysipelas, the acute disseminated myelitis was limited quite sharply to the posterior columns. The more chronic the intoxication the sharper the localization and the less evident the inflammatory reaction. Simple degeneration of the nervous elements with secondary proliferation of the connective elements when due to external agency may be spoken of as chronic myelitis, but its inflammatory nature is probable rather than proven. Multiple sclerosis Strümpf does not consider a myelitis, since the evidence would indicate an endogenous rather than an exogenous cause.

Discussion Concerning Acute Myelitis.—SCHULZE (Bonn) emphasized the intimate relation between meningitis and myelitis, especially the purulent variety. In many cases no bacteria have been found, but a more general use of the lumbar puncture is much to be desired. Acute myelitis frequently accompanies caries of the vertebra, but is mistaken for tumor since the neuralgic pains fail because of the paralysis. Hence one should be careful in diagnosis since the prognosis in these cases is so different.

V. KAHLDEN (Freiberg) emphasized the view that in inflammations the degenerative changes in the parenchyma elements are primary, the changes in the vessel walls secondary, and the exudation follows the latter.

ROTHMANN (Berlin) spoke of the results of animal experimentation.

GOLDSCHIEDER (Berlin) reiterated his opinion, which the former speaker had criticized, that the vascular changes were primary, and the disease spread along the vessels as the focal lesions of groups of ganglion cells proved.

BITTER (Berlin) reported 6 cases of myelitis in children following various diseases. The exudate was injected into the vertebral canal of animals where it set up a similar trouble.

REDLICH (Vienna) closed the debate.

[TO BE CONCLUDED.]

AMERICAN SURGICAL ASSOCIATION.

ANNUAL MEETING HELD IN BALTIMORE, MD., MAY 7, 8, AND 9, 1901.

[Specially reported for AMERICAN MEDICINE.]

An unusually large attendance made this a most successful meeting. The first paper on the program was:

Some Phases of the Cancer Question, by Dr. ROSWELL PARK.—Cancer always begins as a local manifestation. Both antemortem and postmortem studies are necessary to determine the course of the disease. Park has held for 15 years that cancer is an infectious disease. The specific cause is believed to be due to a protozoan which is exceedingly polymorphic. All observers have seen the same cells but have called them by different names. He thinks, however, that many organisms may enter into the causation of cancer. The subject must be studied from a biologic and chemic standpoint. This the speaker and his colleagues are attempting to do at the University of Buffalo. The small hyaline bodies which are believed to be the specific cause of cancer have been found plentifully in abdominal ascites of animals suffering from visceral cancer, and in all cancer scrapings. They are lighter than fluid and hence are seen near the glass slide in hang-drop. The speaker said that Dr. Galard could state positively that all sarcomas and carcinomas contain parasites, and that these parasites are not the fungus growths observed by the Italians. He would not say, however, that the fungus growths never produce cancer. The great difficulty arises when attempts are made to cultivate the organisms believed to produce cancer. This must be done in living animals and not in media. In this connection the nature of the vaccine virus has thrown some light on the subject. The experiments of Coplin and Funke with vaccine virus were referred to with approval. The author said fluid containing the supposed germ of cancer was injected into 14 guineapigs, all of which died; the average length of life after injection was 50 days, whereas fluid injected into fresh guineapigs from those already inoculated caused death on the average in 25 days, showing that the virulence increases with inoculation. Animals dead of cancer have the germs in the peripheral blood. In 1 case of Hodgkins disease the germs were found in the peripheral blood 7 days before death. There appear to be 2 forms of the injection: (a) that which attacks the lymph-nodes, and (b) that which attacks the spleen. The organisms may remain in the lymph-nodes after the latter are removed and dried, and may then be used for injection into animals. Spontaneous retrocession of cancer may occur, and this is not inconsistent with the germ theory. In a later discussion Park said all animals that had been artificially inoculated had died. A full report would later be made of all their work.

Early Signs of Carcinoma of the Uterus, by THOMAS S. CULLEN, M.D.—The address was a demonstration of the early

signs of carcinoma uteri. Numerous illustrations were shown by the lantern, and the difficulty of and the necessity for early diagnosis insisted upon. The speaker insisted that cells with large nuclei and abundant chromatin in diseased tissue are pathognomonic of cancer.

Brief Consideration of Cases of Cancer of the Breast Treated at The Johns Hopkins Hospital Since 1889.—W. S. HALSTED explained that in the Johns Hopkins Hospital drawings are made of all cases of cancer, and paintings are made of some. Some 320 cases of cancer of the breast have been operated upon in the above-named hospital since 1889, and about 150 of these during the past 3 years. There have been 450 cases of tumor of the breast since 1889; of these only 3 were sarcoma, and but 1 of these was primary. Adenocarcinoma is not very malignant, but always becomes malignant. Dr. Halsted explained the difficulty of compiling trustworthy statistics. Many hopeless cases were operated upon simply for temporary relief, and these should not be counted in with more hopeful cases. He had divided his cases into 3 groups: (1) those from which the axillary and supraclavicular glands were removed at the primary operation; (2) those from which the supraclavicular glands were not removed until a secondary operation; (3) those from which the supraclavicular glands were not removed at all. Local recurrence occurred in group (1) in 11%, in group (2) in 20% and in group (3) in 9% of cases. In group (1) 45%, in group (2) 33% and in group (3) 43% were cured. Intracanalicular myxomas and fibromas are often spoken of as sarcoma, but they are not such.

Late Results in Inoperable Sarcomas Treated with the Mixed Toxins.—W. B. COLEY, began his experiments about 10 years ago, but in the past 3 years has not changed his technic. The best results are obtained in the spindle-celled sarcoma, which shows cures to occur in 50% of the cases. Only about 3% of cures have been effected in the round-celled sarcoma. The treatment should be tried only in inoperable cases. The injection of the toxins is almost devoid of danger. Out of 600 cases treated, but 2 have been fatal from resulting erysipelas. The treatment is useless after metastasis has occurred. It is likewise useless in melanotic sarcoma, and in lymphosarcoma. The speaker has had 15 cases pass the 3 year limit, of these 8 were of the spindle-cell variety. One case recurred after 8 years, another after 3½ years. Several of these cases had sarcoma of the parotid gland. The treatment may be kept up a year or more without harm to the patient. The mixed toxins appear to inhibit to some extent the growth of carcinoma, but do not effect a cure. The author advises this treatment in all cases of inoperable sarcoma.

The Influence of Mental Depression on the Development of Disease by JOSEPH D. BRYANT. Ambroise Paré was the first to suggest the probability that mental depression aggravates cancer. Various later writers were quoted who supported this view. Velpeau opposed this view and Virchow and Rokitsanski gave qualifying opinions on the subject. Idiots appear to be almost or quite immune to cancer. Depression arises under 3 conditions with reference to cancer: (1) Depression arising without fear of oncoming cancer; (2) depression arising in cases fearing cancer; (3) depression arising after cancer has manifested itself. No special fear predisposes to cancer. Among 402 females and 343 males having melancholia, 1 male and 4 females died of cancer. Mental depression plays a very small part, if any, in predisposing to cancer. Possibly there is some predisposition among females, but it is not significant. Death from cancer among melancholic females is nearly double what it is among males similarly afflicted.

Discussion of papers relating to cancer was opened by WARREN, who referred with approval to the increased attention which cancer is receiving among surgeons and in laboratories. The speaker is the recipient of a trust fund bequeathed to Harvard Medical School for investigations with reference to cancer, and he and his colleagues are now in their second year's work, but so far their results have been negative. To make cultures of the supposed cause of cancer is the great difficulty. He believes germs are responsible for cancer, but insists that Koch's law should be complied with. Proof is wanting in many cases. The speaker referred to experiments by inoculation, but said this procedure is similar to transplantation. The germ is probably a protozoan, but this is not proved as yet. Warren has seen the fat-like bodies in the hanging-drop, referred to by Park and Gaylord, but he finally concluded they were inanimate bodies with Brownian movement. The bodies may be simply a contamination of cancer rather than a cause. The speaker agrees with Halsted in having difficulty in compiling statistics in cases of cancer operated upon. He says a classification by the pathologist is desired. The speaker referred approvingly to Coley's experiments, and said he had received favorable results by using the injections of toxins in post-operative treatment.

Dr. CULLEN's brief paper on the subject of the cancer parasite appears in this issue.

Dr. PARK closed the discussion by saying they had great hopes at the University of Buffalo of making valuable contributions before very long. A complete report would soon be made.

Blood Examination as an Aid in Surgical Diagnosis: J. C. BLOODGOOD (Baltimore). See author's abstract in this issue.

The Clinical Value of Blood Examinations in Appendicitis: J. C. DACOSTA, JR. (Philadelphia) reviewed 118 cases seen in the German Hospital at Philadelphia, the statistics representing the condition of the blood before operation, usually immediately after admission to the hospital. The value of the blood-count as a means of differential diagnosis is greatly limited, since conditions which bear the closest clinical resemblance to appendicitis give rise to blood changes identical to those found in the latter disease. Should the diagnosis be between appendicitis and enteric fever, the former is suggested by a leukocytosis, except in event of intestinal hemorrhage or perforation. In typical cases a leukocytosis is sufficient to exclude noninflammatory conditions, as enteralgia, lead-colic, ovarian neuralgia, etc.

Blood Examination in Relation to Surgical Diagnosis: J. D. BLAKE, J. C. HUNNARD, R. C. CABOT. Blood-counts have been made in 50 cases before administration of ether at the beginning of the operation, and again after the operation. A slight leukocytosis was observed soon after etherization, and a still further increase after operation. The increase persisted for about 7 hours. The greatest was an increase of 10,000 leukocytes, with an average of 2,000 increase per em. Operation alone increases the leukocytes in about ½ of the cases. Fracture causes a slight leukocytosis. Some 32 cases were examined after fracture, and 10 showed an increase to 10,000 per em., and none showed over 12,000 per em. After operation for malignant disease of the breast, the hemoglobin was found increased. In perforation in typhoid fever there is found to be an early wave of leukocytosis, but other conditions cause the same, and it is therefore not pathognomonic. It is unsafe to base a diagnosis of perforation on a wave of leukocytosis—it should be an increase that is constant. The blood of the Marathon runners was examined before and after the race, and it was found there was a marked leukocytosis in all, the polymorphonuclears showing a great increase. There were found no nucleated red cells.

The Effect on the Blood of Ether Used as an Anesthetic.—J. CHALMERS DACOSTA, and J. L. KALTEYER, Philadelphia. See author's abstract in this issue.

Examination of the Blood in Relation to Surgery of Scientific Value, But Too Often of no Practical Value, and May Misguide the Surgeon: JOHN B. DEEVER. Blood-count gives only one physical sign, and its significance should not be allowed to go further. Blood-examination promises much and is valuable, but information so obtained is open to many fallacies, because the opportunities for error are many. Attempts have been made to set a standard degree of anemia, below which operation is contraindicated. The speaker insists that there can be no such standard. He cited 2 cases on which he operated, the hemoglobin in one being 30%, and in the other 22%. Both cases progressed favorably and terminated in recovery. Concentration of the blood from purgation, vomiting, sweating, etc., may give a normal or even higher percentage of hemoglobin, when the total quantity of blood is very deficient. The presence or absence of leukocytosis is the most significant fact to the surgeon which a blood-examination will give. Speaking generally, a high leukocytosis is a favorable sign. It is caused by inflammation, but it usually foreshadows a reaction. The speaker emphasized the fact that leukocytosis is not the rule in malignant disease. Only 19 out of 49 of his cases showed over 10,000 leukocytes to the em., and in only 2 cases was it over 20,000 per em. We cannot depend on a blood-count in appendicitis, for the favorable time for operation is early, before leukocytosis has become marked. In salpingitis even a moderate leukocytosis of from 14,000 to 17,000 per em., as a rule, indicates pus. In obstructive jaundice a leukocytosis usually occurs. Excluding pneumonia, leukemia, etc., a leukocytosis of over 20,000 per em. usually indicates pus. Blood-count is valuable, but it must not be permitted to mask the clinical picture.

Wednesday morning's session was held at the Johns Hopkins Hospital. Dr. OSLER was the first speaker. He explained the methods of instruction given the third and fourth year students in the University, emphasizing the point that almost all instruction in medical diagnosis and treatment are given at the bedside, and didactic lectures are almost entirely dispensed with.

Dr. HOWARD KELLY followed, holding a clinic in which he demonstrated the use of the cystoscope. He catheterized the female ureters and demonstrated his method.

Dr. YOUNG exhibited several instruments devised by various men for catheterizing the male ureters. He successfully catheterized both ureters in a male and demonstrated the manner of collecting the urine. No general anesthetic was given the patient but a 4% solution of cocaine was injected into the bladder to relieve pain.

Dr. WELSH then gave an explanation of the laboratory methods in vogue in Johns Hopkins University and explained how the work is done. He congratulated the profession and students of the United States on the progress which has of late years been witnessed in laboratory facilities and technic. It is no longer necessary, said he, for the student of pathology to study abroad in order to become a pathologist. The laboratories of at least a dozen medical schools in this country offer equally as good advantages as can be had anywhere abroad.

[TO BE CONCLUDED.]

CORRESPONDENCE

SALINE INFUSION IN THE TREATMENT OF PNEUMONIA.—FIRST USED BY DR. F. P. HENRY, OF PHILADELPHIA.

BY

S. SOLIS-COHEN, M.D.,
of Philadelphia.

Referring to the excellent paper by Dr. Wm. Crawford Johnson on the treatment of pneumonia, which appears in your issue of April 27, permit me to correct the author in a historical respect. Credit for the introduction of saline infusion in the treatment of pneumonia belongs to Dr. Frederick P. Henry, of Philadelphia, who practised it at the Philadelphia Hospital at least as early as 1890. In the *Medical News* of August 20, 1892, page 216, this statement will be found in print in an editorial article from my own pen. I have also alluded to the matter, giving credit to Dr. Henry in several clinical lectures and other addresses, among them an address on "Progress in Therapeutics," delivered before the Philadelphia County Medical Society, and printed in its "Transactions," and in the *Therapeutic Gazette* of June 15, 1900. In a signed editorial in the *Philadelphia Polyclinic*, July 20, 1898, on "The Use of Physiologic Salt-solution or Artificial Serum," I make the following statement: "In toxemias, in which class of cases, for example, delirium tremens and pneumonia both find place, preliminary or coincident venesection may usefully be made. We have seen recovery take place in doubtful cases under this form of treatment. In 1 or 2 cases, after a preliminary irrigation, the injection of a pint or a quart of warm saline solution into the colon has seemed to serve a good purpose in connection with deficient excretion of urine, and in pneumonia and uremia to keep up the good effect previously obtained by hypodermoclysis." In the *Philadelphia Polyclinic*, May 28, 1898, Dr. Torrance reports from my service at the Polyclinic Hospital, one of these cases in which venesection and intravenous injection of saline solution were used coincidentally. While I have no desire to claim any priority for myself in this connection, I do desire to place on record definitely the absolute priority of Dr. Henry, because I know that his modesty will prevent him from making any claim for himself.

TO IMPROVE THE HYGIENIC AND PHYSICAL CONDITION OF THE SLUMS.

BY

L. I. BOGEN, M.D.,
of Omaha, Neb.

In the first number of your valuable journal in an editorial on "Heredity and Human Progress," the writer strikes the keynote to the situation, when he says: "It cannot be doubted that modern city life, with its unhygienic, underfed slum population, must inevitably produce some such horrors as Dr. McKim outlines." After reaching such conclusions the remedy would naturally suggest itself, viz.: to improve the hygienic and physical conditions of this underfed slum population, and the cause once removed, the effects will themselves disappear. Instead of it the writer suggests "for those classes who are unquestionably hopelessly depraved," etc., the unsexing of these classes and thus preventing them from producing others of their kind.

The writer's remedy would be consistent and logical if, like Dr. McKim, he would contend that the world's degeneracy is due solely to the survival of bad and weakly people. If, however, modern city life, etc., be the cause of it, then degenerates must always be produced as long as this modern city life with the unhygienic surroundings will continue in existence.

It may not be amiss to remind the writer, as well as Dr. McKim, that about a hundred years ago Robert Owen was confronted with the same problem and he solved it very effectively

and in a very much more humane way than Dr. McKim and the writer suggest.

Robert Owen was manager of a large mill in Scotland employing 2,000 people; 500 were children, and nearly all of them had been taken at the age of 5 or 6 years from charity institutions. He found his workingmen in a most deplorable condition, many of them being hopelessly depraved. Most of the families were living in single rooms, and theft, drunkenness, and other immoralities, together with long hours of factory work, kept respectable people from working in the mill.

Robert Owen reduced the hours of labor, established schools for children and adults, improved their dwellings, sanitarily and otherwise, and he put the sale of intoxicating liquors under the strictest surveillance. In a short time this once demoralized village became the most civilized, industrious, intelligent, happy and prosperous community in Great Britain.

AN EPIDEMIC OF ABDOMINAL INFLUENZA AMONG CHILDREN.

BY

DR. WILLIAM B. YOUNG,
of Bon Air, Tenn.

During the summer months I believe we have more gastrointestinal diseases in Bon Air, Tenn., than any town of the same population in the State, and for the following reasons:

Bon Air is a mining town situated 2000 feet above sea level, just on top of the brow of the Cumberland Mountain, where the land is very poor and the sand rock comes so close to the surface that it renders the soil about most of the residences unfit for cultivation. The population is composed largely of coal miners who take very little interest in gardening. No vegetables are shipped to our town, as we have no market house and but one store. The roads up the mountain are almost impassable for vehicles. For the above reasons our people depend almost wholly for their vegetables and fruits upon trucksters, who carry their "truck" in sacks thrown across mules and horses. This method reminds one of Oriental carriers—donkeys and camels. By the time they reach our homes from the valley below the vegetables have usually undergone more or less decomposition, from pressure in the sacks, the bodily heat of the animal upon which they are borne, the excessive warm weather and the distances they are conveyed. On account of the inconvenience of procuring vegetables and fruits, many of our citizens buy in rather large quantities and too often eat them withered and decomposing. There are no cellars and few refrigerators in our little city. The former we cannot have, as the sand rock is too close to the surface. The latter few are able to possess.

A very large percent of our population is poor and illiterate and does not realize and cannot easily be taught the dangerous results of such methods of marketing. They allow, unless closely watched, all ages to partake freely of this unwholesome diet.

Another avenue of contamination is from the milk, on account of the imperfect methods they have of preserving it pure, cool and wholesome.

During the fall and winter seasons we have had, until this year, no more gastrointestinal troubles than any other town of its size. Possibly not so much, as we get few fruits and vegetables, and live very largely on meats and prepared foods, as vitoes, oatmeal, grapenut, and so on. However, during the past winter and early spring, from January the first to April the first, I treated more cases of gastroenteritis than during the entire spring and summer seasons of any previous year. I have been in Bon Air 14 years, and this is the first epidemic of the kind that ever occurred in the winter months. The symptoms were very similar in each child and for this reason I shall generalize and not record individual cases in this report.

Usually the attacks began abruptly, the child being previously healthy. In quite a few cases the attacks came on at night. The child awaking with abdominal pains would soon vomit and purge. The vomiting preceded the diarrhea in most

all cases. After the vomiting and diarrhea the pains would usually cease. However, possibly in one-third of the children the pains continued for several days. Many, after the initial vomiting, never vomited again, but the diarrhea would continue until convalescence. The vomit consisted of recently ingested food. The discharges from the bowels were usually of a dark, green color. Sometimes I would notice a very thin yellowish discharge, having a very offensive odor. Three or 4 children passed considerable blood from time to time. Some few could not take any food nor even water by the mouth, for from 24 to 48 hours, without immediately ejecting it with considerable abdominal pain.

The attacks lasted in some cases for 6 weeks. Two cases were complicated by pneumonia, from which one died. The pneumonia was ushered in with a violent convulsion in each case, after the vomiting and diarrhea had lasted for 3 or 4 days. Usually there would be only one child in a family attacked at first, then, in from a few hours to a few days, every child in the household would have the same trouble.

I am at a loss to account for such an epidemic, unless it was produced by the germ of influenza. All late authorities, I believe, agree that gastroenteric catarrh is caused from some infection. It seems to me we can exclude the most important factors that bring about a summer diarrhea; for instance, injudicious feeding and excessive heat. One-fourth of the attacks occurred in young infants taking nothing but their mother's milk.

Treatment.—In every case I prescribed at the first visit a laxative, usually a little tablet (one of my hobbies in gastrointestinal troubles) composed of calomel $\frac{1}{2}$ gr., ipecac $\frac{1}{16}$, and soda 1 gr. For the children who could not take food or drink without incurring vomiting I gave dry calomel on the tongue from $\frac{1}{16}$ to $\frac{1}{4}$ gr. repeated every hour, until from 1 to 2 grs., according to age, were given. In all such cases it was beneficial and in some it acted like a charm by allaying the irritability of the stomach. I prohibited all food and drink by the mouth and allayed the thirst by euemas of normal salt solution. After the action of the laxative I usually prescribed subnitrite or subgallate of bismuth and salol; in a few cases I was compelled to resort to hypodermics of morphin to relieve the severe abdominal pain. I irrigated in but few cases as I did not consider the trouble due to injudicious feeding, nor to any foreign material in the alimentary canal. The mortality was very light, only 1 death (complicated by pneumonia) out of over 50 typical cases. Not a single child, up to the present, has had a second attack. This gastrointestinal disorder did not attack the adults. It seemed to be confined to very small children and infants. Many of the children seemed weak and lifeless for some time after the diarrhea ceased and the appetite had returned. For this I prescribed strychnine and whiskey, with rest.

MAY A HOSPITAL STEAL CASES?

BY

DR. A. L. BENEDICT,

of Buffalo, N. Y.

Ap[ro]pos of your extract from the *Cleveland Medical Journal*, entitled "May a Hospital Steal Cases?" the following 2 instances may be of interest: Case 1 was referred by me to a certain hospital to which I had previously sent cases as convenient. Through some personal influence she secured a special rate in a small ward. She was essentially a private case, though a poor woman. After all arrangements were made the superintendent insisted that she should be treated by the ward attendant. A request for a suspension of rules was refused and the patient left the hospital. Case 2 was sent to another hospital and referred to me, under the impression of her family physician that I was consultant at this hospital. On visiting her I found that, in addition to the chronic digestive disturbance for which she had been referred, she had erysipelas. I referred her to the regular attendant for treatment for this intercurrent affection. Telephoning after a few days to learn when I should assume charge, I was informed that I could not take

the case as the patient was in the ward. This patient, I believe, remained in the hospital for some time. One naturally dislikes to argue too strongly in his own behalf, and yet when a patient is referred to a specialist for a definite reason and is sent to a certain place for this very purpose, when in addition the case is referred to another to avoid infringement on established lines of limitation of practice, it seems rather remarkable that any hard and fast rule should be adhered to, to justify an obvious breach of ethics.

In writing this letter, I am influenced by no personal hostility: on the contrary both of the attendants mentioned are personal friends, neither were the cases such as to appeal to one strongly from the mercenary standpoint, though neither was a charity case. I may also state that I am not a "sorehead" or an "anti" in regard to hospital work. There is a good old-fashioned principle recognized both legally and generally by the medical profession, that every patient has the right to select his own physician. If a hospital takes a patient as a matter of out-and-out charity, it certainly has the right to lay down any rules it sees fit. So far as I know, no hospital does extend its own charity to this extent. A man who takes a cheap room at a hotel has precisely the same liberty and rights as the one who occupies the most expensive. Partly as a matter of philanthropy, partly for sound business reasons, hospitals offer patients graduated service at graduated rates. The ward patient does not pay as much as the one in the private room, neither does he enjoy the same privacy, luxury and personal attention. To deny him the choice of physician is a gross infringement of his personal rights, as well as an injustice to the majority of the medical profession. To compel him to accept gratuitous services from physicians whom he may not desire, is an insult to his independence. Such a course leaves no middle course open between pauperism and an expense of \$20.00 or \$30.00 a week. In other words, it forces pauperism on a very large proportion of all persons who require hospital care. Even when the patient is genuinely an object of charity, he is rarely the beneficiary of those who lay down arbitrary rules as to what physician he shall have and what he shall not be allowed to choose. The charity is either charged to the city or county or to a fund obtained by an appeal to public generosity on the ground that a public service is being rendered.

A cast-iron rule that a ward patient must be attended by a certain physician is defensible only on the theory that this physician possesses a higher degree of skill than the one whom the patient might prefer. If this is true, why not protect also the patient in the private room and in his own home? Surely there is no excuse for permitting the man in comfortable circumstances to run the risk of malpractice, and to consider the safety only of the poor. There can be no objection to appointing a staff who shall be placed at the service of patients who have no choice of physician. Personally, I do not believe that it is reasonable to require, as some extremists have suggested, that such appointees should be chosen impartially from a civil service list, open to all qualified physicians. This world is not run on such principles. But why should a man with the prestige to obtain such a position require a compulsory protection against the outside physician? Let him use his merit and his influence to the utmost and accept whatever measure of success he can get, just as in his private practice. Such a policy would do away with the antagonism toward hospitals, manifested by many physicians. The great majority of physicians do not care for a ward service, but simply for the right—which is mutual between patient and physician—to attend such patients as seek their services. To paraphrase an old saying, why compel a man to be wholly a hog or to have nothing?

International Academy.—A congress composed of savants representing 12 nations is being held in Paris. Its aim is to establish a federation of learned investigators in order to secure more systematic efforts in research, and a more rapid interchange of results obtained. It has decided in favor of establishing an international academy to which only the world's most famous physicians, philosophers, and scientists may be elected. Germany has sent 11 delegates, and England, Russia, Switzerland, Scandinavia, and Italy are well represented. Prof. Goodale, of Washington, is the only delegate from the United States.

ORIGINAL ARTICLES

DISEASE AND DEFORMITY OF THE KNEE: ETIOLOGY, DIAGNOSIS AND TREATMENT.

BY

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of New York.

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Kneejoint-disease may be either purulent or tuberculous or purulent and tuberculous. It may also be complicated by constitutional disease, as syphilis, and occasionally depends upon some lesion of the central nervous system, as in Charcot's disease. Other names that have been used to describe the same condition are: Tumor albus, chronic purulent synovitis of the knee, chronic tuberculous osteitis of the knee, strumous arthritis, fungous or scrofulous disease of the knee. Statistics of disease of this joint are easily obtained and some were



Fig. 1.—Tuberculous disease of the knee.

compiled in the early history of medicine. Dijou, of France, reports a case of tumor albus treated by cataplasms, vesications, cautery, and finally, by excision. In 1730 the French treated this affection by fomentations and the application of Venice turpentine. At this date the length of treatment for cure of the cases was 10 years. Filkin, of Northwich, in 1762 resected a kneejoint for

white swelling, and the patient lived 20 years. Desgranges* in the 17th century used decoctions of herbs and cataplasms of cowdung, which he said afforded relief. This certainly was heroic treatment. In 1836, the English surgeons began to practise extension and fixation in these cases, after the American line of treatment, prominently advocated at that time by Davis, of Massachusetts, and



Fig. 2.—Characteristic subluxation of tibia in advanced kneejoint-disease, either purulent or tuberculous; no previous treatment.

Sayre and Taylor, of New York. Since then various theories relating to injection of the joint have each had their enthusiastic exponents, and not until recently has it been proved by bacteriologic research and clinical experience that these agents are unavailing.

The etiology of disease of this joint may depend upon infection from any of the sources mentioned. In 90% of the cases the disease is primarily tuberculous, the infection occurring in the same manner as in hip-disease. It is not until a mixed infection occurs, as a rule, that there are found in the joint the pus-producing microbes. When they do exist they are usually staphylococci. Cases dependent upon constitutional conditions are rare. A not uncommon occurrence is an arthritis, or inflammation, of the synovia, due to trauma, which is simply the effort of nature in the normal process of repair, when no inoculation of germ-life has as yet taken place in the area of new cell-proliferation. These cases are analogous to the so-called cases of ephemeral hipjoint-disease, which recover in a few weeks, and are entirely distinct from the typical tuberculous or purulent diseases of joints which are often spoken of under the general term of arthritis.

In cases of kneejoint-disease, the focus of disease may exist in the bone, the synovia, fibrous capsule, ligaments, or cartilages. The invasion, development and progress of disease is practically the same here as in the hip. The most common location of the disease is in the internal condyle of the femur, and next most frequently upon the head of the tibia. We can readily account for the frequency with which the internal condyle is the site of the initial focus of disease. In cases of traumatism, however slight, the internal lateral ligament invariably sustains more or less strain, particularly at its insertion

* Griffith, in Ortho. Trans., 1893.

into the condyle of the femur. It is because of frequency of trauma in this location and the subsequent inflammatory process of repair, offering as it does an excellent culture-medium for the reception and growth



Fig. 3.—Chronic contracture of joint. Suitable ease for tendon resection and forcible reduction of deformity.



Fig. 4.—Showing outward rotation of leg and displacement backward of tibia, as seen in advanced stages of disease.

of tubercle, or pus bacilli, that the primary seat of disease is in the internal condyle.

Sex does not seem to have much bearing upon the etiology. If there are more cases among boys it is readily explained by their greater exposure to traumatism in their sports and out-of-door life.

Pyogenic and tuberculous germs enter the circulation primarily, according to Phelps, through the lymphatics. A child playing in the back yard of a tenement house, in an atmosphere contaminated with germ-life, through beating carpets from an infected room where an individual has died of tuberculosis or osteomyelitis, inhales the spores of the germ. These spores are immediately absorbed by the lymphatics from the mucous membrane of the pharynx and the trachea and carried to the neighboring lymphatic glands. The lymphatic glands are rich with cells and are good soil for the reception and growth of the germs. The cells or phagocytes of the lymphatic glands are at once attacked by the germs and destroyed, until the entire gland is converted into a pus-cavity or tuberculous cavity, depending upon the kind of germ absorbed. These are the large glands seen in the necks of children and called by the older authors "strumous or scrofulous gland." Ulceration now begins in the gland, burrowing takes place in the direction of least resistance. The gland is surrounded by a vascular network of veins and arteries. When perforation of the gland takes place from ulceration, its contents may discharge directly into a vein. Thus it can readily be seen how the circulation becomes contaminated with germ-life from the reservoir which is constantly discharging into it. Now if the child playing in the back yard receives a slight injury of a joint, inflammatory action begins at once at the point of lesion already described. The blood being loaded with germs of infection carries them to the point of injury. The pathogenic germs finding a fit soil

for their reception and growth attack the normal, new inflammatory material and convert it into a *diseased condition*, with a formation of pus or a tuberculous abscess. From this point of local infection the pathogenic germs find their way into adjacent tissues, destroying them as they advance and thus enlarging the diseased area. Should the head of the bone be involved it is soon destroyed, and the diseased cavity discharges into the joint, infecting all the tissues involved in the structure of the joint. If the diseased focus is in the soft parts, the joint becomes infected in the same manner, and the bone is secondarily involved. The entire joint now being involved, the same processes which took place in the lymphatic gland are observed in the joint, viz., ulceration, burrowing, and the formation of tuberculous or pus cavities, together with destruction of all tissues, lying in contact with the disease, by infection. Burrowing always takes place in the direction of least resistance. This accounts for abscesses appearing at different points in joints apparently similarly affected. Tuberculous disease does not, *per se* produce abscess. Fluctuation is not present in cold abscesses. Large tuberculous cavities exist frequently, which are filled with tuberculous debris and partially organized material, but pus is not present until the cavity becomes inoculated with pathogenic germs.

The symptoms of kneejoint-disease are numerous and unmistakable: In addition to the 8 cardinal symptoms of disease in any joint there are present in the majority of cases symptoms characteristic to the joint involved. In every case it is well to examine the patient stripped from the waist down, for in 50% of all the cases



Fig. 5.

of hipjoint-disease the pain is referred to the knee and not infrequently cases of hipjoint-disease are well advanced before the discovery is made that it is not the knee but the hip that has been attacked. If the patient

is a child the examiner should use all the arts at his command to gain the confidence of the little one; without it his examination must be less thoroughly made and is much less satisfactory to all concerned. There are usually present in a typical case:

1. Pain.
2. Heat.
3. Swelling.
4. Pain upon joint-pressure.
5. Limited motion.
6. Muscular spasm.
7. Atrophy.
8. Deformity.

The history of the case will deny or affirm the existence of pain. Careful palpation of the affected joint, as well as its healthy mate, will enable the examiner to ascertain the relative temperature of the parts. Swelling of the joint is detected by observation and by palpation. If the presence of fluid in the joint is suspected, it may be discovered by gently tapping the patella. If there is effusion present the floating patella will rebound from the condyles of the femur when tapped by the examiner's finger-tips. The fourth symptom, pain upon joint-pressure, is of prime importance, and is detected by holding the femur firmly in one hand while with the other the operator *gently* crowds together the articulating surfaces of the femur and tibia. No great amount of force should be exercised here and the presence, or absence, of this symptom should always be ascertained



Fig. 7.—Method of discovering absence, or presence, of pain upon joint-pressure, as described in text.

without causing the patient great suffering. Limited motion in the knee is shown by an effort to flex the leg to a right angle, or, to extend it fully upon the thigh. This is occasioned by an involuntary spasm of the muscles governing the joint. Atrophy, if present, is readily seen, and if of any consequence, can be discovered with sufficient accuracy for all practical purposes without resorting to the use of measuring apparatus. The goniometer will record it with scientific accuracy, but a few degrees more or less in flexion matters nothing in the treatment. The limit of motion and muscular spasm

are in all cases the most reliable symptoms. The usual deformity consists of the leg flexed upon the thigh and the foot rotated slightly outward. The earlier symptoms of limp and night-cries exist, of course, before all others.

Before resorting to treatment, it is of importance that the cause of these symptoms is fully understood. Otherwise there exists a probability that treatment for the disease may not be conducted upon the most practical lines. The pain is caused by pressure upon the terminal nerve-plates of the sensory nerves distributed in the area of disease. Nature, in her efforts to repair the traumatism which invariably precedes these invasions of germ-life, throws out countless numbers of leucocytes in her healing inflammatory process. These form an exudate and it is the pressure of this partially organized material upon the minute terminal nerve-filaments that causes the pain always attendant upon reparative processes. The heat is caused by the same influences that produce heat in any inflammatory condition. The swelling



Fig. 6.—Usual appearance of first stage kneejoint-disease. Suitable for extension "in the line of deformity," as explained in text. Operative measures probably not necessary.

is produced by the inflammatory exudate, the effusion into the joint, and the partial luxation of the tibia. The pain attendant upon joint-pressure is caused by the impinging of the intraarticular surfaces upon each other. The cartilages act as buffers in receiving the shock of traumatism and the jar of walking. Limited motion depends upon muscular spasm, which is in turn produced by the nerve-reflexes, which find their origin in the pain caused by the exudate upon the nerve-terminals. The atrophy is brought about by the nerve-reflexes, long disuse, and the wearing of heavy and constricting braces. The greater atrophy is present when the disease is in the bone, rather than when confined to the soft parts. This is because the inflammatory exudate when produced in the medulla of the bone naturally exerts greater pressure upon the terminal nerve-plates than it does if the inflammatory product is in the soft tissues which are of more yielding and elastic consistency.

It will be seen from this that rapid atrophy is always pathognomonic of bone-disease. The deformity is at first due to the voluntary effort of the patient to relax the intraarticular tension of the joint and thus relieve the pain. This flexion is later augmented by involuntary contraction of muscles in spasm, which increases the deformity by advantage of leverage, due to flexion. The characteristic outward rotation of the leg is caused by spasm of the biceps cruris, after a certain degree of flexion has taken place. This flexion, as noted by

Phelps years ago, causes the lateral and rotatory displacement of the joint. When there are erratic deformities, which exist in disease of all joints, they are due to pathologic destruction of the bone, or soft parts, permitting a change of leverage in the muscles affecting the joint. The night-cries in disease of this joint are of the same etiology as those seen in the first stages of hip-disease. The child while asleep has dreams, in which she makes involuntary movements. During profound slumber the muscular spasm, with which Nature while the child is awake protects the joint, is in some degree relaxed, so



Fig. 8.—Specimen, showing extensive destruction of bones of pelvis; same patient had been operated upon for tuberculosis of kneejoint.

that when the involuntary movement occurs while the little one is in dreamland, the tender and inflamed intra-articular surfaces are suddenly brought together, occasioning pain, almost sufficient to awaken the patient, and invariably severe enough to cause the "cry."

It is of interest in any case to know the precise location of the pathologic lesion. Hold the thigh firmly with one hand, and with the other exert lateral traction upon the tibia outward. This will create tension upon the internal lateral ligaments and, if they are involved by the disease, will cause the patient pain. The same is true of the external lateral ligaments, if the leg is adducted at the knee. This method, together with the one described for ascertaining the presence or absence of pain on joint-pressure, will materially assist in locating the focus of disease. The value of the x-ray in this connection has been overestimated. While it is of great value, it is nevertheless not indispensable in this branch of sur-

gery. It is of more assistance in determining the details of congenital and acquired deformities than in locating the early pathologic lesions of disease. It, however, does



Fig. 9.—Ascertaining location of focus of disease, by adduction and abduction at knee, as advised above.

enable the examiner to follow the course of progressive, destructive processes in the bony structure. I have had better results with radiographs made with a good four-plate static machine than with the fluoroscope.

[TO BE CONCLUDED.]

THE CAUSE OF CANCER.*

BY

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of Baltimore, Md.

Being interested in the subject of cancer, I have followed the work in the New York State Laboratory for the last two years and learned with interest the results obtained by Dr. Gaylord and embodied in his lecture at the Johns Hopkins Hospital and in his paper in the *American Journal of the Medical Sciences* for May of this year.

In order to prove conclusively that a given organism is the cause of cancer it is necessary:

- (1) To find or isolate the organism.
- (2) To produce cancer by inoculating the organism into another body.
- (3) To recover the organism from the cancer thus produced.

I have had the opportunity of examining some of Dr. Gaylord's specimens and it is certain that the nodules he

*Remarks made before the American Surgical Association at Baltimore, Md., May 7, 8 and 9, 1901.

produced in the guineapig's lungs are cancer. He, however, used peritoneal fluid and not a pure culture of the organism and hence the first and second requisites are not properly fulfilled. He cannot exclude the possibility of cancer-cells from the patient having been carried over in the fluid to the guineapig, and it is a well established fact that cancer-cells may be transplanted and grow. The third requirement is barely touched upon and no proof of its successful accomplishment is adduced.

On page 511 of the journal above mentioned he speaks of being able to cultivate his germ with "comparative regularity," and we are given the medium upon which it grows. And yet, no word as to its appearance or behavior on the culture medium is mentioned. Nor have we a picture of it, although both Plummer's and Sanfelice's organisms are depicted on plate 7. This omission is difficult to account for. Further, on page 537 a list of his injections into animals is found, and here also we fail to find a single instance where there is conclusive evidence of a pure culture of a germ being employed.

The major portion of the article is taken up with the examination of tissues hardened according to different methods, but, as Professor Welch pointed out at the Hopkins meeting, we might argue indefinitely upon the histologic changes without making an iota of progress. In fact, for years one body of men has been claiming that these peculiar bodies found in carcinoma are due to cell degeneration; the opposite faction, that they are parasites. It is only by cultivating the organism, if there be any, and then producing the disease afresh with this newly-found germ that we can prove the cause of this dread malady. As a matter of fact, Dr. Gaylord has confirmed the results of others but added little or nothing new,* and the cause of cancer is still an unknown factor. It is very unfortunate that the suggestion that cancer parasites were floating around in the blood has led a portion of the daily press to infer that cancer is a blood disease and consequently that the removal of a cancer will be useless, as the disease is sure to appear at another point. Such is certainly erroneous. We know that cancer is not a blood disease, but that in the early stages it is an entirely local process; that it is permanently curable is evidenced by the results in European and, to come nearer home, in our own hospitals, where patients are living and well, years after complete removal of the growth.

Dr. Gaylord and his associates should in no wise be discouraged. Many of the world's most able investigators have been seeking the same goal, and as yet none have reached it. They should be encouraged at every point, as in their love for science they are willing to forego financial prosperity in the hope that they may eventually rid mankind of this scourge. New York State is to be congratulated on its wisdom in establishing a cancer laboratory, and is showing a commendable spirit in increasing instead of diminishing the support accorded its scientific men.

*In justice to Dr. Gaylord, it must be added that the above-mentioned article is a preliminary communication and that the completed work may solve many of the still obscure points.

SLOW PULSE, WITH SPECIAL REFERENCE TO STOKES-ADAMS DISEASE.*

BY

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of Boston.

The permanent slow pulse with paroxysms of vertigo and epileptiform or apoplectiform symptoms is by no means a common disease. A very interesting and typical case was shown to this association in 1889 and 1890 by our late associate, D. W. Prentiss, and is doubtless well remembered by many members. Through the kindness of Dr. Prentiss, I had the opportunity of seeing this patient several times during his life and of making a postmortem examination. Since this time I have seen one other quite as typical, and some not quite so well marked but sufficiently important in connection therewith to be worth reporting.

A woman, aged 50, of N. E. birth and parentage, had been an invalid since the birth of a child 25 years ago. After fainting several times, she entered the Boston City Hospital in June, 1897. Her temperature was 101° and her pulse 56. Within a day or two her temperature fell to normal and the pulse to 40 and then 20. From this time until September, during the latter part of which time she was in the Adams Nervine Asylum, her pulse remained slow, occasionally rising to 40 and sometimes falling to 25 or a little below.

The heart's area was not enlarged, its action usually, but not always, regular and the sounds very weak. At times between the pulsations were heard sometimes 1, sometimes 2 or 3 slight sounds as of incomplete beats. At times a soft systolic murmur replaced the first sound at the apex. During this time she had fits of varying degrees of severity, of syncope with apparent loss of consciousness, which was not always complete. In some of these the pulse would go down to 18 or 20, and become extremely weak remaining so for some time after her return to complete consciousness. The attacks became more severe, were attended with more dyspnea and Cheyne-Stokes respiration, and she died September 20.

The early diagnosis in this case had been "hysteria and myocarditis" with an interrogation. Dr. Councilman's report was:

Heart distended, especially the right side, with fluid blood. Valves normal save a slight thickening of the edge of the mitral. Myocardium normal. Coronary arteries normal. The aorta smooth save for a few small plaques of atheroma in the beginning of the thoracic and above bifurcation. Arteries at base of brain normal. Very slight interstitial nephritis.

A man, aged 80, in fair general health, had a normal pulse of about 68 or 70. In April, 1878, he had a slight bronchitis with a pulse of 33. April 21, he fell unconscious and vomited; pulse 36. He had several other attacks more or less severe. In one of them Cheyne-Stokes respiration was noted.† While the breathing was on the decline there were some interpolated weak beats which disappeared during the period of apnea and increase. There was gradual improvement till in June his pulse was 70 and on one occasion after a little exertion 80.

In October of the same year, his pulse was rather quick. About a year later he felt rather weak, and the pulse was 36. In July another series of attacks with slow pulse and Cheyne-Stokes occurred. In November, 1880, he had a cold with cough, and a slow, irregular pulse. An hour or two before he died, his pulse was 44, and regular. The sphygmograms, of which quite a number were taken at different times, show only occasionally faint, if any, indications of the intermediate beats noted in the text.

*Author's abstract of paper read to the Association of American Physicians, Washington, April 30, 1901.

†Two sons of this man died of interstitial nephritis and each had well marked Cheyne-Stokes.

In September, 1890, I saw with Dr. Edson, of Roxbury, a bank cashier, aged about 60, who had been working hard with very little vacation. He had had one severe attack in which he lost consciousness and fell and since then, several severe and many lighter ones. He said that he had some of the latter during my visit, but I could observe nothing, except that after some of the seizures there seemed a little longer interval between the heart beats, and then 2 or 3 closer together. The pulse at the wrist was from 29 to 31, mostly regular and of good force and tension. There were some interpolated beats.

About 1½ years after this first examination, Dr. Edson wrote that "for a year his pulse has kept at 28, and is full and perfectly regular, with none of the faltering it showed when you saw him. His lapses of consciousness grew less frequent until last May, since which date he has had none." I found that he had had not only no lapses of consciousness, but no faintness or dyspnea, unless on going up stairs too fast. He was able to walk about quite briskly and do some light work. I was not quite certain whether in my not very thorough examination I could make out any extra beat, but I thought I saw a slight indication of it in the sphygmogram. His breathing at times in the night, as described by his wife, was very much like Cheyne-Stokes.

Dr. Putnam kindly called my attention to a Polish Jew in the Massachusetts General Hospital, who had had fainting fits with some convulsive movements, and a pulse as low as 25. When I saw him there had been no fits for some time, and the pulse was 38. With the slowest pulse there had been some intermediate slight beats, but I could see no trace of such in the sphygmograms nor detect any by the ear. The interne of the service informed me that he had been unable to hear any recently. The form of the sphygmogram in all these cases closely resembled those given in Prentiss' cases, varying only according to the rapidity.

Although most persons with a slow pulse are not in sound health, it must be admitted that there are some who, so far as any one can tell, are not only being able to live comfortably with care, but even to carry on active occupations. We can hardly avoid calling some of these physiologic. In others, good health is only relative, and they are obliged to restrain their activities within narrow bounds: Among these are to be found some who have suffered with the characteristic symptoms of Stokes-Adams disease and have made a partial recovery. The slow pulse may have lasted many years. A temporary moderately slow pulse is not rare, being met together with a slight fall of temperature in many acute diseases, especially for a few days during convalescence; also in the puerperal condition, and in some instances as one of the symptoms of acute nervous depression from fatigue. It seems, for some unexplained reason, to have a special connection with rheumatism, besides its well-known tendency to valvular disease of the heart. Some physicians have seen in this tendency the foundation for a theory of rheumatism as a nervous disease.

Certain poisons, some of them used in medicine, slow the heart. Among them are digitalis and colchicum. Tobacco in some cases seems to have this effect temporarily, although its usual action is the opposite, and the pulse slowed by tobacco is likely to make a sudden jump to over-rapidity. Tobacco, however, has nothing to do with the development of the permanent slow pulse.

The most interesting and important group of cases, however, are those described and commented on first by Mr. Adams and Dr. Stokes, both of Dublin. In these the pulse is considerably below the average, say in the

neighborhood of 40 all the time, with paroxysms at irregular intervals in which it falls still lower; and certain symptoms, vertigo, syncope and epileptiform or apoplectiform convulsions with more or less complete loss of consciousness marking the failure of the heart to supply blood enough to keep the cerebral functions in activity.

In many, perhaps most, of these cases, when fully developed, the pulse is regular and the slowness depends upon the prolongation of the diastole, the systole being sharp and strong and but little longer than in the normal pulse, being quickened or slowed, according to some authors, in proportion to the square root of the diastole.

In other cases, however, there are to be heard, or felt, or seen in the sphygmogram, pulsations in the interval which represent either abortive systoles of the ventricle reaching the wrist much more feebly than others, or not at all; or else, as seems to be shown by comparing tracings taken at the heart, the wrist, and over the jugular veins, of auricular pulsations which fail to be followed, as normally, by contractions of the ventricle. This condition has been imitated in the horse by a feeble stimulation of the pneumogastric nerve. Some observers caution against mistaking a slow pulse at the wrist for slow beats of the heart, and intimate that many cases of slow pulse are really normal at the heart, but have become apparently slow by the failure of beats to reach the wrist. As has just been said, although this condition may exist, as it does sometimes in mitral stenosis, I do not think, after looking over a large number of reported cases, that its possibility has failed to be recognized; for most authors, directly or by implication, show that they have assured themselves of the correct state of things by listening at the heart as well as by feeling the pulse at the wrist. Even were such mistakes common, however, they would not have great consequence, for an interpolated beat of the heart which fails to make itself perceptible at the wrist is not likely to send much blood to the brain, and is interesting chiefly for purposes of explanation and history.

I have looked over a considerable number of cases, many of which were not included in Dr. Prentiss' paper, and tabulated 35 of Stokes-Adams disease and 21 of slow pulse without the paroxysms, in which autopsies have been made. There are also many more of both classes in which no autopsy was held, which have been consulted and in part tabulated for the sake of convenience of reference.

When we come to the pathologic anatomy of these cases, we are met at once by the lack of data on what seems to me one of the most important grounds, *i. e.*, the intrinsic ganglia of the heart. The defect is due to anatomic difficulties which will certainly prevent for a long time their being objects of routine examination, and cases of the kind we are considering are so rare that the chances of one falling into the hands of a competent and enthusiastic microscopist are few and far between; also, in very few of the cases of slow pulse dependent on lesions of the spinal cord, has a histologic examination been made.

The pathologic histology of the ganglia of the heart has been studied quite thoroughly by several specialists,

many of them Russians, but among them all there is but one instance of this kind. The lesions found are of 2 kinds, which may be very briefly summed up as changes in the bloodvessels of the ganglia, hypertrophy and proliferation of nuclei, not only in the capsules of the ganglia, but of the individual connective tissue sheath which surrounds each cell in all sympathetic ganglia, and degeneration of the cells themselves. In all of Ott's cases, with one exception—and that not a typical one—in which the clinical condition was noted, the pulse had been rapid.

These little ganglia are situated in the interauricular septum and along the sulcus between the auricles and ventricles, not (in man) going below this. Although they can sometimes be found by picking out pieces of nerve or even seen under the pericardium by the naked eye, the routine method in most cases will probably consist in serially sectioning the regions where they are most likely to be found.

The nervous supply of the heart is, as is well known, of 2 kinds, supposed to have their centers near each other in the medulla oblongata or the spinal cord, but which reach the heart by different paths. The pneumogastric passes directly downward to the cardiac plexuses. The accelerator or augmentor fibers pass down the spinal cord, uniting with the sympathetic at various points, the most important being the ganglion stellatum, formed by the union of the lowest cervical and first dorsal, which also send branches to the cardiac plexus. The functions of these 2 systems are well known, the augmentors apparently supplying motor energy to the heart and tending to increase its rate, while the vagus or moderator or inhibitory regulates the rate of expenditure of the energy. The interaction of the 2 forces keeps the balance between the demands upon the heart and its response to them. The exact function of the intrinsic ganglia is not so well known. They have been supposed to be the automotors and sources of independent energy, but it has recently been urged against this theory, or assumption on embryologic grounds, that they are offshoots of the sympathetic and of the posterior spinal ganglia, and hence can be only sensitive. How cogent this argument is I do not undertake to say, but there is good physiologic reason for considering them of importance, if not in supplying energy for each muscular contraction (for which the muscle itself is competent) yet as coordinating reflex centers which hold together the ventricles and auricles and keep them beating harmoniously and, of course, also with the maximum efficiency.

It seems to me that they may be compared to the plexuses of Meissner and Auerbach in the intestinal walls, which pass along the motor impulses from one segment to the next, and cause the peristaltic propulsion of the contents.

There have been several theories as to the relation of the cardiac nerves and muscles to the slow pulse. Many years ago Mr. T. Wilkinson King said that "the only known cause of slow pulse is a lesion of the upper part of the spinal cord," and he was perfectly correct, for he protected himself by the word "known," and distinctly admitted the possibility of other causes. More recently

the tendency has been to look to the muscular and vascular degeneration and similar lesions of the augmentor system on the one hand, and irritative lesions of the vagus on the other. No single lesion can cover all the ground. Irritation of the vagus has existed in a few cases and physiologic considerations point very strongly to its influence in the production of the paroxysms; but an irritative lesion is unlikely to remain constant and active for years, and the vagus in particular is known to be capable of holding down the rate of the mammalian heart for only a few minutes.

Another test which seems almost decisive is found in the action of atropin, which is well known to paralyze the vagus from one end to the other, but which does not raise the rate of the pulse in these cases. This observation was first systematically made and published as a means of diagnosis by Dehio, although atropin has been used on more or less empiric grounds and with results corresponding to his statement.

Injuries to the cervical spinal cord, from the level of the occipital foramen down to the last vertebra, have been frequently followed by slow pulse, and they make a very important group. The stellate ganglia, an important way-station, and the intrinsic ganglia, the terminal of the augmentor system, have not, as already said, been examined often enough in cases of this kind to make them constantly explain the permanent slow pulse, and yet it seems that there we are to look for the causation of the typical and nontraumatic cases of Stokes-Adams disease.

Tabulation shows that a very large number of cases are associated with arteriosclerosis, atheroma or muscular degeneration of the heart. In particular, fatty degeneration of the coronaries has been thought to bear a special relation and it is by no means certain that an extension of degenerative arterial disease to the nutrient vessels of the ganglia may not mark the transition point between the fatty degeneration with the quick pulse and that with the slow. The probable relation of disease of the ganglia to these 2 groups was pointed out by our own Jacobi in the discussion of Prentiss' case.

The introduction of vagus irritation into the explanation of the paroxysms demands for its justification no lesion of that nerve. Its activity is well known to be called out by sensory irritations of various kinds within physiologic limits, and it has been shown that its inhibitory power is much more manifest in an animal in any way weakened or in the case of heart weakened by repeated inhibitions. The case may, it seems to me, be briefly stated as follows:

The permanent slow pulse depends upon a weakening or paresis of the augmentor or accelerator system.

This may take place in any portion of its course. In some very marked cases it is the result of injury to the cervical spinal cord. In the majority of medical cases, it is supposed to be connected with degeneration of the cardiac ganglia, but evidence of this is as yet more physiologic and clinical than anatomic. It is distinctly a symptom indicating weakening of the heart.

The paroxysms are the consequences of reflex excitation of the vagus, perhaps no more than normal, but acting against an antagonist while weakened by

degenerative changes and perhaps also by frequent defects from the same conqueror.

Special and extreme depression of the augmentors, or special and pathologic irritation of the vagus, would of course emphasize all the phenomena, and may perhaps be taken as representative of those cases which have originated through great strain of body or mind, which sometimes recover, and sometimes run on into the chronic condition.

Certain experiments illustrating the results of irritation of the stomach and subsequent depression of the pulse through the vagus are very interesting. The irritation was not produced by chemical means or by cold applied to the mucous membrane, but by electric or mechanical irritation of the muscular walls, and especially by distention of the stomach with a rubber balloon blown up. An attack or exacerbation from digestive disturbances occurring in a person with a slow pulse, might hence take place in one of two ways, either from the absorption of ptomain poison, acting on the vagus center in the bulb, or by distention from flatulence, acting simply as a reflex stimulus.

There is no special etiology for these cases. Tobacco is surely not a cause, and alcohol only so far as it contributes to vascular and muscular degeneration in general. The most frequent cause is overwork and strain. With this is to be considered the great preponderance of the male sex among the reported cases. It is especially interesting to note this etiology in connection with that group of cases of cardiac disease induced by muscular strain, noted by DaCosta, Allbutt, and others, where the pulse is too rapid.

The diagnosis of these cases may make itself, but should be confirmed by a search for all cardiac lesions and for concomitant nervous phenomena, lest there should be other existing causes for the epileptiform attacks than a temporary cutting off of the blood supply. It should also be remembered that there are some cases where the ordinary pulse is not below normal in frequency but where its easy yielding to vagus stimulation and the subsequent paroxysms of a nervous character betray its relationship. There are also cases where the nervous symptoms are so slight that their true nature is overlooked. Such a case may suddenly terminate fatally.

The prognosis has been partly hinted at in the beginning. Setting aside the distinctly acute cases of which the prognosis is quite favorable, it is found that there is no inconsiderable proportion who live for many years, some with but little discomfort and others only with a great deal of care. A computation of the average length of life after the discovery of the slow pulse would have no value in face of the fact that the discovery may only be accidental. Osler gives the history of a patient who was known to have had slow pulse for 30 years; this is one of the longest periods recorded.

There are very few cases in which an acquired slow pulse seems to have become distinctly physiologic. This is difficult to understand unless we admit that the healthy heart is capable of doing an amount of work greatly in excess of what it is ordinarily called upon to do; that is, that the margin is a very wide one and that the physio-

logic estimates of the amount of blood pumped by the heart are maximums which very much more than cover the ordinary and necessary work. There is perhaps in such cases some adjustment of the capacity and elasticity of arteries, making a larger reservoir, so that an extremely slow pulse may give a stream sufficiently steady for practical purposes. The case of Dr. Archibald Hewan is an interesting one. His pulse, from overstudy and from gout and rheumatism, gradually fell from 72 to 38, where it remained, but he never had a fainting fit. He was able to climb a mountain some thousands of feet high, his pulse at the top being 40.

But after excepting these more or less favorable classes and circumstances, the prognosis remains very unfavorable not only as regards recovery but as regards life, the great majority of cases in which the disease has existed long enough to be considered chronic, dying in one of the paroxysms, usually before many years.

The treatment, as regards the general condition, should be rest and tonics. The nitrites have been found efficacious and bromides have given relief. Digitalis, in a few instances, has quickened the pulse instead of slowing it. Atropin has been, in most cases, a distinct failure as regards the permanent condition or the frequency of recurrence of paroxysms. As a means of diagnosis it should be given hypodermically. In a few cases reported by French writers, a milk diet has produced rapid and distinct improvement, upon which fact and the temporary scantiness of urine, a theory of uremia has been built, which one is not obliged to accept however, although admitting the value of the clinical fact.

As regards the paroxysms, the recumbent position, nitrites and other heart stimulants have been found most beneficial. Atropin, in a really efficient form, has singularly enough not been extensively used, but should be given hypodermically in doses of 1 or 2 milligrams.

THE TOXIN OF THE COLON BACILLUS.*

BY

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In our work on the bacteriology of cheese McClymonds and I found that the colon bacillus is present in practically all samples of American green cheese and we also ascertained that cultures of this germ may be boiled without destroying its toxicity.¹ Cooley and I took up this work and have recently reported our results.² It is the purpose of this paper to make a further report on the same subject. Since Dr. Cooley left me I have been ably assisted by Mr. L. M. Gelston.

As has been explained in the article by Cooley and myself, we have attempted to isolate the toxin from the bacterial cell, and have therefore worked with the germ-substance obtained from growths on solid mediums. Generally we have employed a number (50 to 100) of Roux flasks of the largest size. These are prepared with a 2% beef-tea agar and inoculated with a beef-tea cul-

*This paper contains the substance of a talk given before the New York State Medical Society, January 30, 1901, but was written a month later.

ture of the bacillus. The colon bacilli with which we have worked have been obtained from cheese, water and normal feces. As a preliminary step, the virulence of the germ is intensified by passing it through a number of animals. The Roux flasks after inoculation are placed in a warm room or in a large incubator. After a time varying with the growth of the bacillus, the cells are scraped from the surface of the agar and used in the preparation of the toxin.

With the germ-substance obtained in this way numerous experiments have been made and the facts learned may be summed up as follows:

1. The toxin is contained within the germ-cell from which it does not, at least under ordinary conditions, diffuse into the culture-medium.

This is shown by the following experiments: A beef-tea culture which had been grown for 21 days in the incubator was filtered through porcelain. Eight cc. of the clear, sterile filtrate was injected intraabdominally into a guineapig, weighing 435 grams, December 4, 1900. The animal was restless for some time immediately after the injection, probably because of the volume of the fluid used, but gave no other evidence of any effect of the injection and remained well afterwards. As a control to this experiment 0.25 cc. of the same culture unfiltered injected into a guineapig of the same weight killed the animal within 12 hours.

It might be argued that these experiments do not show that the colon toxin is not in solution in the beef-tea culture but that the toxin although in solution will not pass through a porcelain filter. This is shown not to be the case from the following experiment:

An unweighed portion of dried bacterial cells was suspended in water heated in the autoclave to 154° under 2 kilos of pressure and filtered through porcelain. Four cc. of this clear filtrate was injected into the abdominal cavity of a guineapig. In 36 hours this animal died and the postmortem findings were those usually found after death from the toxin. This experiment shows that the toxin of the colon bacillus after being removed from the bacterial cell by means of superheated water may be filtered through porcelain.

2. The toxin is not extracted from the cell by either alcohol or ether.

We have repeatedly extracted the bacterial cells with both of these reagents at different temperatures, evaporated the extracts thus obtained, dissolved the residues in water and injected these aqueous solutions into animals. No effect has been induced by this treatment. These reagents even after prolonged boiling do not produce any visible alteration in the form or tinctorial properties of the germ. Traces of coloring matter and fats are apparently the only substances extracted from the germ cell by alcohol or ether and it is probable that all of the coloring matter and the greater part of the fat come from the agar on which the bacillus has been grown.

3. Very dilute alkalis do not extract the toxin from the cells.

This is shown by the following: 100 milligrams of germ substance in a 0.25% solution of potassium hydrate was boiled in an open test tube for 5 minutes. After

this exposure, the germ-substance was separated from the supernatant fluid in a centrifuge and was found to be still highly toxic while the fluid was inert.

4. The germ-substance may be heated to a high temperature with water without destruction of the toxin.

200 milligrams of germ-substance was placed with 10 cc. of water in a tube which was sealed and heated to 184° for 30 minutes. On opening the tube, the contents was found to be milky and microscopic examination showed a granular mass containing a few unbroken cells. Portions of this heated substance injected into guineapigs caused death, and autopsy showed the lesion usually found in these animals when killed with the colon toxin.

Another portion of the contents of this heated tube was placed in a centrifuge and separated into a deposit and a supernatant milky fluid. Guineapigs were inoculated, some with the deposit and others with the fluid; both sets died. This shows that superheated water breaks up the cell wall.

5. Boiling with a 0.2% solution of hydrochloric acid has but little, if any, effect upon the germ-cell or its contained toxin.

One hundred milligrams of the germ substance was boiled in an open-test tube with 10 cc. of a 0.2% solution of hydrochloric acid. This induced no visible alteration of the bacterial cells as seen through the microscope, and the injection of this germ-substance thus heated, after neutralization, caused death in animals in the usual time and with the usual postmortem findings.

6. Heating the germ-substance for an hour at the temperature of the waterbath, with water containing from 1% to 5% of hydrochloric acid, breaks up the cell wall and lessens, but does not destroy, the toxicity of the cell-content. Prolonged heating may render the toxin inert.

Five hundred milligrams of germ-substance was heated on the waterbath for 1 hour with 500 cc. of a 5% solution of hydrochloric acid, then decanted through a filter. The filtrate was clear and colorless, and gave no precipitate when dropped into absolute alcohol, but that the acid had dissolved some part of the substance is shown by the fact that the filtrate gave the biuret test.

The portion undissolved by the acid was dissolved in 100 cc. of a dilute solution of sodium bicarbonate, and this was injected into guineapigs as follows:

No. 1, weight 275 g.;	received 10 cc.
No. 2, weight 255 g.;	received 9 cc.
No. 3, weight 267 g.;	received 8 cc.
No. 4, weight 250 g.;	received 7 cc.
No. 5, weight 305 g.;	received 6 cc.
No. 6, weight 285 g.;	received 5 cc.
No. 7, weight 300 g.;	received 4 cc.
No. 8, weight 315 g.;	received 3 cc.
No. 9, weight 290 g.;	received 2 cc.
No. 10, weight 250 g.;	received 1 cc.

These injections were made at 6 p. m. February 5. Nos. 1, 2, 5, 6, 7, 8 and 10 were found dead at 7 a. m. February 6; No. 4 on the morning of February 8; No. 3 on the morning of February 9, and No. 9 on the morning of February 11.

7. The toxin as separated from the cell-wall by diges-

tion of the latter with hydrochloric acid and pepsin is markedly active.

I removed the germ-growth from 50 Roux flasks, and extracted it with 96% alcohol at ordinary temperature as long as the alcohol took up coloring matter. The germ-substance was then collected upon a filter and the alcohol allowed to drain away; then the mass of germs was placed in a beaker and 1,000 cc. of a 0.2% solution of hydrochloric acid and 0.5 grams of active pepsin added. The beaker with contents was allowed to stand for 4 days in the incubator, the mixture being occasionally stirred. The undigested portion is found by microscopic examination to be amorphous, but still easily stained with methylene-blue. This was collected on a filter, washed thoroughly with a 96% alcohol, dried to a constant weight at 100° and pulverized. One hundred milligrams of this powder was shaken with 50 cc. of water, with which it formed a colloidal body of acid reaction. On adding enough bicarbonate to render the mixture feebly alkaline, the toxin dissolved to an opalescent fluid. This was sterilized by boiling over the naked flame and was injected into guineapigs:

- No. 1, weight 407 grams, received 16 mg. of toxin.
- No. 2, weight 392 grams, received 12 mg. of toxin.
- No. 3, weight 320 grams, received 10 mg. of toxin.
- No. 4, weight 455 grams, received 8 mg. of toxin.
- No. 5, weight 417 grams, received 6 mg. of toxin.
- No. 6, weight 470 grams, received 4 mg. of toxin.
- No. 7, weight 442 grams, received 2 mg. of toxin.
- No. 8, weight 412 grams, received 1 mg. of toxin.
- No. 9, weight 432 grams, received 1 mg. of toxin.
- No. 10, weight 480 grams, received 2 mg. of toxin.

Nos. 1, 2 and 3 died within 6 hours, Nos. 4, 5, 6, and 10 within 12 hours, and Nos. 3 and 9 within 24 hours. One-fifth of a milligram of this toxin kills guineapigs of 200 grams weight and less.

After death from this toxin there is usually, not always, considerable (from 2 cc. to 10 cc.) of serum in the peritoneal cavity. This is sterile, if removed before postmortem infection takes place, and it has absolutely no germicidal action on the colon bacillus as the following extract from my protocol book shows:

"Every tube of exudate taken from the above-mentioned pigs proved to be sterile. This was shown by making beef-tea inoculations from each tube, all of which remained free from growth. I then tried the germicidal action of one of these exudates on the colon bacillus. A loop of a beef-tea culture of this germ was placed in a tube of beef tea and then a loop of this dilution was added to a tube of the serum and plates made from this at intervals:

"Time, 5 min.	15 min.	30 min.	60 min.
"Colonies, 10	25	28	100

"This test, repeated several times, shows that the serum that collects in the abdominal cavity after fatal poisoning with the toxin of the colon bacillus has no bactericidal action on this organism, but furnishes a medium on which it grows readily.

"This serum is not only without germicidal effect on the colon bacillus but it fails to agglutinate this organism."

There are many interesting problems in connection with this toxin which I do not yet feel able to discuss. If the toxin is confined within the cell wall, how is it set free when the whole germ either living or dead is introduced into the animal? If this is accomplished by phagocytic action, do the phagocytes destroy the toxin when they kill the germ? What is the chemistry of

this toxin? Is it a definite compound or is it composed of the many substances mentioned by Ehrlich in his theory concerning the constitution of toxins? Does the bacterial cell contain both a toxin and an immunizing body, or may the toxin be changed into an immunizing substance either by artificial means or within the animal body? These and other similar questions await further study. Although I have pushed my investigations along the lines here suggested further than is indicated in this paper, I do not feel that the knowledge obtained up to the present time is sufficiently accurate to satisfy myself or others, and I prefer not to indulge in theories. However, the fact that at least one of the bacterial toxins is a remarkably stable body and can be obtained in the dry state and permanent form justifies us in taking a somewhat more optimistic view concerning the probability of ascertaining the chemical constitution of these bodies than that recently expressed by Brieger and accepted by Ehrlich³.

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A PLEA FOR UNIFORMITY OF TECHNIC IN WIDAL'S REACTION.

BY

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When Widal first gave to the scientific world the procedure now known as "Widal's reaction," it was with specific instructions. But since that time modifications have become very numerous. Take, for example, the proportion of dilution in the blood or serum. This dilution, of course, should be uniform, either 1 to 10, 1 to 20, or 1 to 40. Yet many use a dilution of 1 to 100, 1 to 200, and even 1 to 500. Again, as to the age of the culture: Some use a 12-hour, some an 18-hour, and some a 24-hour culture, while some recommend an incubated and some a non-incubated one. A number of observers claim that a filamentous form of the organism is better than the short bacillary form, and hence employ the former, although the reason why is not clear.

Another point of divergence is the time-limit applied to the reaction. Some observers claim that the reaction should occur inside of 15 minutes, others allow 30 minutes, and still others wait so long as 2 hours before declaring the reaction positive or negative. Two hours (I believe) was the time-limit set by Widal himself. It certainly should be considered typical when an *immediate* reaction takes place, particularly when in connection with it, there is a plain history of typhoid fever. This would be as natural as the finding of tubercle bacilli in a tuberculous process.

Again, if we have a Widal reaction in *progress*, clumps form and cessation of motility ensues, although a few individual bacilli are often seen outside of the clumps retaining their motility. Should this, or should it not constitute a positive reaction? Some observers regard it as positive, others do not. In this

connection also, confusion often results because of the disintegration of many corpuscles, more especially the white, the clumping of their granules being then mistaken for groups of bacilli. This might seem improbable were it not for the fact that the inexperienced repeatedly mistake these granules for microorganisms, exactly as they often mistake the nuclei of pus-cells for gonococci. Of course, the serum should be used in cases where it is possible to obtain it, and in this way very few corpuscles would be present.

Again, as to the way of preparing the dilution. If we are to make a specific dilution, a proper instrument should be devised for the purpose. Most observers employ a platinum loop, and take drops of both serum and culture. But here again it is self-evident that no two drops are ever exactly alike in size, especially where there is no uniformity in the size of the wire or loop.

There is likewise frequent variation in the number of tests made. Certain practitioners make but a single test, and whether the reaction be positive or negative, end the matter there. But a single positive reaction should not be considered pathognomonic, since it has been demonstrated that this may be caused by a very high temperature, while on the other hand, in a moderately afebrile stage the reaction may not occur at all. To be scientific and trustworthy, at least 2 tests should be made in each case of typhoid fever, one early and one in the middle of the attack.

If we could agree on a given diameter of platinum wire and a certain size of loop, something looking toward uniformity would be attained. Some use the leukocyte apparatus, and in this way a fairly accurate dilution is obtained.

All objections to the present methods of employing the Widal test have not been stated, for another point of considerable prominence to whether dried or fresh blood gives the better reaction. Some prefer the former, others the latter, and uncertainty sometimes arises in consequence. The dry method, first practised by Johnson, of Montreal, certainly seems very good when we consider that a positive reaction was obtained after 82 days (DaCosta). But every experienced observer knows, or should know, that fresh blood is by far the best for this test, although where the patient lives at a distance from the laboratory, dried blood must be used, and a positive result may be obtained with gratifying success.

In speaking of the results of a test the term "doubtful" and "pseudo" are not infrequently given. Such statements are unscientific and meaningless. A reaction should always be spoken of as either "positive" or "negative," and never as anything else. If there is cessation of motility and clumping of *all* the bacteria in the field (not some of them), this should be spoken of as a positive reaction. Where clumping without cessation of motility ensues, it should be called negative. In cases where some bacteria are grouped together and motility ceases and at the same time individual bacilli outside of the groups still retain their motility, it is only possible after the agreed time-limit has expired to speak of a negative reaction. In such cases a second test

would be necessary, for we know that diseases and conditions other than that of typhoid fever sometimes give a positive reaction, as, for instance, miliary tuberculosis, acute articular rheumatism, endocarditis, and septiemia. In fact, *normal* blood will sometimes give the reaction. Therefore, when these diseases, and even normal blood, may give the reaction, it is evident that we should employ a definite routine in our testing to minimize these phenomena.

The points which I would emphasize and urge the adoption of are:

1. The use of a uniform dilution.
2. A definite time-limit.
3. An agreement as to what constitutes a positive reaction.
4. The use of a culture of definite age, and a clear statement as to incubation or non-incubation.
5. A decision as to whether dried blood, fresh blood or serum is to be used.
6. A stated number of tests to be made in a given case.
7. To drop the terms "doubtful" and "pseudo" reaction.
8. Use of terms "positive" and "negative" only.

Of course some physicians may say that medicine is not an exact science, and no approximate uniformity can be expected. The object of this paper is not to revolutionize the method, but merely to plead for uniformity and definite technic in using a very important scientific aid to the diagnosis of typhoid fever.

Another aim is to discourage confusing modifications. It is well known that in the production of surgical and gynecologic instruments "modifications" are well nigh endless, each claiming to make the instrument much better than the original. Some of these modifications may be improvements, but when an instrument accomplishes its purpose easily and well, no modifications are needed.

So it is in the application of any scientific principle. After the original method has been devised, and a reasonable number of improvements adopted after satisfactory experience, then further "modification" is detrimental and confusing. The Widal test, properly employed, can be of the highest diagnostic service. An agreement along the lines indicated, would largely obviate inaccuracies in its use. Uniformity, not "modification," is the chief requirement for its successful use at the present time.

International Congress of Physiologists will hold its fifth session at Turin, September 17 to 23, 1901, in the Physiological Institute of the University, directed by Professor Angelo Mosso. The International Organizing Committee invites the attendance of physiologists and their active participation in the work and desires such to notify their acceptance to Dr. Z. Treves, Local Secretary, Corso Raffaello, 30, Turin, Italy, and to give him, by the beginning of August at the latest, the titles of the experiments or communications which they have in view, with a detailed list of apparatus or material necessary for demonstration. The payment of 10 francs paid to Dr. Treves in September ensures a card of membership. In addition to the General Secretaries for the work of preparation towards the fifth congress, Professor Frederic S. Lee (Columbia University, New York), Secretary of the American Physiological Society, kindly consented to discharge secretarial duties in America. American physiologists who intend to be present at the fifth congress are requested to notify him, in addition to communicating with Dr. Treves.

THE EFFECT ON THE BLOOD OF ETHER USED AS AN ANESTHETIC.*

BY
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AND
J. L. KALTEYER, M.D.,
of Philadelphia.

The authors review the somewhat meager literature on the subject, dwelling particularly upon the writing of Mikulicz, J. Chalmers DaCosta, Von Lerber, Oliver, Dudley Buxton, Hamilton Fish and Bloodgood. They allude to the great difference of opinion that exists as to whether or not ether causes blood destruction. They hold that it does cause blood destruction and that those who affirm the contrary have been misled by the blood concentration which results from the preliminary treatment and which is often added to by sweating during the anesthetic state. This blood concentration may mask the fall of hemoglobin; in fact in some cases will cause an apparent rise. The important facts to note are that the color index practically always falls and that the number of corpuscles increases.

These facts prove marked blood destruction and increased production of corpuscles deficient in hemoglobin, resulting from ether anesthesia. The authors report upon 50 cases in which blood examinations were made, and subdivides these reports into numerous tables for purposes of examination and comparison. In 49 of the cases the color index was lowered. The writers also showed sections of the marrow of a rabbit's femur the animal having been etherized to death. These sections showed marked erythroblastic proliferation. The authors conclude that the hemoglobin is absolutely reduced after the administration of ether, this reduction being manifest in the individual corpuscular hemoglobin value. The increased hemolysis is Nature's effort to rapidly replace destroyed corpuscles, and the regenerated cells are imperfectly supplied with hemoglobin. The authors urge that whenever possible 1 or 2 blood examinations should be made before ether is administered, and these examinations should be made before preparatory treatment is instituted. If less than 50% of hemoglobin is present an anesthetic is dangerous and should only be given as a matter of absolute necessity. In malignant disease a percentage of under 50 contraindicates operation. Mikulicz says no general anesthetic should be given under any circumstances if the hemoglobin is under 30%, we believe that 40% is probably the lowest justifiable limit. If operation must be performed when the hemoglobin is under 40% a local anesthetic should be given, except under stress of absolute necessity. It is true, cases with under 40% of hemoglobin are occasionally etherized (for instance we know of 1 case with only 24%) but such cases are rare and are only justified by the imperative necessities of a vital emergency. Whenever the percentage of hemoglobin is low the administration of the anesthetic should be entrusted only to an experienced man. As little ether as possible should be given. The surgeon should operate quickly and prompt measures should be adopted to bring about reaction and to remove the ether from the lungs and blood.

M. Dussaud, a scientist of Paris, is the inventor of 3 remarkable machines: The first, "a loud-talking telephone," is designed to catch, repeat, and preserve every syllable or word spoken in a room in which it is placed; the second, is a cinematograph, capable of conveying to the blind, ideas of motion in natural objects, as we receive them through the sense of sight; and the third is a microphonograph, which is constructed to convey to the deaf sounds of nature, from the human voice to the whisper of the wind.

*Author's abstract of paper read before the American Surgical Association at Baltimore, May 7, 8 and 9.

BLOOD EXAMINATIONS AS AN AID TO SURGICAL DIAGNOSIS.*

BY
JOSEPH C. BLOODGOOD, M.D.,
of Baltimore, Md.

Shock and Hemorrhage.—Observations have demonstrated that there is a leukocytosis of 15,000 to 24,000 following hemorrhage. This comes on within a few hours as a rule. There are not sufficient observations to demonstrate the relation between the amount of blood lost and the leukocyte-count. We have not sufficient observations yet to clearly determine the exact changes in the number of white blood-cells in shock from injury alone without loss of blood. Following hemorrhage, in addition to the rise in the number of leukocytes, there is a diminution in the number of red blood-cells and the percentage of hemoglobin. In severe hemorrhage a blood-count will indicate to a certain extent the amount of blood lost, but as a rule not until 6 to 10 or more hours have intervened after the hemorrhage.

The examinations of blood after contusion of the abdomen to ascertain, if possible, whether we can distinguish by the changes in the elements of the blood the difference between shock from the injury alone, internal hemorrhages and peritonitis from rupture are not sufficient in number to allow any conclusions.

The Importance of a Careful Blood Examination Preliminary to General Anesthesia.—There are now sufficient observations to demonstrate pretty conclusively that in marked anemia, especially when the hemoglobin percent is low, that general anesthesia especially if prolonged, is dangerous. Some authorities give 50%, others 40%, but the majority agree that 30% of hemoglobin is a danger signal, and if possible the operation should be delayed until appropriate treatment has been used to increase the percentage of hemoglobin and the number of red blood-cells.

Postoperative Leukocytosis.—There is need for much more study on this question. Most authorities agree that following ether there is perhaps a slight increase in the leukocytes, which, however, disappears within 24 and at least 36 hours. In operations with much loss of blood there would, of course, be a temporary rise in the leukocytes, but on the whole in the average operation one should expect the leukocytes to be within the normal limits 24 hours after operation. If this is true a sudden rise in the leukocytes would indicate some post-operative complication. In abdominal surgery it would indicate peritonitis, although if the peritonitis were a very grave infection the leukocytes would soon fall rapidly. Perhaps the leukocyte-count as an aid to the postoperative diagnosis in abdominal surgery is most important in the early recognition of obstruction. Here there is always a rise, usually over 20,000 associated with any obstruction of the intestines. This rise generally takes place within from 8 to 20 hours after the beginning of the obstruction, and in the few cases observed the rise in the leukocytes had been prominent before the clinical symptoms themselves were sufficiently clear to make a positive diagnosis. The number of observations so far have demonstrated that when after laparotomy with general anesthesia the patient develops slight distention or even marked distention with a little nausea and vomiting which seems more or less due to paralysis of the intestines and not to a definite obstruction or peritonitis, the leukocytes do not rise, at least not above 12,000 to 15,000. If these observations are confirmed the counting of the white blood-cells would be a great aid in the differential diagnosis in the first 24 to 48 hours or later after laparotomy between benign abdominal distention and obstruction or peritonitis, for which operative interference would be indicated early.

*Authors' abstract of paper read by invitation before the American Surgical Association at Baltimore, Tuesday, May 7, 1901.

Postoperative Phlebitis.—In a few cases observed there is a rise of the leukocytes varying from 15,000 to 20,000. Such a leukocytosis has been observed frequently in typhoid phlebitis, but on the whole, the observations of the changes in the leukocytes after operation are not well established.

The Importance of the Leukocyte-Count in the Early Recognition of Acute Abdominal Lesions.—In this field there are more observations and they seem to be of great importance.

Leukocytes in Appendicitis.—Observed within 48 hours the number of white blood-cells is in the majority of instances of great value in pointing to the extent of the inflammatory condition of and about the appendix. Cases of recurrent appendicitis, of appendicitis suffering from the first attack, first observed practically at the end of the attack when the clinical symptoms are subsiding, rarely show an increase in the white blood-cells. In a few instances when first observed within 48 hours after the beginning of the attack, but when the symptoms are subsiding, there have been a few leukocyte-counts of 15,000 which have rapidly fallen in a few hours to 10,000 and 7,000.

In the cases admitted within 48 hours with acute symptoms, if on account of the clinical picture, operation has been delayed, we have always observed a falling leukocytosis. These patients have recovered and at a later operation the appendix is found to be the seat of a diffuse inflammation, but there has been no evidence of pus outside the appendix. In one case admitted 16 hours after the beginning of the attack the leukocytes fell in 10 hours from 17,000 to 13,000, and in 24 hours to 11,000 associated with the disappearance of the symptoms. With 1 exception the highest first leukocyte count in this group has been 17,000, falling in a few hours to 12,000, 9,000 or even lower. A patient admitted 20 hours after the beginning of the acute attack had a leukocytosis of 22,000. The clinical symptoms, however, were not very marked. The patient was observed 8 hours; during this period the leukocytes fell to 16,000 and the local symptoms practically disappeared. Within the next 24 hours the leukocytes were 11,000, then 8,000, 7,000, then 6,000. Although this patient with a leukocytosis of 22,000 at the end of 20 hours recovered and there is every reason to believe that the inflammatory condition about the appendix subsided, nevertheless it is an exception to the general rule and it would be safer, I believe, to operate in those cases of acute appendicitis observed within the first 48 hours with a leukocytosis of 20,000.

Acute Diffuse Appendicitis; operation; recovery.—In this group there are a number of counts. In the majority the operation was performed at once a few hours after the first observation more on account of the clinical signs than the leukocyte-count. The average leukocyte-count when first observed has been from 15,000 to 18,000. With 2 exceptions, if further leukocyte-counts have been made, there has been a rising count. With these 2 exceptions, when the second count within 4 hours after the first showed a fall of 3,000 or 4,000, it is a question whether these patients would not have recovered if operation had been delayed. In 1 case observed from the beginning of the attack during the period of 36 hours before operation the leukocytes rose gradually from 8,000 to 18,000. In this case the appendix showed diffuse inflammation with no pus in or outside of the appendix and not much exudate. The highest count in this group, 25,000, 36 hours after the beginning of the attack, exhibited at operation the most intense inflammation and the greatest amount of exudate about the appendix.

Gangrenous Appendicitis; operation; recovery.—In this group of cases as a rule, the leukocytosis is higher and rises more rapidly, and in 3 instances it has been of the greatest importance in the early recognition of a grave inflammatory condition of the appendix which without doubt would have led to general peritonitis and death if

early operation had not been instituted. In 1 case the rapid rise in the leukocytes was practically the only clinical evidence of a grave abdominal condition. The patient, a boy, suffered from an attack of pain and nausea and vomiting following a few hours after taking a good deal of indigestible food. When the stomach relieved itself there was no further pain and no further abdominal symptoms. After 24 hours the leukocytes were 17,000. A leukocytosis of 17,000 in a patient a number of hours after taking food would make one suspicious of an inflammatory lesion. In 30 hours the leukocytes were 17,000, and in 36 hours 35,000. The highest temperature was 100°. There were practically no abdominal symptoms, except the history of a short attack of colic and vomiting following indigestible food. Because of this rapid rise and the high leukocyte-count (35,000), it was considered safer to explore the abdomen. A gangrenous appendix with beginning purulent pelvic peritonitis was found. A second and almost similar case was observed when the leukocytes rose from 13,000 to 24,000 in 20 hours after the beginning of the first colicky pain, the first count being 14 hours after the beginning of the pain. In this case there were in addition marked clinical signs of appendicitis. In a third case with very subacute local signs the leukocytes rose rapidly from 13,000 to 23,000 in 20 hours (first count 16 hours).

Acute Appendicitis Distended with Pus; Operation; Recovery.—The high leukocytosis and the rising leukocytosis in cases with more than 1 count has been observed in this group of cases, and the clinical picture and the leukocytosis corresponds pretty closely with that observed in gangrenous appendicitis. Within the first 48 hours after the beginning of the attack our observations have demonstrated that a high leukocytosis, at least above 20,000, has, in the majority of instances, irrespective of the clinical picture, been associated with an increasing diffuse appendicitis, gangrene or an appendix distended with pus.

ABSCESS VS. PERITONITIS.

Appendicitis Abscess.—So far, in our observations we have but 2 cases of abscess with leukocyte counts observed within 48 hours after the beginning of the attack. In 1 the leukocytosis was 18,000 and there were distinct local signs, although on account of the muscle spasm it was impossible to make out a collection of pus. This patient was operated on 24 hours after the beginning of the attack. A small abscess was found about the perforated appendix, the collection of pus was well walled off, but there was beginning peritonitis demonstrated by cloudy sterile fluid and fibrinous exudate on the intestines about the abscess. The low count, 11,000, 24 hours after the operation is hard to explain. This patient had marked local signs of inflammation but no definite tumor. At operation there was evidence that there had been recurrent attacks, the adhesions about the appendix were very firm but the collection of pus was very small.

Appendicitis, General Peritonitis; Operation.—The correct interpretation of the leukocyte-count in this group of cases is difficult because in the majority of cases it is hard to estimate the duration of the peritonitis. Observations seem to demonstrate that in the early hours of peritonitis there is a rapid rise in the leukocytes which, however, soon falls. Three cases have been grouped according to the duration of the attack and not to the approximate duration of the peritonitis. Five cases have been observed, in each of which the beginning of the attack was within 48 hours. Three cases recovered. One operated on 16 hours after the beginning of the attack with a leukocytosis of 14,000; 1 24 hours with a leukocytosis of 32,000 and 1, 36 hours with a leukocytosis of 36,000. In these 3 cases there were distinct local symptoms, but slight general abdominal symptoms. There was no distention of the intestine;

the exudate was chiefly purulent; in the exudate in the general peritoneal cavity only the colon bacilli were found and no streptococci. In 1 case observed 48 hours after the beginning of the attack and operated on at once, the leukocyte count was 25,000. The general abdominal symptoms masked the local symptoms, the patient was very ill, the intestines were distended, streptococci were present and the patient died. One patient was observed in the hospital. Twenty hours after the beginning of slight abdominal colic localized in the right iliac fossa, the leukocytes were 8,000; 6 hours later or 36 hours after the beginning of the attack, the leukocytes were 20,000. Clinically, the patient was not very ill, but on account of the rise of the leukocytes from 8,000 to 20,000, operation was performed. The appendix was perforated and surrounded by a few drams of purulent material; this pus was not walled off by adhesions; the general peritoneum was slightly injected; it appeared as if there was beginning general peritonitis. After the operation the leukocytes continued to rise for 12 hours up to 26,000; then within the next 12 hours fell to 11,000, the patient dying with clinical picture of peritonitis, which was found at autopsy. In this case the streptococci were present. In 5 cases admitted 3 days after the onset of the symptoms, all showing the clinical picture of peritonitis, the leukocyte-counts in 4 were 11,000, 11,000, 13,000 and 14,000. These 4 cases were fatal. The fifth case whose leukocyte-count was highest (17,000) recovered. The cultures from the peritoneal cavity in this case showed *Bacillus coli communis*. These counts and others not given in this short account seem to demonstrate that within 48 hours after the beginning of an attack, a very high leukocytosis is suggestive—but not at all positive—of beginning peritonitis, and that the leukocyte-count does not help us with regard to prognosis. After the second day, in cases in which the peritonitis has been present longer, we have never observed a recovery with a low leukocyte-count. If the leukocytosis still remains high at this period, the prognosis seems better for the ultimate recovery after operation.

Appendicitis-Abscess.—The leukocytosis in this group of cases seems more difficult to interpret. The majority of cases come in with a history of more than 3 days' illness and in the majority of instances the leukocyte count is high, above 16,000, up to 30,000. A high leukocytosis with a history of illness over 3 days, especially if associated as it is in the majority of cases with the clinical signs of tumor, indicates a collection of pus. There are exceptions to this rule. If clinically the patient is getting better, and the tension of the abscess is subsiding, the leukocytes fall. So it must be distinctly remembered that patients admitted at the end of an attack, clinically getting better, may have a collection of pus with a low leukocyte-count and if one is unable to make out the tumor by abdominal examination it will be impossible to tell previous to operation whether there is an abscess or not.

Leukocytosis in Intestinal Obstruction.—In this group of cases the increase in the number of the white cells associated even with very slight symptoms of intestinal obstruction is of the highest importance in the early recognition of the lesion. We have a large group of cases which have demonstrated that within 12 hours after the beginning of the obstruction the leukocyte count may rise to 20,000. Within the first 12 to 24 hours a few observations would demonstrate that if the leukocyte-count rises above 25,000 or 30,000, the probabilities are that one will find gangrene of the obstructed loop or beginning peritonitis. If observed on the second or third day after the beginning of the symptoms it is difficult to make a differential diagnosis with regard to gangrene or peritonitis. After the third day, in cases in which there is no gangrene and no peritonitis or in whom the autointoxication is not yet

very grave, the leukocytes still remain high, 15,000 to 23,000, according to the degree of obstruction; complete, higher; partial, lower. In the presence of gangrene, peritonitis or grave autointoxication, the leukocytes begin to fall. If the patient is admitted after the third or fourth day with a history of intestinal obstruction, and still has a high leukocyte count, the prognosis is good for operation. If the count is low, and especially if it is below 10,000, the probabilities are that you will find at operation extensive gangrene-peritonitis; or the patient will be so depressed by the autointoxication that reaction does not follow relief of the obstruction.

FRACTURES AND DISLOCATIONS OF THE SPINE.*

BY

DR. STEPHEN H. WEEKS,

of Portland, Me.

The doubt and uncertainty which have hitherto surrounded the treatment of fractures and dislocations of the spine can only be cleared up by a more careful study of the nature of such injuries. Though dislocation of the spine apart from fracture is rare, it nevertheless does sometimes occur. It is almost wholly confined to the cervical region, occurring most frequently in the lower half of the neck.

The dislocation is usually brought about by hyperflexion, which causes the inferior articular processes of the vertebra above to slip forward and upward on the superior articular processes of the vertebra below. This is rendered possible by the tearing or separation of the intervertebral disk and laceration of the surrounding ligaments. The displacement of the upper part of the spine is almost invariably forward.

Aside from positive demonstration by dissection it would seem almost impossible that the vertebrae bound together by numerous articulations, ligaments and cartilages, could be dislocated without being broken. Abernethy denies the possibility of such a dislocation. Though the accident is uncommon, a sufficient number of cases have been observed to establish the existence of this injury beyond a shadow of doubt.

Agnew gives a table of 24 cases of cervical dislocation; 11 of these were verified by a postmortem examination.

In the dorsal and lumbar regions the dislocation is very generally associated with fracture, producing what is more frequently called fracture dislocation. The manner in which these dislocations and fractures occur would seem to show, that for their production it is necessary that great violence should be applied while the spine is in the flexed position, as when a mass of earth falls upon a man while in the stooping posture. In the unilateral or one-sided displacement the force is supposed to act more on one side, the affected side, than on the other, or the luxation may result from the spine being violently twisted.

In addition to the displaced and fractured vertebrae, the laceration of the ligaments and cartilages, the cord itself is very liable to be compressed, contused, crushed, and often completely severed. Blood is also extravasated both within and without the spinal canal.

Symptoms of Dislocation of the Cervical Vertebrae.—Though in many instances there may remain some doubt as to the exact nature of the injury, yet in well marked cases of this luxation the head assumes a certain position, dependent upon the direction of the displacement; that is, it will be flexed upon the breast when the dislocation is backward, extended or carried backward when the luxation is forward, and turned to one side or the other when it is a lateral luxation. A break in the line of the

* Author's abstract of paper read before the American Surgical Association, at Baltimore, May 7, 8, 9, 1901.

spinous processes may also be detected, the dislocated vertebra and all above it being found either in front of, behind, or to one side of those below the seat of injury.

The same want of regularity which is noticed in the position of the spinous processes may be seen to exist to some extent also in the anterior surfaces of the bodies of the vertebrae by examining the posterior wall of the pharynx. Both in dislocation and fracture dislocation of the cervical vertebrae paralysis more or less complete follows the injury, affecting all the parts below the seat of injury. Death, after a lesion of this nature, may follow instantly, especially when the luxation is above the origin of the phrenic nerves; or it may be delayed for a few days, rarely exceeding two. Should the head be found twisted to one side and incapable of rotation, with a bent state of the neck, and if it were known that a sufficient cause of dislocation had been applied, there would be presumptive evidence of a unilateral displacement, provided, however, no deformity could be felt at a lower part of the cervical spine. Unilateral dislocation is sometimes brought about by extreme rotation of the neck. When this occurs the head will be turned toward the opposite side and fixed in that position, while an irregularity in the spines and in the transverse processes will be present. Pressure upon the nerves rising between the displaced vertebrae gives rise to peripheral pain and numbness. Varying degrees of paralysis, both of motion and sensation up to the level of the lesion, will result from compression of the spinal cord, and will depend upon the amount of injury inflicted. When the dislocation is unilateral, the cord may escape injury or the damage to it be but slight. When the paralysis is delayed for days, it will probably be due to an inflammatory effusion of serum or lymph, or to inflammatory softening of the cord.

A REPORT OF ONE OF MY OWN CASES.

August 29, 1900, Mr. C. P., aged 70 years, fell from a ladder a distance of about 12 feet, striking on his right shoulder and right side of the head. He was rendered partially unconscious, and while in this condition was carried into the house, when it soon became apparent that he had sustained some serious lesion somewhere in the cervical region. The head was thrown slightly backward, turned sharply to the right and before operation held firmly in this position. The left upper extremity was paralyzed as to motion; sensation was apparently good. Motion in right upper extremity fairly good, motion in lower extremity fairly good. He was, however, unable to pass his urine, the use of the catheter being required. There was great pain in the left arm and hand. Nine days after the injury I saw him in consultation with the attending physician, and found the condition which I have described above, and also found a deformity in the cervical spine at about the fourth or fifth vertebra. It seemed like a dislocation, and it seemed as if there was a fracture with a fragment of bone pressing upon, or had injured the spinal nerve supply to the left upper extremity. An operation was thought advisable to see if the condition could be improved. The next day, September 8, 1900, I made the operation. The laminae of the fourth and fifth cervical vertebrae were found broken and depressed. These were removed and the cord relieved of all pressure so far as possible, and the wound closed without drainage. The position of the patient during the operation was upon the face. As I was closing the wound the patient became badly cyanosed, and the pulse feeble. He was turned upon the back, $\frac{1}{2}$ of strychnia given hypodermically, and he was soon breathing regularly, and no further trouble was experienced. The seventh day after the operation the patient had a slight chill, became cyanosed with a weak pulse. He complained of numbness of the lower extremities, especially the left side. Strychnin $\frac{1}{2}$ gr. was given subcutaneously and repeated in half an hour. In the afternoon of the same day his temperature was 102.4°, respiration 28, pulse 108. The dressings were removed for the first time and it was found that the wound had healed by first intention. The lower stitches were removed, thinking there might be some retained fluids that had caused the sudden rise in temperature. Some bloody serum escaped from the wound; soon after this the temperature fell to 100.4°. The next day the bowels were freely moved with Hunyadi water, and the temperature became normal. During this attack the left leg became partially paralyzed. Strychnin $\frac{1}{2}$ and quinin 2 grains were given 3 times in the day. The wound was irrigated and dressed every day with a strip of sterilized gauze for drainage. I am satisfied that it would have been better had I put in a gauze drain at the time of the operation, as the man was large and muscular and the wound deep, and hard to close without leaving spaces between the divided tissues. At the end of

the sixth week from the time of the operation the wound was entirely healed. The fourth week the patient had an attack of cystitis. This was relieved by irrigation of the bladder twice a day with normal salt solution with 5 gr. of salol 4 times a day.

The fifth week the patient was able to sit up in a chair 3 or 4 hours each day. There was good motion of the head, lower limbs and right arm, but no motion in the left arm. At the end of the sixth week he was able to sit up from 4 to 6 hours each day, and was able to take a few steps with assistance. At this time had a little motion in the fingers of the left hand. From a letter received from his son and signed by the patient himself, dated November 15, 1900, 2½ months after the injury, I quote the following: "My father's condition now, as compared with that before the operation, is an improvement of 75%. He has a good appetite, can eat anything he wants, has gained a good deal in strength, can walk short distances by being supported on either side. His left leg bothers him some, and both legs are somewhat weak. The right hand and arm are nearly normal. Can write his name legibly. There has been some improvement in motion of left hand and arm, can move forearm some by having it supported. His greatest trouble is pain in his left shoulder, arm and hand. He can support his head and turn it fairly well in either direction, wound in neck entirely healed and lameness in cords and muscles seems to be growing less daily. His head was turned sharply to the right before the operation and firmly held in that position. The action of the bladder is normal."

Treatment.—I believe the surgeon should perform laminectomy in every case, if the condition of the patient is such as to justify any operation, regarding the operation in the first instance as an exploratory one.

When an exploratory laminectomy has been undertaken in fracture dislocation, and such displacement found that the removal of the neural arch does not suffice to relieve the pressure on the cord entirely, the operation can be extended to the articular processes, so that manipulation in the wound, combined with extension and rotation, may succeed in reducing the dislocation and restoring the normal line of the spinal column. In making the operation, resection should not be limited to 1 or 2 arches, but should be a large one, often involving the removal of 5 or 6 arches. The membranes and the cord can be carefully drawn first to one side and then to the other in order to expose the bodies of the vertebrae for examination, and if necessary operation. Mr. Horsley, of London, is definitely in favor of an operation in all cases where there are symptoms which would show pressure upon the cord. The greatest possible care should be taken to have the operation thoroughly aseptic. No operation demands greater care in all its details. The shock of the operation is almost always severe; hence every precaution must be taken to avoid it.

Mr. Horsley has called attention to five special dangers.

1. Hemorrhage, which is always considerable in amount, but by means of hemostatic forceps and by pressure by means of gauze and sponges dipped in hot water it may be easily controlled.

2. Difficulty in exposing the spinal canal. With care and patience this difficulty can be overcome.

3. Physical difficulties in treating the fractured vertebrae. In many cases the vertebrae are hopelessly fractured and displaced, and cannot be dealt with satisfactorily. Unfortunately we are not always, or even often, able to judge of the severity of the fracture until it has been revealed by the operation.

4. The hopeless nature of the injury to the spinal cord. In the majority of cases of fracture-dislocation the cord has been injured beyond the possibility of repair.

5. The danger of specific infection. With the observation of modern aseptic surgery there should not be much danger of septic infection, excepting in compound fractures where infection has taken place before the surgeon sees it, or in those cases in which a fistula results from too long use of the drainage tube.

6. To these dangers Dr. White has very justly added the danger of anesthesia in the prone position, the abdominal muscles being paralyzed. This is a very real danger, and was well illustrated in one of my own cases,

in which the patient stopped breathing and came near dying before the operation was completed. The depressed fragments of bone had been removed, the cord liberated and I was in the act of closing the wound when the respiration suddenly ceased. The wound was immediately covered with sterilized gauze; the patient turned on his side, the tongue pulled forward, and soon respiration was restored. The closing of the wound and the application of the dressings were made with the patient on his side. No further trouble was experienced and my patient made a good recovery. After the arches have been removed, the dura should be carefully examined to see whether it pulsates. If there is no pulsation it is generally due to adhesions, or to some other cause of interference with the continuity of the subdural space. If there is blood within the dura, the membrane will present a bluish or purplish hue; if pus, yellowish; if a tumor is present, or there is any increase in the quantity of cerebrospinal fluid, the increased tension and elasticity of the dura will be perceptible to the touch.

Whether the dura should be opened is a more serious question in the spine than in the brain. It is claimed by most operators that the dura should generally be opened. There are exceptions to this rule. The best result I ever had was in a case of fracture dislocation in the middle cervical region, when I did not open the dura. When the dura is opened and the operation completed, the opening in the dura should be closed if possible with a continuous catgut suture in order to secure immediate union.

If the dura is not opened, we cannot learn the exact condition of the subdural space or the cord itself. Having opened the dura the canal can be explored carefully by an ordinary bent probe. So, too, the extradural space between the dura and the laminae should be explored, in order to determine whether there are any irregularities or obstruction, fracture, dislocation, etc. If the cord has been crushed or injured by accident, any splinters of bone should be removed and any considerable irregularity due to dislocation or fracture of the bodies of the vertebrae should be carefully removed by gauge or chisel.

Attempts have been made by several surgeons to suture the cord itself, but without success. Leckey has even gone so far as to propose to shorten the spine by removing a part or the whole of a vertebra or portions of 2 vertebrae by gauge or drills, a procedure which is only mentioned to be condemned.

Drainage is usually required and a wick of sterilized gauze is the best, which can be removed in 2 or 3 days, or at the time of the first change of dressings. At the subsequent dressings the strictest antisepsis must be observed.

The spine is best supported during the healing process by plaster-of-paris dressings or by sand bags placed on each side of the patient.

The usual precautions as to food and drink must be observed, opiates given for the relief of pain, care in relief of bladder and bowels and the preventing of bed sores.

The University of Leyden (Holland) has offered the chair in pathology to Dr. Hausemann, now prosecutor at the Friederichshain City Hospital, Berlin. Two well-known former teachers at Berlin are already professors at Leyden; Professor Rosenstein of internal medicine; Professor Veit of gynecology.

The Causes of Death Among Sailors.—*The Hamburger Seewarte* has collected exhaustive statistics as to the causes of death among German sailors. In the year 1900, 355 seamen died, or no news of them could be gathered. Of this number 93 had not been heard from for so long that it is probable that they are dead; 127 died from accidents; 27 were murdered or committed suicide, leaving only 108 or less than $\frac{1}{3}$ who died natural deaths. In 48 cases the disease causing death was not known; 12 died from yellow fever and malaria; 13 from the after-effects of sunstroke; 2 died from apoplexy; and the remaining deaths were from various diseases, among which were mentioned typhoid fever, tuberculosis, and dysentery.

PRACTICAL THERAPEUTICS

Under the charge of
A. A. STEVENS,
Assisted by
L. F. APPLEMAN.

Warts and Corns.—Daniel (*Therapist*, February 15, 1901) states that very excellent results are obtained by painting warts and corns with pure formalin morning and evening, or more frequently, allowing the fluid a few minutes to be absorbed. The hardening action of formaldehyde very soon effects shrinkage, and the warts or corns may, after a week or two, be lifted off bodily by some manual inducement.

Honthin.—Frieser (*Therapist*, January 15, 1901), has used this compound (a combination of tannin with albumin and keratin) in 38 cases (26 children, 12 adults) of diarrheal disease with excellent results. He believes that it is half as powerful again as tannalbin, and that, owing to its more intimate chemical combination, a much larger amount of the drug reaches the large intestine unchanged. It is also cheaper than tannalbin. He prescribes the preparation in powders to adults in doses of from 8 to 15 grains, 3 to 4 times a day; in children in single doses of from 4 to 8 grains, 3 times daily. It is quite tasteless and odorless, and in the author's experience was always well borne.

Treatment of Neurasthenia.—Brewer (*Journal of the American Medical Association*, January 26, 1901) emphasizes the following points: (1) Rest, either partial or total, according to the severity of the symptoms, and to be enforced for from 2 to 6 weeks. For business men 1 or 2 hours quiet and rest in a darkened room every afternoon, with absolute relaxation from business. (2) Diet should contain proteid materials in abundance—eggs, milk, beef, and mutton being the basis. Sugar should be used only in small quantity. When dyspepsia is present malted milk, somatose or partially peptonized food is given. In severe cases, where absolute rest in bed is enforced, a cup of malted milk mixed with somatose is given every 2 hours. (3) Galvanism to all the muscles sciatin once daily. The head and neck should also be treated with currents of 1 to 3 milliamperes, using large electrodes, and the abdominal muscles with 5 to 10 milliamperes. (4) Hydrotherapy, sponge bath and the wet pack daily, the last beginning with a temperature of 70° F., and gradually lowered to 50° F., and prolonged about 1 hour. The wet pack promotes tissue metabolism, favors elimination of fatigue products, and promotes sleep. (5) Massage daily practised, the movements at first being gentle and superficial. Little by little the force and extent of the treatment should be increased. As the case progresses towards recovery physical exercises should be added. Outdoor cycling, golfing and horse-riding are also good. (6) Aperient drugs, such as a pill of aloes and strychnin, and an occasional calomel purge prove beneficial. When renal deficiency is present, diuretics such as effervescent potassium citrate are indicated. Neurasthenics are benefitted by drinking water freely. (7) When there is much cerebral irritability sodium bromid in combination with a cardiac tonic—fluid extract of adonis vernalis—is given. When there is anemia Bland's is the best preparation. Phosphates and hypophosphites, especially in the form of the compound syrup of hypophosphites, are excellent.

Cardiovascular Disease of Middle and Advanced Life.—J. Mitchell Bruce (*Lancet*, April 6, 1901) states that a large proportion of the distress, disabilities, and dangers attending degeneration of the heart are due to some extrinsic disturbance—distension of the stomach, constipation, worry or exertion, which alone, not the pathologic condition, calls for therapeutic attention. Many unfavorable influences can be avoided by effort of the will. The toxic effects of tobacco, alcohol, tea, etc., are due to abuse, from thoughtlessness or ignorance, or from indisposition, rather than inability to exercise self-control. Gout, corpulence, and allied metabolic disorders—fruitful causes of atheroma—call for temperance not

only in drinking, but in eating. One bit of advice is always of value—whatever they eat, to eat little. Moderation in amount is, speaking broadly, far more important than avoidance of the theoretic antecedents of uric acid, whether meat or milk or sugar. With observance of this single rule must go attention to free elimination by all the excretory channels and the insurance of sufficient exercise and enjoyment of fresh air. Moderation and due respect for age are the true guides to useful enjoyment of exercise after 40 years of age. Nervous strain, as distinguished from simple hard intellectual work, often must be relaxed if cardiovascular damage is to be prevented. In syphilitic lesions potassium iodide should be given freely; it is a remedy of great value. In simple atheroma, depending upon toxemia and anemia, the obvious indication is to enrich and purify blood, and this must be effected by a thorough reform in every department of personal hygiene. Arsenic and moderate doses of iodides, combined with an excess of alkalies, are calculated to promote the same end. The nutrition and activity of the myocardium can be increased and sustained by means of specific cardiac stimulants and tonics, such as strychnin, ammonia, and the digitalis group of drugs, with hematinics, stomachics, and laxatives to insure an abundant supply of wholesome blood, by the control of nervous influences—one of the conditions of healthy nutrition—and by the employment of the non-medical measures now so extensively used to increase the vigor and benefit the metabolism of the cardiac walls, particularly active and passive exercises and baths. In many instances precordial pain, palpitation, faintness, and small irregular pulse are not due to actual failure of the myocardium, but to an embarrassment of temporary character—indigestible meal, loaded bowels, nervous shock, or passing hardships. In such an event cardiac stimulants are out of place. Complete rest in bed, a carminative draught, calomel and saline purgatives, spare and highly digestible food, reassurance, and a little time are quite sufficient means of treatment. When true failure occurs, manifested by residual dilation, mechanical congestion, and dropsy, the restorative measures are bodily rest, a light solid diet and a definite allowance of alcohol, if required, active purgation with mercurials, salines and jalap, and the exhibition of sufficiently large doses of digitalis or one of its congeners, in combination with saline and other diuretics. A few points should be emphasized: (1) We must not be afraid to purge these patients if necessary every morning; (2) when the appetite flags and flatulence occurs, instead of slops a blue pill or dose of calomel should be given and light solids persevered with; (3) nocturnal restlessness and sleeplessness are to be met unhesitatingly with permission to spend the night in an easy chair by the bedside; (4) acupuncture and drainage succeed perfectly in these senile cases with dropsy, as much as 10 pints or more of serum escaping in the course of 24 hours, to the complete and often lasting relief of the circulation.

Yeast in Diabetes.—Nobécourt (*Semaine Medicale*, No. 2, 1901) states that yeast attacks nascent glucose formed from the conversion of carbohydrates, and that experiments have shown that a quantity of glucose which would produce alimentary glycosuria ceases to do so if a small amount of yeast is administered at the same time. It may therefore be possible by the administration of yeast to permit diabetic patients to take a larger quantity of carbohydrate food. A dose of a tablespoonful may be given after meals.

Formaldehyd in the Treatment of Favus.—Demidoff (*Mercel's Archives*, April, 1901) has used formaldehyd with excellent results in a number of cases of favus. After as many of the crusts as possible have been removed mechanically, the remaining ones are then painted with a 5 to 10 percent solution of formaldehyd. The scalp is then covered with a layer of cotton and gauze to prevent evaporation and to render the action of the formaldehyd more lasting. This application causes redness and burning of the skin. In a patient who had been affected with favus for years and who had become almost completely bald, the applications of formaldehyd effected a perfect cure; the crusts and redness disappeared, and the skin of the scalp resumed its normal appearance.

Treatment of Bronchitis.—Patton (*Clinical Review*, March, 1901) states that in most cases the attack is either mild enough or sufficiently advanced to allow of a prescription containing an expectorant, sedative or demulcent. He recommends the exhibition every 2 hours of the following:

R
 Ammonium chlorid 3 to 5 grains
 Codein $\frac{1}{4}$ to $\frac{1}{2}$ grain
 Solution of ammonium acetate 20 drops
 Syrup of licorice anocolin A sufficient quantity.

He believes that bimeconat of morphin and codein are far more efficient than heroin, dionin and similar preparations. Where there is considerable laryngeal irritation he suggests a combination like the following:

R
 Ammonium chlorid 3 to 5 grains
 Morphin bimeconat $\frac{1}{8}$ of a grain
 Fluid extract of cannabis indica 1 drop
 Syrup of tolu Sufficient quantity.
 To be taken every 2 to 4 hours.

Or when the expectoration is very viscid:

R
 Ammonium chlorid 5 grains
 Codein $\frac{1}{4}$ grain
 Tartar Emetic $\frac{1}{2}$ grain
 Fluid extract of licorice 10 drops
 Glycerin 10 drops
 Syrup Sufficient quantity.
 To be taken every 2 hours.

Ammonium bromid is often very effective in bronchitis in weak, nervous people. In acute bronchitis of influenza alteratives often act better than expectorants. Five grains of sodium

The Treatment of Nasal Syphilis.—Morris (*Medical Age*, xix, No. 4), states that in nasal syphilis local applications to the nose and inunctions of mercury to the body are necessary in addition to internal treatment. The oleate of mercury should be applied to the thinner parts of the skin, in various parts of the body. A half hour should be devoted to clearing the nasal cavity of all contained crusts. These may be softened by soaking with Dobell's solution used by means of a soft rubber bulb syringe or a Birmingham douche, after which they can be removed with angular forceps. After all the large crusts have disappeared, the small crusts and any dried secretion may be removed with a cotton applicator. A careful search for any denuded or loosened bone should then be made. After cocaineizing, probe the nose, detach and extract any loosened bone. Remaining particles of pus are destroyed by hydrogen peroxid applied upon a cotton applicator. The whole ulcerated area should then be touched with a solution of silver nitrat 1 dram, distilled water 1 ounce. This should be followed by an insufflation of the following powder:

R
 Iodoform of each 30 grains
 Tannic acid
 Bismuth subnitrat
 Powdered acacia of each 2 drams
 Morphin sulfat 2 grains

This treatment should be repeated daily for several days and the patient directed to syringe the nose 20 to 30 times a day with Dobell's solution.

The Treatment of Bubo.—Griffith (*New York Medical Journal*, lxxiii, No. 7) considers internal medication often superfluous, beyond keeping the bowels freely open and the observance of general hygienic measures. Iron may be given with good effect. Abortive measures are indicated in the early stages. An ice-bag at bedtime or a flaxseed poultice applied to the bubo, combined with vigorous treatment of the primary source of infection, will prevent further development in about $\frac{1}{3}$ of all cases. The following salve may be applied once daily to soften the tissues:

R
 Mercurial ointment,
 Belladonna ointment,
 Ichthyol of each equal parts.

As soon as fluctuation is present the abscess should be opened and drainage established.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

April 27, 1901. [No. 2104.]

1. Traps and Pitfalls in Special and General Practice. DUNDAS GRANT.
2. Remarks on the Training of Ophthalmic Surgeons. A. FREELAND FERGUS.
3. On the Advisability of the Inclusion of the Study of Anesthetics as a Compulsory Subject in the Medical Curriculum. DUDLEY W. BUXTON.
4. On Certain Practical Applications of Extract of Suprarenal Medulla. E. A. SCHLAFFER.
5. Suprarenal Gland Extract in the Epistaxis of Hemophilia. DAN MCKENZIE.
6. The Dietetic Value of Sugar. H. WILLOUGHBY GARDNER.
7. A Preliminary Note on the Hibernation of Mosquitos. H. E. ANNETT and J. E. DUTTON.

1.—Grant, in a preliminary address on **traps and pitfalls in special and general practice**, discusses the business of practice, infection, specialism, the debt of general medicine to specialism, the debt of specialism to general medicine, physical examination and general observation, consulting and general practice, venesection, pitfalls in general practice, pitfalls in special practice and special and medical education. [A.O.J.K.]

2.—An academic discussion by Fergus of the **requisites of the training of ophthalmic surgeons**. [A.O.J.K.]

3.—A plea by Buxton for the including of the study of **anesthetics as a compulsory subject in the medical curriculum**. [A.O.J.K.]

4.—See editorial page.

5.—McKenzie reports a case of the **epistaxis of hemophilia** occurring in a boy of 13, in which, after various remedial procedures—such as the insufflation of tannin, plugging the nostrils, and calcium chlorid internally—had failed to control permanently the bleeding, the application of a **watery solution of suprarenal gland** was followed by immediate cessation of the hemorrhage. A slight recurrence several hours later was effectually stopped by another application of the suprarenal gland solution. [A.O.J.K.]

6.—Gardner, in an article on the **dietetic value of sugar**, discusses the history of cane sugar and beet sugar, and from a consideration of the results of laboratory experiments, as well as from the experience of mankind, concludes that sugar is an extremely valuable article of diet. He believes that the vitality and stamina possessed by the Anglo-Saxon race, as contrasted with the Russians, are due in large part to the greater amount of sugar consumed by the Anglo-Saxons. Its use is urged in simple marasmus, in tuberculosis, in conditions of malnutrition and in growing boys and girls. It is believed that of itself it does not harm the teeth. Bearing in mind alimentary glycosuria, the urine should be examined if the patients be taking large quantities of sugar. In the cases of children with mucus disease, care must be observed in its administration; the obese must avoid it. Its interdiction in rheumatism is possibly merely a prejudice, but those who suffer from gout must not use it. [A.O.J.K.]

7.—Annett and Dutton refer to the recent communication by Wright (AMERICAN MEDICINE, May 4, page 217) concerning the resistance of the larval mosquito to cold, and consider it truly remarkable that it has been found that larvae may withstand a temperature of 4° C. for 2 weeks. They note briefly their own investigations concerning the **hibernation of mosquitos**, and conclude that there can be no doubt that mosquitos (both Anopheles and Culex) hibernate during the winter months in England, and that it seems certain that not only the adults, but, from Wright's experiments, the larval forms also provide for the continuation of the species during the cold weather. Of the hibernating mosquitos found, there were only females, and these had been fertilized. Kept in a dry cage they quickly died, but kept in a damp cage in the cold they survived some months, preserving their so-called hibernating attitude. When warmed, they soon became active, fed on blood, and deposited eggs on the fifth, sixth, seventh and eighth days. Many of them died after depositing a batch of eggs. [A.O.J.K.]

The Lancet.

April 27, 1901. [No. 4032.]

1. The Sometimes Successful Treatment of Cases of Apparent Incurable Blindness. CHARLES BELL TAYLOR.
2. On 2 Cases Bearing upon the Question of the Limitations of Enterectomy. ARTHUR E. BARKER.
3. On Hourglass Stomach; with List of 6 Cases Operated upon by the Writer, and a Tabulated List of all Cases in which Operations have been Performed. B. G. A. MOYNIHAN.
4. Reversed Pulsus Paradoxus due to Aneurysm of the Aortic Arch. JOHN HAY.
5. Case of a Parasite—"Argas (or Ornithodoros) Mégnini" Dugés—in each Ear. J. CHRISTIAN SIMPSON. With a Note on the Anatomy of the Specimen by E. G. WHEELER.
6. A Case of Belladonna Poisoning; Morphia Used as an Antidote. PETER D. STRACHAN.
7. Dermatitis from Arsenic in Stockings. F. W. TUNNICLIFFE and OTTO ROSENHEIM.
8. Tetanus Puerperalis. KEDARNATH DAS.
9. Mercury and Iodide of Potassium Internally given with Pilocarpine Hypodermically in Disease of the Eyes. G. HERBERT BURNHAM.

1.—Taylor refers to a number of cases of **apparently hopeless blindness** in which success followed persistent treatment. The remedies employed in addition to the usual routine and whatever measures were indicated consisted in electricity, the administration of mercury in large doses alone or in combination with other drugs. Emphasis is laid on the rational method of treating disease by removing the cause, strengthening the vital resistance, and treating symptoms carefully as they arise. [J.W.M.]

2.—Barker reports **2 cases of enterectomy** which have some bearing on the limit of intestinal resection. The first patient, a lady of 58, whose urine contained 6.6% of sugar, suffered from severe pain above the umbilicus, vomiting and obstinate constipation. On operation a carcinoma of the colon producing stricture was found. Four and one-half inches of the bowel were incised and the divided ends united by means of 2 rows of silk sutures. Infection, followed by the discharge of some feces and omental sloughs occurred, but eventually complete recovery resulted. The glycosuria which existed adds additional interest to the case. The second case was that of a lady of 76, who for 2 years had a neutral hernia in an ovariectomy scar. For 3 years she suffered from abdominal pain, vomiting and later some obstruction. On operation strangulated hernia of the small intestine through the omentum was found, and the condition of the intestine was such that a resection of the 5½ feet, followed by an end-to-end anastomosis was performed. Uninterrupted recovery followed. Senn has concluded from experiments on animals that not more than ¼ of the small intestine should be removed. The lower in the intestinal tract the resection is done the better it is tolerated. [J.W.M.]

3.—Moynihan in discussing **hourglass stomach** states the symptoms are usually those of dilation following a chronic gastric ulcer. Characteristic signs are (1) disappearance of fluid introduced into the stomach; (2) after lavage of the stomach a sudden gush of ill-digested food may occur; (3) succussion splash heard in the pyloric cavity after emptying the cardiac; (4) after distending the cardiac pouch it gradually subsides, and at the same time the pyloric distends; (5) when both pouches are inflated a sulcus or constriction may be evident. For the relief of the condition gastroplasty, gastrogastrostomy, gastroenterostomy, and partial gastrectomy have been performed. The operation applicable in each case must be determined after a careful examination at the time of operation. [J.W.M.]

4.—Hay reports a case of **reversed pulsus paradoxus** in aneurysm of the arch of the aorta, caused by pressure of the innominate artery. By the aneurysm behind and the sternum in front, the lumen of the artery was almost obliterated at the end of inspiration, at which time no radial pulse could be felt. The patient was a young man who gave a history of syphilis, strain, and rheumatism; suffered from severe pain between the shoulders, headache, dizziness, suffocation, and pain on

swallowing. The larynx and trachea were displaced to the right, there was fullness of the right side of the neck and engorgement of the veins of the arms. Tracheal tugging was present, and a distinct expansile pulsation could be felt behind the left clavicle. He had a deep, wheezing cough, and the cardiac area was enlarged; 2 murmurs were heard, one systolic heard over the seventh right costal cartilage, the other diastolic, heard best over the lower end of the sternum. Postmortem showed aneurysmal dilation of the entire arch. A projection from the aneurysm was adherent to the anterior surface of the trachea. The heart showed hypertrophy and dilation. [J.W.M.]

5.—Simpson reports the presence of the parasite, *Argas Megnini* in each ear of a patient who, 2 months before, had been camping in Arizona. One came away of its own accord, the other was adherent to the tympanum, and was removed by first inserting into the canal a pledget of cotton saturated with chloroform, thus killing it, and then syringing the canal. The symptoms to which the presence of the parasite gave rise were pain above, and a "rattling" sound in the ear. [J.W.M.]

6.—Strachan reports a case of *belladonna poisoning* occurring in a boy of 5, in which *morphin* was used as an antidote with a successful result. The case illustrates the tolerance of the child for the belladonna, he having taken $\frac{1}{2}$ ounce of the glycerin of belladonna (supposed to contain about 1 grain of the alkaloid hyoscyamin), and having remained untreated for 5 hours. The case illustrates also the efficacy of morphin as an antidote, the drug being used hypodermically in 2 doses of $\frac{1}{4}$ grain each, with an interval of about 10 hours. [A.O.J.K.]

7.—Tunnicliffe and Rosenheim, in an article on *dermatitis from arsenic in stockings*, report several cases of dermatitis traced to the wearing of stockings in which arsenic was demonstrated by chemie investigations. They report also the results of their examination of a number of stockings purchased in the open market, and which revealed the presence of arsenic. The arsenic was ascertained to be used in the process of dyeing, and in stockings examined it was present in much larger quantity than is permitted by the laws of certain countries, such as Germany, Austria, and Sweden, that have adopted regulations governing the use of arsenic in dyestuffs. They suggest that if arsenic mordants cannot be dispensed with in dyeing, their use should at least be supervised. [A.O.J.K.]

8.—Kedernath Das, of Calcutta, reports a case of *tetanus puerperalis* successfully treated. The patient, a Hindu woman, aged 28, was admitted to the hospital 2 weeks after delivery with the jaw completely locked, and the spasms did not entirely cease until 6 weeks after admission. There was administered in this period more than 8 ounces of chloral, as much bromid of potassium, and a quantity of tincture of Indian hemp. She was also given plenty of liquid food, and, in addition, saline injections under the breast. In a rational treatment of this dread disease one must look to the following points: (1) To destroy the bacteria at the seat of infection by thoroughly antisepticizing the parturient canal and by subsequently keeping it aseptic; (2) to eliminate the toxins already absorbed by brisk purgation and intercellular injection (under the breasts) of normal salt solution; (3) to overcome the symptoms induced by the action of toxins, viz., the increased reflex irritability of the higher nerve centers, and this is best accomplished by keeping the patient absolutely quiet in an isolated place, and by chloral in very big doses, given either per os, if possible, or per anum; or hydrobromate, or morphia; and (4) to neutralize the poison already absorbed and to immunize the body after local infection has taken place. In regard to the fourth point, theoretically, antitoxin should be used, but its action is as yet uncertain; and though in other forms of tetanus it has reduced the mortality from 90% to 59%, its use in puerperal tetanus has as yet brought no improvement. [W.K.]

9.—Burnham discusses the value of *mercury and potassium iodid* internally with *pilocarpin* hypodermically in diseases of the eye, and reports 2 cases in which the treatment was employed with gratifying results. The first was a case of sclerokeratitis, which, after 4 months of active treatment, cleared up almost completely, nor is a return feared. The second was a case of sympathetic ophthalmia, in which the

treatment was continued for 8 months, and while the improvement was interrupted the results at the time were all that could be desired, and it was expected that the normal condition of the eye would be restored. The efficacy of the treatment is attributed to its power of arousing to excessive activity the normal physiologic processes in diseased tissue, and thus assisting nature in bringing about a restoration. [J.W.M.]

Journal of the American Medical Association.

May 11, 1901. [Vol. xxxvi, No. 19.]

1. The Diagnosis and Treatment of Injuries of the Head. JAMES H. DUNN.
2. The Relation and Position of Pelvic Organs: Examination of Patients. FRANKLIN H. MARTIN.
3. Four Cases of Calculi Impacted in the Ureter. Nephro-Ureterectomy, Abdominal Uretero-Lithotomy. Vaginal Uretero-Lithotomy. B. R. SCHENCK.
4. The Differential Diagnosis of Ectopic Pregnancy, With Especial Reference Between it and that of Early Uterine Abortion. HIRAM N. VINEBERG.
5. I. Union Following Pathologic Fracture of the Femur due to Secondary Carcinoma. II. Spontaneous Disappearance of Carcinoma of the Lip. LEONARD FREEMAN.
6. The Rational Use and Limitations of Therapeutic Measures Intended to Promote the Absorption of Exudation within the Eyeball. Medicinal Measures. RANDOLPH BRUNSON.
7. Suppurating Mastoiditis with the Report of Cases. Suppurating Otitis Media, Both Ears; Suppurating Mastoiditis on the Right Side, Abscess Extending into the Deeper Tissues of the Neck, and Extracranial Abscess. J. H. BRYAN.
8. Remarks on the After-Effects of Operations for the Removal of Adenoid Tissue at the Vault of the Pharynx. E. L. SHURLY.
9. Medical Treatment of Actinomycosis. J. L. SAWYER.
10. Tropical Abscess of the Liver. E. F. ROBINSON.
11. The Prevention of Insanity. DANIEL R. BROWER.
12. When Should We Operate in Appendicitis? DOUGLAS C. MORIARTY.
13. Operating Under X-rays. J. F. BALDWIN.

1.—For diagnosis of injuries of the head it is always desirable and usually necessary to shave the head. Two conditions needing special consideration are the natural irregularities of the skull and homefactions from extracranial effusions. These under certain described conditions may emulate fracture. A careful study of hemorrhages and ethymosis and cleansing of the various cavities, exposing the brain to infection is necessary. In injuries without important local signs or definite focal symptoms the treatment must be nonoperative. Fractures of the vault without wound are considered in 3 classes (1) those with local signs but no focal cerebral symptoms; (2) with both present; (3) localized cerebral symptoms of compression indicating most frequently rupture of the middle meningeal. In the first class, if there is no depression there is no indication for operation. Depression must always be relieved by trephining. When the focal symptoms are on the opposite side, trephine at the site of the lesion; when on the same side, trephine on the opposite side. With facial paralysis on the same side as the lesion and monoplegia or hemiplegia on the opposite side, trephine over the motor area implicated. The prognosis is bad. With complex symptoms without connection with any determinable cranial lesion the treatment must be along the lines indicated in the first category. In hemorrhage whether extra or subdural or intracerebral the clots should be removed and the flow controlled. Fractures of the base may be recovered from. The preventable deaths are due to infection. In fractures of the vault with wound in which there is loss of bony wall, simple aseptic healing after careful approximation of the tissues layer by layer causes the least cortical irritation. Insertion of foreign substances is wholly objectionable. In operating for rupture of the meningeal artery, resection of a large rectangular bone flap is advised and the technic is described. [I.M.]

2.—The bladder and rectum perform their functions without interfering with the position of the uterus. They both collapse with the long diameter anteroposteriorly, thus occupying as much anteroposterior space when empty as full.

The upper wall of the empty bladder is not in contact with the anterior wall of the uterus, the intervening space being occupied with intestine. This is demonstrated in laparatomies. The direction of abdominal pressure in consequence is at all times in line with the uterine axis and therefore equally distributed to all of its supports. The lymphatics, blood and nerve supply and general and local examination described. [H.M.]

3.—Three cases of Kelly's and 1 of Halsted's of stone impacted in the ureter, are reported in detail, the literature of the operation is reviewed and a table of 84 operations is appended. When the stone cannot be felt through vagina, rectum or abdominal wall, diagnosis must be made by catheterizing the ureters with a wax-tipped bougie or by radiography, or by exploratory celiotomy. The points of predilection are from 3 to 6 cm. from the kidney, the point where the urethra crosses the iliac artery, and just above the vesical orifice. If the calculus is in the vesical portion it can be reached by the urethra, vagina, rectum or through perineal incision. Extraperitoneal operation is advised for those higher up. [H.M.]

4.—Vineberg presents several cases with misleading symptoms and discusses the frequency with which ectopic gestation is diagnosed as early uterine abortion, and the advisability, if the latter is not running a natural course, of anesthetizing for rigid examination and proper curettage is indicated. If doubt remains after this, exploratory vaginal incision should follow. The unreliability of the so-called pathognomonic signs and symptoms of ectopic gestation are shown. [H.M.]

5.—Fractures due to metastasis of malignant disease or abnormal fragility of the bones. In the case of subsequent union reported a hard shell of bone was found around the deposit. Union is more likely to occur in deposits of slow growth and the slower the growth the less the pain. The degree of pain therefore affects the prognosis. Nonunion is due to the health of the patient, extensive destruction of the bone or separation of the fragments by the growth and not to any inhibition of ossification by the disease. The case of spontaneous disappearance of carcinoma described is one supposed from the history to be such. [H.M.]

6.—In severe inflammation of the eye it is very important that the patient be at rest. Too often there is neglect to put the patient in bed. The circulatory, respiratory, secretory and excretory functions should be attended to and an active cathartic is generally indicated. Bloodletting is very beneficial in certain acute conditions. Altreatives are more influential than any other drugs. In conjunction with hot baths larger doses of iodids can be borne. Mercury should be used till the hemoglobin begins to decrease. Inunction is preferred. Pilocarpin is the best diaphoretic. Iodin salicylate or aminoform should be used in rheumatic exudates. Hot baths are a valuable adjunct to internal remedies. [H.M.]

8.—The immediate untoward effects which may follow removal of adenoids are hemorrhage, injury to the pharynx, reactionary acute inflammation affecting the pharynx, larynx, tonsils, ear, accessory cavities and sepsis. Among remote effects are subacute disease of the pharynx, chronic diseases of the ear, diseases of the accessory sinuses and tuberculosis. The latter danger has been much overrated. [H.M.]

9.—Six cases verified by the microscope and one not so verified are described. This is followed by a short review of the literature, etiology, bacteriology, pathology and treatment. The conclusions are that actinomycosis is not uncommon, that when pure it is nonsuppurative, afebrile, comparatively painless and slowly progressive; that the signs and symptoms are often pathognomonic; that combined surgical measures and potassium iodid give the best results, the latter administered internally curing a large percentage of cases. Interstitial injections exert a striking influence. [H.M.]

10.—During 1899, 12% of the dysentery cases in the Reserve Hospital at Manila developed abscess of the liver. The part played by Amoeba coli is as yet undetermined. Natives rarely develop it, the frequency among Europeans being due to overeating and drinking and other conditions favoring hepatic engorgement. The right lobe was commonly affected, and the abscesses in most cases multiple. In the diagnosis, symptoms

are of little value, this depending on local signs and aspiration of pus. Dulness was increased greatly above, below and to the left of the median line. There was persistent pain over the whole region, with tenderness in the anterior axillary line just below the ribs. Local bulging, edema, with increased width of the interspaces makes abscesses probable, but aspiration alone establishes the diagnosis. Several punctures should be made. The presence of pus makes operation imperative. [H.M.]

11.—Preventive measures for insanity should come from the State. Brower advises the election of senior students in medicine by competitive examination as internes in hospitals for the insane, and these would act as centers of prophylaxis for the community. Treatment for incipient cases should be provided in every hospital on account of the prejudice against legal commitment to asylums. Heredity is the chief causative factor. Marriage should be regulated and degenerates asexualized. Neurotic mothers should be placed under the most favorable conditions during gestation, a healthy wetnurse provided and the child carefully trained. Public schools are sadly deficient so far as neurotic children are concerned. [H.M.]

12.—The presence of pus in an inguinal tumor, rigidity of the abdominal muscles, a paroxysm of pain, and in late cases edema of the abdominal walls, with distention and progressive inflammation, a rise followed by a fall in temperature, with a weaker and quicker pulse, a chill, are some of the conditions indicating immediate operation in appendicitis. [H.M.]

13.—The operation was for the removal of a bullet in the kneejoint which changed its position constantly with gravity. The bullet and point of the forceps had to be located in 2 planes by rolling the patient back and forth. Operation was difficult owing to darkness, etc., but was successful, ultimate motion being perfect. [H.M.]

Boston Medical and Surgical Journal.

May 9, 1901. [Vol. CXLIV, No. 19.]

1. Some Reported Cases of Typhoid Fever Attributed to Contaminated Oysters, With Certain Facts Concerning this Means of Infection. CHARLES HARRINGTON.
2. Experience with the Widal Reaction in Typhoid Fever. CHARLES F. WINTINGTON.
3. The Widal Reaction in Typhoid Fever. GEORGE B. SHATTUCK.
4. Means of Infection in Typhoid Fever. E. N. WHITTIER.
5. Early Diagnosis of Typhoid Fever by Isolation of Bacillus Typhosus from Stools: Conclusions of Dr. L. Remy Based on the Use of his Asparagin-Laetose-Carbol Gelatine. CALVIN G. PAGE.
6. The Fevers of the Philippines. A Preliminary Report on the Nature of the Fevers Prevalent in the Philippine Islands, Including Typhoid Fever, Malta Fever, the Malarial Fevers and Undetermined Tropical Fevers. JOSEPH J. CURRY.

1.—The cases are taken from literature published since 1893. The investigations of De Glaxa, in 1889, as to the influence of sea water on pathogenic bacteria is summarized. Foote found typhoid cultures introduced with shells virulent at the end of 48 hours. Polak's conclusions were opposed to those of others who had determined that the organism lives longer in the oyster than in sea water itself. Klein found the bacillus after 4 to 18 days in oysters placed in purposely-infected water. According to Boyce, the organism will not grow in the tissues of the oyster. Danger arises wholly from sewage in water where the oysters are planted or stored. The remedy lies in transferring the beds or in storing contaminated oysters from 7 to 16 days in clear sea water. [H.M.]

2.—Withington reports 4% of failures with Widal test in 253 cases of typhoid at the Boston City Hospital. That the reaction rarely appears before the sixth and often not before the ninth or tenth day lessens its value in early diagnosis. In one case, after 8 failures, it appeared on the twenty-ninth day. The technic is described. [H.M.]

3.—Shattuck reports 62 additional cases with clinical diagnosis of typhoid in which 3 failed to respond to the Widal test; 1 additional doubtful case with a positive reaction, and

another developing a different disease, also positive, but attributed to typhoid 2 years before. During the period of the Spanish-American war soldiers having malaria gave positive reactions, but previous typhoid could not be excluded. The paper begins with a resume of one presented 4 years ago. [H.M.]

4.—Whittier alludes to the virulence of rural typhoid and the many sources of infection, with especial reference to the outbreak at Marion attributed to contaminated oysters.

5.—Colonies appear on Remy's gelatin after 2 days at room temperature. The appearance is not sufficient for diagnosis. Clumping with typhoid serum and the absence of indol and gas bubbles are necessary for differentiation of the typhoid and colon bacilli. Cultures have been obtained as early as the third day. In 3 cases bacilli have been found before the serum reaction or any other sign of typhoid was present. The time required to make a report is at least 3 days. [H.M.]

6.—Typhoid fever in the Philippines has never assumed anything near the epidemic form as in camps in the United States during the late war or as in South Africa. The use of old infected Spanish camps has been the source of much sickness, including typhoid. The disease undoubtedly existed before our occupation. The extent is unknown owing to the worthlessness of Spanish and native records as to causes of death. The death-rate in the First Reserve Hospital has been remarkably low, only 15%. No doubt some deaths among soldiers attributed to dysentery and malaria have been due to typhoid. The adoption of prophylactic inoculation for departing troops is worthy of serious consideration. Sixteen cases of Malta fever came under Curry's observation and he believes the disease is not uncommon there. The symptoms are described. Compared with other tropical countries the malarial fevers are not severe and are the causes of relatively few deaths, but are serious on account of predisposing to other diseases through debility and complicating convalescence. The number of admissions to the above hospital was greater than for any other cause. The estivo-autumnal tertian and quartan types are found, a larger percentage of the tertian are reported than in other tropical countries and it is probably as common as the estivo-autumnal. Mosquitos are very thick and active. Very little has been done in the tropics in systematic scientific examinations but when conditions are on a peace basis valuable work can be done toward identifying the undetermined fevers. Some are of short and others are of long duration of the continued type. Hepatic fever is accompanied by marked jaundice and acute enlargement of the liver and lasts from a few days to weeks. Fatal cases show hyperplasia and hyperemia of the liver. In 1 case there were multiple abscesses without previous dysentery. Examinations were negative for the ameba. [H.M.]

Medical Record.

May 11, 1901. [Vol. 59, No. 19.]

1. The Toxic Origin of Neurasthenia and Melancholia. M. ALLEN STARR.
2. Potain's Simple and Accurate Method of the Percussion of the Heart (with Postmortem Verifications). GEORGE M. CONVERSE.
3. The Treatment of Pneumonia, Including the Hypodermic Injection of Saline Solution. F. NEUHOFF.
4. Syphilis in the Well-to-Do. J. A. McDONALD.
5. Subarachnoid Spinal Cocainization as a Means of Inducing Surgical Anesthesia. F. N. LIELL.
6. Keloid Formed upon a Vaccination Scar. FREDERIC GRIFFITH.
7. Successful Pylorotomy on a Man in his Seventy-first Year. ALFRED KING.
8. Postural Treatment in Threatened Miscarriage. ALICE M. SMITH.

1.—Starr divides neurasthenics into 4 classes, according to the origin of the disease, and considers the cases that are toxic in origin. The symptoms, psychological, circulatory, digestive, etc., are described, the chief characteristic being alternations of feelings and symptoms, the depression curve being lowest from 9 p. m. to 4 a. m., and gradually ascending until noon. That the maximum of distress occurs after sleep shows it is not

due to the wear and tear of exhaustion but to some toxic agent which accumulates in the blood and is counteracted by the activity of the day. As activity of the digestive powers appears to aid elimination the poison is probably manufactured in stomach or intestines. The diet usually best digested by these patients is given, followed by formulas for hepatic stimulants and intestinal antiseptics used by the writer. Hot baths followed by cool sponging, moderate exercise and regular rest are also indicated [H.M.]

2.—Potain presents a method by which accurate knowledge of the deep dulness or real size of the heart may be obtained. Percussion is digital, moderate in force, single and concentric, beginning 3 or 4 cm. beyond the periphery. Differences in pitch and not intensity of sound are noted. The projection on the chest wall is mapped out by 3 lines and angles with a dermatographic pencil, adding a few fixed points, and these markings are traced over on transparent tissue paper. Postmortem verifications are made by placing the paper in position, inserting long needles perpendicularly through the chest at certain points which remain in position during removal of the sternal plate. The results are precise. Tracings thus made at different stages of disease give valuable indications for prognosis. [H.M.]

3.—All specifics have been so far disappointing in pneumonia. The best hope lies in serumtherapy. As a symptomatic remedy hypodermoclysis has proved itself a valuable adjunct. An ordinary rubber syringe and the needle of an antitoxin syringe are all the apparatus needed. The injection is given under the breast. When the usual heart tonics fail from $\frac{1}{2}$ to 1 pint of normal saline solution is injected every 2 to 6 hours. It is a powerful cardiac stimulant, increases secretion, moistens the tongue and skin, lessens delirium. It is contraindicated in pulmonary edema unless due to failing heart. Several cases are reported in detail. [H.M.]

5.—Liell, in discussing surgical anesthesia by means of spinal cocainization emphasizes the importance of the most thorough asepsis. To avoid infection from the skin he introduces the needle through a small scalpel incision in the skin. He uses a gold needle and sterilizes the cocain solution by boiling about 1 minute. When introducing the needle, the patient assumes a sitting posture slightly inclined forward to increase the intervertebral distance. The third or fourth lumbar is usually chosen. The needle is introduced in an upward and inward direction at a point about $\frac{1}{2}$ inch to the right of a line drawn between the spinous processes. Its entrance into the spinal canal is indicated by the escape of cerebrospinal fluid. The cocain solution is then injected and anesthesia usually occurs in 10 minutes. Failures sometimes result from faulty technic, the use of too small a quantity of the solution, idiosyncrasy, or inert cocain. The postoperative symptoms which are not constant are nausea, vomiting, headache, increase of temperature and pulse-rate, vertigo, pallor and prostration. These may be minimized and often prevented by the proper preliminary preparation and the judicious use of drugs. [J.W.M.]

6.—Griffith refers to the development of a keloid upon a vaccination scar, and reports a case. The patient was a young girl, who had been vaccinated 5 months before she came under observation, when the tumor was the size of a lima bean. Its removal under cocain was advised, but was refused. [J.W.M.]

7.—King reports the performance of pylorotomy in a patient in his seventy-fifth year. For 2 years he had suffered from gastric disturbance with later evidence of obstruction and gastric dilation. Examination showed dilation of the stomach, and the presence of a nonadherent tumor the size of a goose egg situated above the umbilicus. Before operation the stomach was irrigated with large quantities of decinormal salt-solution, and the patient stimulated by hypodermic injections of strychnin and rectal enema. On opening the abdomen a carcinoma of the pylorus was found, with no involvement of adjacent structures. Pylorotomy according to Kocher's method was performed. Rectal alimentation was resorted to for 3 weeks. Convalescence was uneventful, and 9 months after the operation the patient was well, and had gained 14 pounds in weight. [J.W.M.]

New York Medical Journal.

May 4, 1901. [Vol. LXXIII, No. 18.]

1. Abdominal Pain In Typhoid Fever. THOMAS McCRAE.
2. Spinal Anesthesia by Cataphoresis. J. LEONARD CORNING.
3. The Pathology and Bacteriology of Ureterointestinal Anastomosis. F. ROBERT ZEIT.
4. The Use of the Suprarenal Capsule In Diseases of the Heart. SAMUEL FLOERSHEIM.
5. The Law and the Inebriate; with Remarks on the Treatment of Inebriety. JOSEPH COLLINS.

1.—After discussing the opinions of various authors regarding abdominal pain in typhoid fever, McCrae of Johns Hopkins gives a brief review of 500 cases which have come under his own observation, classifying them as follows: (1) Those in which there is no pain or tenderness at any period (206 cases or 41%); (2) tenderness only (72 cases or 14%); (3) in which abdominal pain is present (222 cases or 44%). Of these, there was, in 61 cases pain only at the onset, which leaves 161 cases or 32% with pain during the entire course. The latter group of 161 cases he subdivides as follows: (a) Those in which pain is due to conditions apart from any special lesions of the disease, as hysteria, lung conditions, abortion, labor, etc. (15 cases); (b) conditions of the intestinal tract apart from complications as vomiting, constipation, diarrhea, etc. (31 cases); (c) abdominal conditions apart from specific bowel lesions as, appendicitis, liver abscess, painful spleen, phlebitis, peritonitis, etc., (25 cases); (d) specific intestinal complications, hemorrhages and perforation (27 cases); (e) no discoverable cause, this being the largest group with 70 cases. [H.H.C.]

2.—Corning describes a method of inducing spinal anesthesia by cataphoresis and reports a case in which it was applied. An apparatus by means of which the cocain solution is injected between the dura and the vertebral canal and to which the positive pole of a galvanic battery is attached is employed. The negative pole of the battery is applied over the abdomen. In the case in which the method was tried anesthesia was produced, but the time required to produce it militates against the practical value of the method. [J.V.M.]

3.—Zeit, in the first instalment of his paper on the pathology and bacteriology of ureterointestinal anastomosis, treats of the mortality percentage resulting from this operation. Of 127 operations performed on dogs, death occurred in 61% of the unilateral and 68% of the bilateral cases. Of the dogs which recovered, not one proved to have healthy kidneys when killed. In man he observed that the percentage was even greater, reaching almost 71%. The percentage in 36 cases of implantation of the trigonum (Maydl's operation) stood at 19%. He found that during the first 10 days dogs died of peritonitis due to leakage, general sepsis or pyelonephritis. Dogs living a longer time either died of pyelonephritis, pyelonephrosis and pyemia or recovered, but all had contracted kidneys. The colon bacillus was the principal cause of these sequels. He concludes the article by speaking of the excretion of bacteria by the kidneys and states that "bacteria in the blood are excreted by the kidneys and may pass through the normal glomeruli without necessarily producing any anatomic lesions." The bacteria found in these instances include the tubercle bacilli, Staphylococcus albus and Staphylococcus aureus, Bacillus prodigiosus and Bacillus anthracis. [H.H.C.]

4.—In his second paper on the suprarenal capsule Floersheim cites 82 cases of organic heart disease which were benefited by the use of the drug. He finds that it is indicated in organic heart disease with weak, fluttering, intermittent or irregular pulse, in cases in which the peripheral bloodvessels are dilated or contracted, in those in which there exists a high-tension pulse and in all valvular lesions. There are no contraindications. The effect lasts from 5 minutes to 3 hours and it is the most rapid acting heart stimulant. It has no cumulative effect and is not poisonous. He gives the dose as 3 grains of the powdered gland, packed loosely in a gelatin capsule. This

is thoroughly chewed, dissolved in the mouth and swallowed without water. For children an emulsion is better. [H.H.C.]

Medical News.

May 11, 1901. [Vol. LXXVIII, No. 19.]

1. Practical Food Prescribing. FLOYD M. CRANDALL.
2. Studies In the Bacteriology of Typhoid Fever, with Special Reference to Its Pathology, Diagnosis and Hygiene. PHILIP HANSON HISS.
3. Restoration of Useful Vision In a Complicated Case of Acute Inflammatory Glaucoma of 10 Days' Duration with Visual Acuity Reduced to the Perception of Light. C. A. VEASEY.
4. Rupture of the Right Kidney: Nephrectomy: Recovery. G. R. TROWBRIDGE.

1.—It is requisite for a good prescriber of food for infants to have a thorough knowledge of breast milk, of chemical and physical composition of artificial foods, of good cow's milk and how secured, of the difference between cow's and breast milk, of modifying for the individual infant, and of the character of food required in health and disease. Artificial foods are deficient in fat, milk, sugar and proteid and are vegetable in origin. Cow's milk, properly modified, is the best food. There is a close relation between acidity and bacteria. An important detail in handling milk is rapid cooling after milking. Milk should be Pasteurized on the least doubt as to cleanliness, and sterilized only in rare instances. Milk should not be modified according to set formulas but according to the requirements of each case, beginning on a weak mixture and working up to a point of tolerance. Tables are given showing the percentage of fat in increasing numbers of top ounces of milk with a general formula for diluting. This relieves the practitioner of the burden of remembering formulas for various ages. A table for milk sugar is also given. The article concludes with suggestions as to the modifications required in various infantile diseases. [H.M.]

2.—The paper gives a review of the bacteriologic investigations of typhoid fever, with a consideration of the results interpreting the disease process, in aiding diagnosis and prophylaxis. The differing views as to whether the lesions are due to toxins or a true infection are presented and also the difficulties in isolating the bacillus in cultures. Its appearance in spleen, blood, rose-spots, mouth, urine and feces are considered in detail in relation to the different stages of the disease. Attention is called to the author's media for plate and tube cultures, described in a previous paper, which permits a diagnosis in from 36 to 48 hours. The exact portals of entry of the bacilli into the tissues and fluids of the body are not known. The usual site is probably the lower portion of the small intestine. It is not known whether they steadily increase after ingestion in the lumen-producing toxins causing inflammation, or whether they first gain entrance to the lymphatic tissues producing the toxins there. That the bacilli are not usually found in feces the first week points to the lesions and not the lumen as the habitat. They are probably carried by the circulation to the spleen, bone-marrow, rose-spots and urine, but typhoid fever is not a true septicemia, as in only the rarest instances is it likely that the bacilli multiply in the blood itself. The portal vein probably carries the infection to the liver and the lymphatics to the mesenteric glands. The germs may enter the general circulation through the thoracic duct. The presence of the organism in the excretions makes it necessary not only to disinfect the feces during the febrile stage, but also all utensils used about the mouth of the patient, and to sterilize the urine until bacteriologic examination has proved the absence of the bacillus. As it may persist for months in urine, this is a serious source of dissemination of the disease. [H.M.]

4.—Trowbridge reports a case of traumatic rupture of the right kidney. Lumbar nephrectomy was followed by recovery. In cases of trauma of the kidney exploratory operation is advised, as this is the only possible means of learning the extent of the injury. [A.G.E.]

Philadelphia Medical Journal.

May 11, 1901. [Vol. 7, No. 19.]

1. The Doctor's Fee—A Plea for Honorable Dealing. JOHN B. ROBERTS.
2. The Etiology of Arrested Mental Development. PEARCE BAILEY.
3. Cataract Extraction. EDWARD JACKSON.
4. Abscess of the Orbit from Disease of the Ethmoid; Chiselling through the Orbit and Draining through the Nose. GEORGE C. HARLAN.
5. Purulent Choroiditis, Following an Attack of Mumps; Diagnosis, Metastatic Choroiditis, Revised by Study of the Eucleated Eye-Ball JOHN T. CARPENTER.
6. Spontaneous (?) Rupture of the Spleen: Laparotomy: Death: Report of Case. D. C. HOWARD.
7. Ephemeral Insanity, with Report of 2 Cases. CHARLES J. ALDRICH.

1.—Roberts, in an article on the doctor's fee and its mode of collection, delivers a scathing rebuke to the members of the medical profession who resort to dishonest and underhand methods. While the physician is often tempted to depart from the strictly ethical standard by life insurance companies or manufacturers of proprietary medicines or new drugs, he should always remember that to do so is to prostitute his professional ability and good name for a monetary consideration which can never repay him for his loss of self-respect and reputation among his fellow-practitioners. [H.H.C.]

2.—In his article on the etiology of arrested mental development, Bailey considers idiocy, imbecility, and feeble-mindedness as varying degrees of the same condition, and divides their causes into the following groups: (1) Those occurring before birth; (2) those occurring at birth; (3) those occurring during infancy and childhood. Speaking of the first group he says that more than 50% of all cases of idiocy are congenital, and in a large proportion of this number, a defective nervous system on the part of the parents or near relatives is demonstrable. Prominent among the diseases in the parent which may cause idiocy in the child are alcoholism, tuberculosis, and syphilis. In the second group he considers injuries to the brain of the child during birth. The commonest clinical manifestations of such injuries are diplegia and paraplegia. Even when such gross lesions are absent, difficult labor with the attendant compression and asphyxiation, is sometimes the only discoverable cause for feeble-mindedness. The proper use of forceps should be regarded as a means of avoiding these injuries, although their use is never without danger to the head of the child. Under the head of causes acting after birth he considers diseases of the brain and its membranes, scarlet fever, typhoid fever, infantile convulsions, total blindness, total deafness, traumatism, and rachitis. [H.H.C.]

3.—Jackson gives clinical notes of 7 cases of cataract extraction. His experience with ripening operations has been favorable. He states that the possibility of making extraction absolutely aseptic must be disclaimed, yet no other operation shows fewer infections. It seems that the line is yet to be drawn between essentials and nonessentials in the technic of aseptic surgery. [A.G.E.]

4.—The operation for abscess of the orbit was practically that of Jansen for the frontal sinus, except that drainage through the nostril was employed and the wound sutured. The drainage tube was not allowed to project through the wound externally, thus allowing better union. [A.G.E.]

5.—The case of choroiditis reported by Carpenter was supposed to have been due to mumps. Preparation of the eye after enucleation showed the presence of a small bit of iron in the vitreous. [A.G.E.]

6.—Howard gives in detail the clinical history of a soldier in whom operation disclosed a ruptured spleen, there being no history of traumatism. The patient had been drinking immoderately for 2 weeks. There had been some cramp-like pain in the left side for a week. The patient's condition did not allow of removal of the spleen and death followed in 14 hours after the operation. Malarial and typhoid infection were excluded as causes of rupture, and while there may have been a trauma, considering the patient's condition, the absence of such history points to spontaneous rupture. [A.G.E.]

Deutsche medicinische Wochenschrift.

April 4, 1901. [27 Jahrg. No. 14.]

Max v. Pettenkofer, F. ERISMANN.

1. The Proportion of Iron in Chalybeate Waters. C. BINZ.
2. Galvano Caustic Occlusion of Vessels in the Nose as a Preliminary to Intranasal Operation. OSTMANN.
3. Remarks on the Therapy of Lachrymal and Nasal Ailments. ALBRAND.
4. Acute Yellow Atrophy of the Liver: Recovery. ALBU.
5. The Treatment of Fresh Cases of Tropic Dysentery. R. RUGE.
6. The Chemistry of Elastic-Staining and its Application in Sputum Preparations. MICHAELIS.
7. Biologic Reaction upon Albumin in Blood and Urine. ZUELZER.
8. The Detection of Minute Traces of Albumin. PRAUM.

1.—Binz takes up the subject of the iron mineral waters, and presents a number of quantitative analyses to show that after standing for some time the original ferrocyanide contained in the water is precipitated on the sides of the bottles as ferrous oxid, thus causing the water to lose its former medicinal value. [H.H.C.]

2.—Ostermann recommends the application of the galvano-cautery as an introductory step to intranasal operations in order to prevent the excessive hemorrhage likely to occur by the use of the more usual methods. [H.H.C.]

3.—Albrand discusses various prophylactic methods for the prevention of stenosis of the nasolachrymal duct, and advises teaching the patient himself or some relative how to use the sound, thus saving the patient time and money, or the application of a permanent sound—preferably that devised by Vulpius, which may be left in situ for months or even years. [H.H.C.]

4.—Albu reports the cure of a case of acute yellow atrophy of the liver in a man of 36. The case is all the more remarkable in that there was no history nor were there any of the objective signs of syphilis present. [H.H.C.]

5.—From his own experience in dealing with acute cases of tropic dysentery, Ruge finds that the old treatment with ipecac (he gives the infusion, 4.0-100.0, 80 cc., t. i. d.) is preferable to that recommended by Plehn (1898), viz.: small, repeated doses of calomel. [H.H.C.]

6.—After discussing the chemistry of Weigert's method for staining elastic fibers, Michaelis describes his method of applying this technic to sputum in cases of suspected tubercular lesion. A thin spread is made upon a slide, dried, and then placed for ½ hour in a jar containing Weigert's solution. The specimen is then washed in water and treated with 3% acid (HCl) alcohol until colorless, after which it is again dried and finally covered with a thin layer of cedar oil (no cover glass). Examination under a low power shows the elastic fibers stained a dark violet. [H.H.C.]

8.—In order to detect faint traces of albumin in nephritic urine the more readily, Praum adopts the following method: A few cc. of the urine is filtered into a test tube and a few drops of the reagent (sulfosalicylic acid in concentrated solution) added. The whole is then carefully mixed and after some time a few more cc. of the filtered urine is allowed to trickle slowly down the side of the tube. The result is a layer of clear control urine above the faintly opaque test urine, forming a contrast capable of revealing extremely minute quantities of albumin. [H.H.C.]

Wiener klinische Wochenschrift.

March 21, 1901. [14 Jahrg. No. 12.]

1. Poisoning with the Fungus *Agaricus torminosus*. HUGO GOLDMAN.
2. Joint Affections in Scarlet Fever. EDMUND HOMA.
3. Primitive Organs of Vision. THEODOR BEER.

1.—Goldman has observed 11 cases of poisoning with the toadstool *Agaricus torminosus*, 3 of which terminated fatally. The symptoms are primarily those of gastrointestinal irritation,

resemble cholera nostras, and set in 4 or 5 hours after the ingestion of the toadstools. The urine is diminished, and contains albumin and indican; eventually there is anuria. The pupils are dilated. The pulse is not accelerated, except in cases that are going to terminate fatally. The respiration is at first increased; later it becomes irregular and superficial. The temperature does not rise above normal. Delirium, trismus, convulsive twitchings, and finally coma, ensue in fatal cases. The author employed tannic acid in the treatment, washing out the stomach with it, and injecting it into the rectum. Stimulants were also employed. Atropin proved of no value. In order to prevent intoxication by toadstools, the author would have the market police instructed in the recognition of the different kinds of mushrooms and toadstools, and would have the pupils in the public schools taught, by means of charts and blackboard drawings, how to distinguish the harmless from the harmful varieties. [D.R.]

2.—Inflammation of the joints—so-called rheumatoid affections are not rare in scarlet fever. Among 506 cases of this disease 14 (2.8%) presented such joint troubles. Other complications occurred in the following proportions: Nephritis in 196 (38.7%), otitis media 115 (22.7%), bronchitis in 59 (11.7%), pneumonia in 21 (4.13%), pleurisy in 6 (1.2%), uremia in 2 (.39%), parotitis, peritonitis and edema of the lungs each in 1 case (.2%). The joint affection appeared in the first week 5 times; at the beginning of the second week once; at the end of the second week 4 times; in the third week 3 times; in the fourth week once. Swelling of the joints was not always present. Relapses are not uncommon. The wrists were involved 8 times, the elbows 7 times, the kneejoints 5 times, the anklejoints 4 times, and the shoulder and hipjoints each once. Several joints were usually attacked at the same time. In 1 of the 14 cases suppuration took place. The treatment consisted in rest for the joints, the application of wet compresses, and in 4 instances the use of sodium salicylate. All of the 14 cases were of the severe or moderately severe type of scarlet fever. Sodium salicylate did not seem to have any special influence. [D.R.]

American Journal of the Medical Sciences.

May, 1901. [Vol. CXXI, No. 5.]

1. The Protozoon of Cancer. HARVEY R. GAYLORD.
2. Thoracic Aneurysm. Carcinoma of Superior Maxilla. Cholelithiasis and Suppurative Cholecystitis. Inguinal Hernia of Bladder; Cecum. BERN B. GALLAUDET.
3. The Carbohydrates of the Urine in Diabetes Insipidus. DAVID L. EDSALL.
4. Conclusions Based upon 330 Outbreaks of Infectious Diseases Spread through the Milk-supply. GEORGE M. KOBER.
5. Laryngeal Hemorrhage from an Apparently Normal Larynx. GEORGE M. WOOD.
6. Blastomycetic Dermatitis of the Gluteal Region. FREDERICK G. HARRIS.
7. Subinvolution of the Uterus; 3 Suggestive Cases. L. W. ATLEE.

1.—See editorial, April 20, page 100.

2.—Gallaudet reports: (1) An aneurysm of the thoracic portion of the left common carotid artery, in which at 2 sittings with an interval of 5 days, the artery was ligated above and below the aneurysm, the sac opened, and the clot extracted. Extremely dense adhesions were encountered, the venous oozing was marked, and while extracting the clot a sudden gush of blood occurred from within the sac. This was immediately controlled by clamping the jugular, but the patient died quickly; (2) a carcinoma of the superior maxilla that was removed after preliminary ligating of the external carotid artery, the inserting of a tracheotomy tube through the cricothyroid membrane, and packing the pharynx with a sponge. The patient made a good recovery, and at the time of the report recurrence had not occurred; (3) a case of cholelithiasis and suppurative cholangitis in which operation was performed with complete satisfaction; (4) a case of right inguinal hernia of the bladder; (5) a case of hernia of the cecum. [A.O.J.K.]

3.—Edsall, referring to previous investigations regarding the total urinary carbohydrates (both the fermentable and

the unfermentable) in health and disease, details some personal investigations relative to the carbohydrates of the urine in diabetes insipidus. His researches seemed to indicate the improbability of any marked increase in the urinary carbohydrates in diabetes insipidus. It is believed, however, that some cases of diabetes insipidus may show an increased excretion of urinary carbohydrates; this is to be attributed to the increased diuresis and possibly also to the diet. There seems, however, to be no relation between diabetes insipidus and diabetes mellitus, at least as regards carbohydrate metabolism. It is considered extremely probable that the amount of carbohydrates in the normal urine depends largely upon the diet, and that these carbohydrates are in large part at least derived from the food rather than formed in the body, as has been suggested. There follow some remarks upon the benzoylchlorid method of the estimation of the urinary carbohydrates. [A.O.J.K.]

4.—Kober, in his conclusions based upon 330 outbreaks of infectious diseases spread through the milk-supply, refers to the various circumstances under which milk may be the source of disease, and states that of the 195 epidemics of typhoid fever that he has tabulated there is evidence in 148 of the disease having prevailed at the farm or dairy; of the 99 epidemics of scarlet fever the disease prevailed in 68 instances either at the dairy or milk-farm; and of the 36 outbreaks of diphtheria there is evidence that the disease prevailed at the dairy or farm in 13 instances. He urges stricter supervision of the milk-supply, and while he believes that good results follow legislative enactments, he believes that the best results are to be attained by education of the public. [A.O.J.K.]

5.—Wood reports a case of laryngeal hemorrhage from an apparently normal larynx, occurring in a man of 36, and gives brief notes of 6 similar cases that he has collected from the literature. [A.O.J.K.]

6.—Harris reports a case of blastomycetic dermatitis of the gluteal region, occurring in a woman of 78. Excision of the affected area was followed by satisfactory recovery and no evidence of recurrence. [A.O.J.K.]

7.—Atlee reviews the opinions of various writers of the causation and treatment of subinvolution of the uterus, and cites the histories of 3 suggestive cases from his own experience. The patients were relieved of their diseased condition by daily catharsis by magnesium sulfate, douches of water at a temperature of 110° F., twice daily, Benjean's one-grain pills of ergotin 3 times daily, rest in bed for a time, and wholesome food. [A.O.J.K.]

The American Gynecological and Obstetrical Journal.

March, 1901. [Vol. XVIII, No. 3.]

1. Pus in the Peritoneal Cavity. ROBERT T. MORRIS.
2. The Complications of Gonorrhea in Women and Their Prophylactic Treatment. JOSEPH TABER JOHNSON.
3. Ovarian Organotherapy in Gynecology. WILMER KRUSEN.
4. Pregnancy in Uterus Bicornis. GEORGE H. NOBLE.
5. The Operative Treatment of Cancer of the Uterus. E. E. MONTGOMERY.
6. Anne Murray: The First Trained Nurse. ELY VAN DE WARKER.

1.—In dealing with pus in the peritoneal cavity, Morris believes the best results will be obtained if we operate rapidly, avoid the use of large incisions, of gauze packing, of iodiform, and of extensive handling of the bowel. After making an elaborate study of the subject, he presumes there will be a small proportion of cases in which drainage will be a necessity, hemorrhage cases for instance; but most of the cases that are drained today are drained because the surgeon feels that he ought to assume a responsibility that really belongs to the leukocytes, and for which they are well equipped if the surgeon does not interfere with their production and their work. [F.C.H.]

2.—Johnsen discusses the complications of gonorrhea in women, under the following heads: (1) The importance of these complications; (2) their frequency; (3) their nature and variety; (4) so-called "latent gonorrhea"; (5) their importance from an obstetric and infantile standpoint; (6) treatment. Under

the last heading he offers no new suggestions. The physician should be certain that his patients are absolutely cured beyond the danger of a relapse before they are dismissed from further observation, control and treatment. Female patients should be so vigorously treated as to prevent, if possible, the extension of the disease beyond the vagina and the external parts. The question of "latent, chronic or residual gonorrhoea," and its possible disastrous consequences should be more constantly in mind when we are treating these cases, and our management should be so radical, thorough and complete as to prevent the occurrence of pelvic infection and adnexal complications. [F.C.H.]

3.—After 3 years' exhaustive study of organotherapy in gynecology, Krusen thinks that notwithstanding the many brilliant results referred to in his paper, experience leads to the following conclusions, based upon the use of the American product upon American women: (1) The employment of ovarian extract is practically harmless, as no untoward effects beyond slight nausea have been noted even when full doses have been administered; (2) in the treatment of amenorrhoea and dysmenorrhoea no good results were secured (although in some cases of dysmenorrhoea of obesity remarkable results have been obtained by the use of the thyroid extract); (3) the best results were seen in the second class of cases, for the relief of symptoms of artificial menopause, when in a few instances the congestive and nervous symptoms were apparently ameliorated; (4) no appreciable result was noticed in the use of ovarin in the natural menopause; (5) no definite or exact reliance can be placed on the drug, as it often proved absolutely valueless when most positively indicated; (6) it is extremely problematic whether, in those cases in which relief was noted, the effect was due to mental suggestion rather than to any physiologic action of the drug, since the neurotic type of individual demanding this treatment will often be relieved by any simple remedy; (7) in those instances in which effects were noted increase in dosage seemed to have little influence in maintaining the effect or preventing the patient from becoming accustomed to its use; (8) in conclusion, the theory which suggests the use of this extract seems to be at fault, and the administration of ovarin or ovarian extract is based upon a wrong assumption as to the function of the ovary. In organotherapy the best results have been obtained from the use of the thyroid and adrenal glands, and the ovary in function is in no sense analogous to these organs. Its principal function is ovulation, and if any peculiar product is coincidentally manufactured the isolation of this product has not yet been accomplished. [F.C.H.]

4.—In this case of pregnancy in a bicornate uterus, Noble did not realize that he was dealing with an abnormal condition, until he attempted to expel the placenta by Crède's method. The fetus occupied the right horn of the uterus. The left horn and part of the left fallopian tube contained the placenta. Owing to the development of the placenta partly in the tube, where it was adherent, it was necessary to insert the hand in order to remove it. In addition to the report of this case, Noble enters into an exhaustive study of pregnancies in uterus bicornis, giving statistics, the dangers, differential diagnosis and the treatment. [F.C.H.]

5.—In discussing the operative treatment of cancer of the uterus, Montgomery confines himself to the radical treatment. He prefers vaginal hysterectomy when the disease is plainly confined to the cervix or body, the uterus is not unduly large and freely movable, and the vagina is sufficiently spacious to permit of ready access. The abdominal operation should be elected whenever the favorable conditions which are enumerated as requisite for vaginal hysterectomy do not exist. In extension of the disease beyond the confines of the uterus, the destruction of the vaginal portion of the cervix, in involvement of the vagina, partial infiltration of one or both broad ligaments, when the uterus is large, and the disease is complicated by the presence of uterine fibroids, ovarian growths, or the uterus is fixed by previous inflammatory attacks. It should also be selected in the single or nulliparous woman. He does not advocate the removal of the lymphatic glands as a routine practice, as oftentimes in hopeful cases they are not sufficiently involved to justify the additional dissection and risk. In the considera-

tion of the treatment it should be appreciated: (1) that an operation to afford hope of escape from relapse should be early; (2) the vaginal operation should have the preference whenever the conditions will permit of its performance; (3) every precaution should be exercised to operate in healthy tissue and avoid the possibility of reimplantation; (4) the prognosis is much less favorable in women under 36, quite favorable in women over 50, if an operation is done early. [F.C.H.]

Annals of Surgery.

April 1901. [Vol. XXXIII, No. 4.]

1. Conservative Operations for Renal Retention. CHRISTIAN FENGER.
2. The Appendix in Relation to the Psoas Muscles in 300 Male and 118 Female Adult Autopsies. Trauma of the Psoas Muscles Produces Appendicitis. BYRON ROBINSON.
3. The Value of the Röntgen Method of Diagnosis in Detecting and Excluding Renal and Ureteral Calculi. CHARLES LESTER LEONARD.
4. Ileus Due to Vascular Obstruction. L. L. McARTHUR.
5. Ileus Due to Mechanical Obstruction to the Fecal Current. D. A. K. STEELE.
6. Ileus Caused by Neoplasms. A. J. OCHSNER.
7. Fracture of the Head of the Radius. CARL BECK.
8. Excision of the Cervical Sympathetic Ganglia for Exophthalmic Goiter. J. SHELTON HORSLEY.

1.—Fenger reports 30 cases of conservative operation for renal retention performed by several surgeons. There were 3 deaths, none of them being due to the operation, *per se*. These cases are considered as firmly establishing the justifiability of the object aimed at, namely, the salvation of the kidney otherwise doomed to removal. They also indicate the general direction in which the different methods of operating must be developed for further perfection. For obstruction located in the kidney causing partial cystonephrosis the operation is bisection of the kidney and division of the partition walls between the sacs and the pelvis. One successful case is reported. Of the 30 operations collected 26 were for obstruction located at the exit of the ureter from the renal pelvis. Various operations—transpelvic and extrapelvic—were employed. Of the transpelvic 9 cases are recorded with 2 deaths, 1 from ileus and 1 from uremia in bilateral disease. Of extrapelvic operations 3 were employed: 1. Resection of ureter and reimplantation in renal pelvis, 6 cases with 1 death from iodoform poisoning. This operation was abandoned for nephrectomy in 2 cases. 2. Operation on ureter and pelvis at the seat of the valve or stricture, 11 cases with no deaths. 3. Pyeloplasty, 1 successful case. For obstruction located in the ureter ureterolysis was successful in 1 case and plastic operation on the ureter 1 case. The latter case demonstrated that an operation for reopening a closed ureter may be successful after an unsuccessful attempt has been made, thus justifying even repeated attempts to reestablish the potency of the ureter and thereby save the kidney from removal. [A.G.E.]

2.—Robinson's article is a detailed record of abdominal inspection in 300 autopsies on male adults and 118 on female adults. In it are recorded observations of the appendix as regards its length, shape, position, meso-appendix in relation to the psoas and other muscles, with especial attention to peri-appendicular adhesions. The average length of the appendix was 3 inches. Two general positions of the appendix are considered: (1) The colonic (benign area of peritonitis); (2) the potential enteronic (dangerous area of peritonitis). The appendix was in contact with the psoas muscle in 52% of the males and 32% of the females. This is important in connection with the effect of trauma by that muscle upon an appendix in a partially devitalized condition. In relation to the psoas muscle 5 positions of the appendix are designated and their frequency given. 1. The pelvic position (females 48%, males 37%). 2. The appendix resting on the psoas (males 46%, females 20%). 3. The retrocecal position (females 35%, males 20%). 4. To the right of the psoas (females 28%, males 18%). 5. The potential position (males 23%, females 20%). In 30 males the appendix possessed peritoneal adhesions in 62% and

in 118 females in 50%. The periappendicular adhesions are in the majority of cases produced by the trauma of the psoas and other muscles. The conclusion is considered inevitable that (psoas) muscular trauma is a vital factor in the etiology of appendicitis. In one of the 418 cases, a female, the appendix was congenitally absent. Some of Robinson's conclusions are: 1. The dangerous appendix is the one in a spiral or kinked shape, within range of traumatic action of the psoas muscle. The size and length of the appendix have no special relation to the frequency of appendicitis. 2. The ratio of appendicitis in man and woman is about 3 to 1, chiefly owing to the fact that man's appendix is more exposed to psoas muscular trauma than that of woman. 3. Almost all postmortem and clinical evidence points to the appendix as the organ which is the most dangerous and treacherous of all abdominal viscera. 4. The frequent peri-appendicular adhesions are not appendicitis but peritonitis. They are important steps toward appendicitis. 5. The appendix varies more in position than any other abdominal viscus. 6. Trauma of the psoas muscle produces appendicitis. [A.G.E.]

3.—A study of 136 suspected cases of renal or ureteral calculi led to the detection of 36 cases, 19 ureteral and 17 renal. In only one of the 100 cases was the negative diagnosis improved, the error resulting from a misplaced plate and defective reading of the negative. From these 136 cases the author draws the following conclusions: (1) that both the negative and positive diagnosis by the Röntgen method are accurate and valuable; (2) ureteral calculus is much more common than has been supposed, or about 50% of all cases of calculus; (3) it is impossible to arrive at as accurate a diagnosis of calculus by other methods; (4) this method is comprehensive, and aids operative intervention by localizing all calculi and excluding calculi from the other kidney; (5) non-operative treatment, without a negative diagnosis by this method, is irrational and dangerous in cases that are at all suspicious; (6) this method is precise, because its results are mechanically produced, but accuracy in its employment and care in reading the results are necessary to the avoidance of error; (7) the data obtained by this method make non-operative, conservative treatment rational in cases of small calculi low down in the ureter that can be expected to pass; (8) the negative diagnosis does not preclude exploratory nephrotomy, but does make unnecessary the actual incision into the kidney in search for calculi; (9) the dilation of the ureter with bougies, as has been practical in the female, may be employed in the male by utilizing a suprapubic cystotomy wound to guide the instruments from the urethra into the ureters.

4.—McArthur writes of those cases of intestinal obstruction which are dependent upon embolism or thrombosis of the arterial or venous circulation of the affected bowel. Embolic ileus due to cardiac vegetations, etc., occasionally occurs. Thrombosis is almost always due to an infective phlebitis having its origin in the intestinal mucosa. When the arterial supply is cut off there is not time for the throwing out of lymph and the bowel has a smooth, steel-blue, black, shiny appearance. Venous thrombosis gives a dark, reddish-black bowel with roughened peritoneum. The 4 most constant symptoms are: (1) Blood seen either in the washings from the bowel, in bowel movements, and in the vomitus, unaccompanied by the tumor of intussusception; (2) colicky-like pains, associated with pains in back and lumbar region; (3) early collapse if the embolism has been sudden or extensive; (4) cardiac disturbance, arrhythmia, great frequency, albuminuria. The notes of a case which had been diagnosed as rheumatic pains in the back and abdominal wall are given. Operation afterward, the patient expiring on the table, revealed an occlusion of the superior mesenteric artery. [A.G.E.]

5.—The symptoms, diagnosis, and treatment of mechanical intestinal obstruction are considered. Opium should never be administered. The forming of an artificial anus is rarely indicated in acute obstruction. In obstruction from neoplasms it is often a valuable preliminary operation to conserve the strength of the patient before undergoing an enterectomy. [A.G.E.]

6.—Ochsner states that his experience with ileus due to

neoplasms has been unsatisfactory. He has had a mortality of nearly 50% and of the cases which lived there were but 2 whose recovery he has not regretted. If the abdomen is greatly distended with gas and fluid, it is best as a preliminary to operation to spray the throat with a 2% solution of cocaine and then perform gastric lavage. By repeating this 2 or 3 times the distention may be reduced to a marked extent. If the intestines are greatly distended when the abdomen is opened a circular purse-string suture of silk should be applied to the convex surface of the intestine, that portion emptied by forcing the contents in either direction, an incision made within the suture, and a long half-inch glass tube inserted. This portion of the operation is usually done too hurriedly and the drainage is not satisfactory. If the growth is in the intestine primarily and no lymphatic glands are involved the intestine should be resected at least 3 inches above and below the tumor. If the lymphatic glands are involved it is best simply to make a short circuit by lateral anastomosis. In cases of resection of the small intestine, the Murphy button or the needle and thread may be used with equally favorable results. If the obstruction is below the ascending colon it is always best to make a temporary colostomy and to postpone the radical operation, unless the patient is in a favorable condition. [A.G.E.]

7.—Beck reports a case of fissure of the head of the radius in a girl of 24. The region of the elbow joint showed considerable swelling and tenderness equally distributed. A skiagraph revealed the presence of the above named lesion. Therapy consisted in the application of a plaster-of-paris dressing in rectangular flexion, the forearm being kept in semipronation. The function of the arm did not become perfect until 3 months after the injury, owing to stiffness. A study of this case shows that wherever skiagraphic observation shows no tendency to displacement, it will be advisable to begin motion after 10 days, in fissure as well as in fracture of the radial head. [A.G.E.]

8.—Horsley reports what he believes to be the first operation for excision of the sympathetic cervical ganglia for exophthalmic goiter. The patient was a woman, aged 26. Chloroform was used. The middle and superior ganglia of the right side were removed. No attempt was made to remove the ganglia of the left side, though this had been the intention, because of the condition of the patient. The pulse varied between 170 and 200 during the operation. Four months after the patient's pulse was 90, and the throbbing and palpitation has not returned since the operation. The exophthalmos has markedly diminished, though there is but little decrease in size of the thyroid gland. The case is recorded as one greatly improved. If favorable progress does not continue, extirpation of the left cervical sympathetic ganglia will be advised. [A.G.E.]

Sundry American.

1. Veratrum Viride; Its Undeserved Neglect. E. W. SAUNDERS. (St. Louis Medical Review, March 23, 1901.)
2. To Cut or Crush In Stone of the Urinary Bladder. STUART MCGUIRE. (Charlotte Medical Journal, March, 1901.)
3. Have we a New Treatment for General Septic Infection? VAN TILBURG-HOFMAN. (Charlotte Medical Journal, March, 1901.)
4. The Early Recognition of Malignant Growths. EDGAR A. VANDER VEER. (Albany Medical Annals, April, 1901.)
5. Exstrophy of the Bladder. F. GREGORY CONNELL. (Read before the American Medical Association, June, 1900. Awarded Senn Medal.)

1.—In speaking of *veratrum viride* as a much-neglected drug, Saunders attributes this neglect principally to the fact that European writers are silent upon the subject. In speaking of its physiologic action, he states that the alkaloids jervin, by a depressing action of the heart muscle and the vasomotor centers, and pseudojervin, by stimulating the pneumogastric, produce a marked diminution of the pulse-rate. Ordinarily this is the only effect noticed when a physiologic dose is administered. In larger doses the drug induces vomiting and rarely purging, chiefly by its influence in the nervous center, but also by its local irritating action. It acts as a powerful depressant to the anterior motor-cells of the spinal cord. It has no effect on the

muscles, cerebrum or nerves. The respiratory center is also depressed by large doses. It also reduces the temperature 1 to 3 degrees. To this must be added the fact that, although a very powerful drug, no case of poisoning has ever occurred from its administration. It has no detrimental effect upon the blood, causes no change of oxyhemoglobin into methemoglobin, and there is no effect upon the aneboid movements of the white blood corpuscles, all of which is in direct opposition to the action of the coal-tar products. He also finds that it is preferable to the coal-tar products in the beginning of acute infectious diseases, such as scarlet fever, influenza, meningitis, etc. In the treatment of pneumonia, he cites a number of cases in which he has used *veratrum viride* with great success, and gives the beneficial action of the drug in this particular disease as follows: (1) It diminishes the pulse-rate; (2) it lessens arterial pressure; (3) it diminishes the number and depth of the respirations; (4) it reduces the temperature 1 to 3 degrees; (5) the patient has a feeling of well-being; (6) The urine is increased in quantity; (7) it quiets nervous excitement; (8) hepatization in the lung is precocious and partial. Doses of 2 to 3 minims are given every hour until the pulse becomes normal, then the intervals should be increased or smaller doses given. If consolidation has already taken place, *veratrum viride* is of no account, caffeine, camphor, strychnin and digitalis being then indicated. He has used the drug with great success in spasmodic croup—both catarrhal and membranous—appendicitis, peritonitis, endocarditis and pericarditis. [H. U. C.]

2.—McGuire, in his paper on the advisability of lithotomy or lithotripsy, states that while he does not condemn lithotripsy, he believes that lithotomy should be the operation most frequently employed, and lithotripsy reserved for a few carefully elected cases. He considers that lithotomy has the greatest range of application, but is contraindicated in the following conditions: (1) When the stone is large and cannot be crushed by instruments capable of being used through the urethra; (2) when the stone is large and cannot be grasped by reasonable separation of the jaws of the lithotrite; (3) when the stone is brittle and the resulting fragments sharp and irregular; (4) when the stone is fixed and encysted; (5) when the stone has a foreign body as a nucleus, which cannot be crushed and removed; (6) when the prostate is enlarged, or the bladder contracted, making it difficult to seize the stone; (7) when there is a tight or impassible urethral stricture requiring a long operation to relieve; (8) when there is ankylosis of the hipjoint in a position embarrassing the movements of the lithotrite; (9) when the general condition of the patient is such as to make shock dangerous and rapid work necessary. [H. U. C.]

3.—Van Telburg-Hofman, in his paper on the treatment of general septic infection, includes toxemia (sapremia), septemia and pyemia under one head and cites a number of cases in which he used a hypodermic of oleum terebinthinae in the dose of 15 minims with remarkably good results. He injects the turpentine in the subcutaneous tissues of the thigh or upper arm. It at once causes an abscess to form, which he opens in about a week, drains and dresses antiseptically. [H. U. C.]

4.—Vander Veer gives the following reasons as a plea for the early recognition of malignant growths: (1) The patient not having been debilitated by a long and tedious strain upon the system, can the better withstand the risk of shock and hemorrhage of an operation; (2) the greater probability of a complete removal of the malignant growth, by an early operation, and so the less liability of its return; (3) the growth being small the incision will correspond, and so the avoidance of unsightly scars. He finds that the surest way to arrive at a positive diagnosis is to obtain a thorough history of the patient, the history of malignant growths in the family, and then to watch carefully the growth itself. He believes in regarding all growths as malignant until positively proven to be otherwise. [H. U. C.]

5.—In his monograph on exstrophy of the bladder, Connel, after dealing with the histology and embryology of the organ, states that the most common anomalies of the bladder are: (1) Exstrophy of the bladder; (2) absence of the bladder (3) the opposite condition, that of multiple or supernumerary bladder; (4) imperforate bladder, or atresia of urethra; (5) the posterior wall of the bladder may be the site of the malfor-

mation, the bladder thus communicating with the pelvic cavity, vagina or rectum. The condition of exstrophy of the bladder includes, as a rule, all the cases of gastroschisis in which the fissure is in the lower part of the abdomen. It is seen in different varieties or degrees of the same variety: (1) There may occur no fissure in either abdominal or bladder wall, but an absence of symphysis, with hernia of the bladder.—Mayo. (2) The bladder wall is perfect and protrudes through abdominal fissure or the umbilicus.—Vrolik. To this condition the term "ectopia vesicae" has been applied. (3) The ordinary form is fissure in both abdominal walls. (4) Anterior and posterior walls of the bladder may both contain a fissure, and thus occur in 2 halves, separated by an opening of the intestinal tract. The treatment of exstrophy of the bladder may be divided into palliative and radical: A—PALLIATIVE. I.—Apparatus. II.—Flap. (1) Of skin: *a*, epidermis in (reversed); *b*, epidermis out. (2) Of mucous membrane: *a*, remaining bladder wall of patient; *b*, intestinal wall of patient; *c*, bladder wall of lower animals. III.—Suture of edges of fissure: (1) By direct suture. (2) Preceded by preliminary measures. IV.—Miscellaneous: (1) Dilatation of ureters. (2) Plaster bandage. (3) Catheters in ureters. (4) Fistula in perineum. (5) Ureters inserted into the urethra. (6) Nephrectomy on one side and lumbar ureteral fistula on the other. B—RADICAL. I.—Axial implantation. (1) By sutures. (2) By apparatus. II.—Vesicorectal anastomosis. III.—Implantation of trigonum vesicae. IV.—Implantation in a manner imitating normal insertion into the bladder; or an attempt to make a valve. V.—Miscellaneous. (1) Vesicovaginal fistula, with col-pocleisis. (2) Artificial anus; ureters inserted into rectum. (3) Artificial bladder; *a*, opening into urethra; *b*, opening into intestinal tract. [H. U. C.]

Sundry German.

1. Influence of mechanical irritation of various parts of the body on contractions of the heart. HEITLER (Centrab. für Innere Medizin, March 16, 1901).
2. Concerning a But Little-known Tract on the Periphery of the Anterolateral Zone of the Cervical Spinal Cord. BECHTEREW (Neurologisches Centralb., March 1, 1901).
3. A Further Contribution to Intermittent Claudication. GOLDFLAM (Neurologisches Centralb., March 1, 1901).
4. Dysphagia Amyotactica. ROSSOLIMO (Neurologisches Centralb., March 16, 1901).

1.—Heitler finds that the heart contractions can be reflexly influenced by mechanic irritation of various parts of the body. Particularly efficient is irritation of the precordial and hepatic region; but stimulation of the skin, the bones, the muscles, the mucous membranes, the arteries, and even flexion and extension of the limbs may bring about a change in the pulse. The reflex obtained by stimulation of the precordial region is principally due to irritation of the sternum. Percussion of the sternal end of the clavicle produces an active reflex, while percussion of the acromial end does not do so. The change in the pulse produced by irritation of the hepatic region is due to irritation of the liver. The reflex may be excited in all parts of the hepatic region, but especially over the eleventh and twelfth ribs. Repeated stimulation of a part causes a lessening of the reflex excited at that part. The most marked effects are obtained by stimulation of the liver, the sternum, and the adjacent portions of the ribs. The reflex consists in a lessening of the heart dulness through cardiac contraction, and a strengthening of the pulse. [The thought suggested is that the stimulation indicated, like massage of the precordia, might be useful in acute heart failure. D. R.]

2.—A few remarks concerning the tract of fibers designated by Bechterew as the *olivary bundle* (or, more specifically, the *periolivary bundle*), running in the anterolateral portion of the cervical cord. No definite opinion as to its course is expressed, but Bechterew is inclined to consider it descending, and connected with the lower olive. Degeneration of this tract has, it seems, been observed by Meyer, Reinhold, Spiller and others. [D. R.]

3.—The symptoms of *intermittent claudication* are as follows: The patient, after walking a shorter or longer distance,

experiences pain or paresthesias in the lower limbs, especially in the calves or feet. These phenomena subside after rest, but return again on walking, so that at intervals the patient is compelled to stand still or to sit down. In such a case the arteries of the feet should at once be examined. Absence of pulsation in the dorsalis pedis and tibialis posterior explains the symptoms. In addition to the absence of pulsation, signs of disturbances in the circulation, such as venous distension, coldness, cyanosis, edema, ecchymosis, and sometimes thrombosis, are observed. The arteritis is usually symmetrical. Narrowing or occlusion of the dorsalis pedis is sufficient to produce intermittent claudication, but not to bring about gangrene. The symptoms may persist for years; but, as a rule, they become intensified, and may eventually lead to gangrene. Vasomotor disturbances play a prominent part, in addition to arteritis. Transitory pallor, especially of the toes, is frequently noticed. The vasomotor symptoms may be so pronounced as to suggest Raynaud's disease. Paresthesias of all kinds are almost a constant accompaniment of intermittent claudication. The cause of the endarteritis is not definitely known. There is no generalized arteriosclerosis, as a rule. The patients are usually under 50 years of age. In the author's 24 cases, 3 were between 25 and 30; 11 between 30 and 40; and 6 between 40 and 50; the others older. Diabetes does not play any prominent role, nor does gout. Goldflam's cases were all Hebrews; others have reported cases among Russian Poles and Russians; and Haga claims that the disease is common in Japan. Excess in tobacco seems to play a part. Importance must also be attributed to the neuropathic disposition. Regarding syphilis, the author found among his 24 cases only one that had had the disease. Alcoholism is also without importance. The author suggests the possibility of a congenital hypoplasia of the vascular system. The male sex is more frequently affected than the female. In addition to citing several cases of intermittent claudication, the author reports one resembling Raynaud's disease, in which there was arteritis, but no gangrene. The patient was a woman of 32, who, without apparent cause, developed intense pain in the right ring finger about the nail. There were slight bluish discoloration and extreme tenderness on the inner side of the dorsal surface of that finger, although the palmar surface was insensitive to pressure. The pain radiated from the nail, along the surface of the finger, and up the forearm and upper arm, even to the shoulder. The pain lasted 11 years, until the patient's death from heart disease. Examination of the arteries of the finger showed thickening of the intima. The changes in the nerves were very slight. There was some increase in the nuclei of the endoneurium. [The ease in some respects suggests erythromelalgia.] In some cases of intermittent claudication spontaneous pains, of a burning, stabbing, or boring character, arise, particularly in bed at night. The nerves as a rule are normal; when degenerative processes occur, they are usually secondary. The pains may be due to involvement of the vasa nervorum, although it is possible that endarteritic processes are of themselves capable of exciting pain, owing to involvement of the Pacinian corpuscles found in the vessel walls. Gangrene occurred in 7 out of 27 cases. The treatment is hygienic and dietetic, but does not seem to be very satisfactory. Iodids and antisiphilitic treatment appear to do no good. This is also true of sodium nitrate, nitroglycerin, etc. Warm baths are well borne; sometimes mustard foot-baths and cold applications are useful. Galvanic electricity and high tension currents produce transient improvement. D.R.]

4.—The term **dysphagia amyotactica** is applied to those disturbances of the act of deglutition which are not due to organic changes in the pharynx or esophagus, nor to spasm or paralysis of the esophagus and muscles concerned in swallowing. The condition consists in a disturbance in the rhythm of the function of the higher nerve-centers. A number of cases are cited in which the act of deglutition was inhibited or rendered difficult by psychic conditions. The first case was in a merchant, 42 years of age, who after a half-hearted attempt to commit suicide by choking, was seized with a feeling that he could not swallow solid food. Later he also had difficulty in swallowing liquid food, and lived in constant dread that he might not be able to swallow when he wished to do so. When

swallowing liquid substances a vehement spasm of the pharynx occurred. A touch upon the neck or the introduction of a spoon into the throat produced an intense anxiety and restlessness. There were no hysteric stigmata. Treatment proved unavailing. The second patient was a woman of 42 years, who was more or less nervous on account of a drunken husband. After hearing a minister preach in a very hoarse voice she became afraid that her voice might become hoarse, and soon after had difficulty in swallowing, which gradually became intensified. Case 3 is that of a man 39 years old, of neuropathic ancestry. There were no organic changes in the esophagus or stomach; no hysteric stigmata. On one occasion the food went down the wrong way, and from that time on he always had a sense of fear when swallowing food, either liquid or solid. Case 4 is that of a woman 58 years of age, whose mother, 2 brothers and husband were alcoholics. She had difficulty in swallowing, owing to a constant fear of swallowing the wrong way. There were some hysteric signs. The fifth patient was a woman 29 years of age, who had an alcoholic father and an alcoholic husband. On hearing news of the death of a friend she experienced a globus in the throat, and very soon after began to have fear of swallowing which interfered greatly with the deglutition of both liquid and solid food. Case 6 is that of a woman 38 years of age, who had several phobias, in addition to a disturbance of the act of deglutition. The seventh patient, a woman of 31, distrustful, irritable and depressed, developed pain in the pharynx after a not very agreeable romantic adventure. The pains in the throat interfered with swallowing. Case 8 is that of a man of 26, who had distress in the back of the neck during mastication and deglutition. This distress interfered with swallowing. He ate very little, and consumed chiefly liquid food. Objectively nothing abnormal could be discovered. The author does not think that the symptoms described by him are hysteric. The condition is not a special disease, but belongs in the group of disturbances of automatic and habitual movements and complicated reflexes. There are 3 possible types of dysphagia amyotactica: first, the motor; second, the sensory; and third, the psychic. [D.R.]

Sundry French.

1. The Gait of Patients Suffering from Locomotor Ataxia Studied by Means of the Cinematograph. MARINESCO (La Semaine Médicale, April 10, 1901).
2. A New Male Niphopagus. CHAPOT-PREVOST (La Semaine Médicale, March 20, 1901).
3. Contributions to a Psychophysiological Study of Vital Acts in an Anencephalic Monster. VACHIDE and VURPAS. (La Semaine Médicale, March 20, 1901).
4. Microbes in the Cerebrospinal Fluid in Cases of Herpes Zoster (La Semaine Médicale, March 20, 1901).
5. Experimental Neuritis following Injections of Uremic Bloodserum (La Semaine Médicale, March 20, 1901).
6. On the Culture and Inoculation of Bacillus Fusiformis. VINCENT (La Semaine Médicale, March 27, 1901).
7. Electrization of the Nipples to Increase the Flow of Milk. BEDART (La Semaine Médicale, March 27, 1901).
8. On a Parasite Observed in Syphilis. STASSANO (La Semaine Médicale, April 3).
9. The Cerebrospinal Fluid in Tetanus. MILAN and LEGROS (La Semaine Médicale, April 3, 1901).
10. The Vegetarian Regime in Japan. BARLZ (La Semaine Médicale, April 3, 1901).
11. Treatment of Herpes Zoster by Applications of Absolute Alcohol. WINTERNITZ (La Semaine Médicale, April 3, 1901).

1.—Marinesco, of Bucharest, contributes an interesting illustrated article on the **gait of ataxia patients**. He concludes that the troubles of coordination of the movements observed in cases of locomotor ataxia are not to be confounded with the functional disorders produced by the paralysis of muscular and articular sensibility. This independence of locomotor ataxia and of sensory troubles is confirmed by the existence of cases of ataxia with perfect integrity of the different forms of sensibility. To explain the production of locomotor ataxia as the result of tabes necessitates the existence of a special faculty,

which the author calls *muscular consciousness*, by which an intimate relation of the muscles and the brain is established and movements are provoked without sight. This muscular consciousness must not be confused with the sensation which gives the idea of weight or resistance, etc., and which was called muscular sense by Charles Bell, and sensation of muscular activity by Gerdy. This last sensation is the result of muscular contraction, and depends upon articular as much as upon muscular sensibility. The muscular consciousness, however, appears to precede and determine the contraction. [C.S.D.]

2.—Chapot-Prevost of Rio de Janeiro reports a new case of *xiphopagia* in the persons of 2 brothers, Chinese, who are joined by a band extending from the xiphoid to the umbilicus. The children were born in Nankong, January 2, 1887, of a primipara, the labor being without difficulty. The first child offered with head presentation, the other with feet. There was but 1 umbilical cord and 1 placenta. The development of the twins has been normal, and they function independently. [C.S.D.]

3.—Vachide and Vurpas record their observations on an *anencephalic monster*, born at 6 months' term and which lived 30 hours. The principal phenomena noted consisted of lowered temperature (28° C. in the rectum); of Cheyne-Stokes respiration, tachycardia (138 pulsations per minute), cyanosis of the integuments, spasmodic contractions of the limbs, exaggeration of the tendinous reflexes and idiomuscular reaction. The general sensibility was retained, but there was no reaction to sound, light, taste or odor. An attack of Jacksonian epilepsy preceded death, which followed dyspeptic symptoms. [C.S.D.]

4.—Aehard obtained by lumbar puncture, fluid which gave cultures of a bacillus resembling *Bacillus coli* and presenting the peculiarity that milk cultures did not coagulate at even temperatures, but did so upon ebullition. He arrived at the opinion that *zona* is due to a specific infection. [C.S.D.]

5.—Dopter explains the pathogenesis of *peripheral uremic paralysis* by the production of Wallerian degeneration of the sciatic nerve as the result of contact with uremic blood-serum. [C.S.D.]

6.—Vineent describes under the name of "*Angina of Bacillus pusiformis*," an affection which presents diphtheroid characters when the bacillus is present alone and an ulceromembraneous form when the bacillus is associated with a delicate spirillum. The inoculation of *Bacillus pusiformis* into the subcutaneous tissues and muscles gives rise to abscesses. [C.S.D.]

7.—Bedart of Lille finds that the *secretion of milk* may be increased by the application of the static current to the nipples for 10 or 15 minutes every 24 hours. [C.S.D.]

8.—Stassano records his discovery of a flagellate infusorian *parasite in the lymphatic glands and blood of syphilitics*. The monad attaches itself to and destroys the blood corpuscles. It is not to be found except during the exanthematous stages and disappears where amelioration is spontaneous or due to treatment. [C.S.D.]

9.—Milan and Legros have recently had occasion to examine cerebrospinal fluid in a case of *nontraumatic tetanus*, and found that it maintained its usual limpidity and fluidity throughout the duration of the affection. At no time were they able to discover any microbes, either by aerobic or anaerobic cultures. Inoculation of guineapigs with the cerebrospinal fluid gave absolutely negative results. [C.S.D.]

10.—Balz, of Tokio, calls attention to the general wellbeing and capacity for endurance exhibited by the inhabitants of the central mountainous portions of Japan where meat, milk or fish are not available and the diet is in consequence exclusively vegetable. [C.S.D.]

11.—Winternitz has had great success in the treatment of *zona* by the application of compresses of 6 or 8 folds of absorbent gauze wet with absolute alcohol. The compress is covered with some impermeable material and this in turn with a layer of cotton, and the whole firmly bandaged in place. The dressing is renewed in 24 hours. The neuralgic pains ceased immediately or within a few days, and the vesicles disappeared without ulceration. [C.S.D.]

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine Hospital-Service, during the week ended May 11, 1901:

SMALLPOX—UNITED STATES AND INSULAR.

		Cases	Deaths
		am'g	Indians
Alaska:	Sitka.....Apr. 9.....	Prevalent	
California:	Los Angeles.....Apr. 20-27.....	5	
	Oakland.....Apr. 6-27.....	2	
	San Francisco.....Apr. 20-27.....	2	
Florida:	Jacksonville.....Apr. 20-27.....	21	1
Illinois:	Chicago.....Apr. 27-May 5.....	5	
	Freeport.....Apr. 27-May 4.....	2	
Indiana:	Evansville.....Apr. 27-May 4.....	2	
	Michigan City.....Apr. 23-May 6.....	5	
Iowa:	Clinton.....Apr. 27-May 4.....	1	
	Ottumwa.....Mar. 30-Apr. 27.....	5	
Kansas:	Wichita.....Apr. 20-May 4.....	71	
Louisiana:	Bossier.....Apr. 1-30.....	1	
	Caddo.....Apr. 1-30.....	7	
	New Orleans.....Apr. 20-May 4.....	23	
	Sabine.....Apr. 1-30.....	1	
Maryland:	Cambridge.....Apr. 1-30.....	5	
Massachusetts:	Fitchburg.....Apr. 20-27.....	2	
	Holyoke.....Apr. 27-May 4.....	1	
Michigan:	Bay City.....Apr. 20-27.....	7	
	Detroit.....Apr. 27-May 4.....	1	
Minnesota:	Minneapolis.....Apr. 20-May 5.....	44	
	Winona.....Apr. 20-27.....	3	
Nebraska:	Omaha.....Apr. 20-May 4.....	32	
New Hampshire:	Manchester.....Apr. 27-May 4.....	4	
New Jersey:	Jersey City.....Apr. 21-May 5.....	23	
	Newark.....Apr. 20-May 4.....	11	
New York:	New York.....Apr. 27-May 4.....	86	10
North Carolina:	Charlotte.....Apr. 1-30.....	18	1
Ohio:	Cincinnati.....Apr. 26-May 3.....	1	
	Cleveland.....Apr. 27-May 4.....	61	2
Pennsylvania:	Lebanon.....Apr. 27-May 4.....	3	
	McKeesport.....Apr. 20-27.....	1	
	Philadelphla.....Apr. 27-May 4.....	2	1
	Pittsburg.....Apr. 20-May 4.....	5	
	Steelton.....Apr. 27-May 4.....	1	
	Williamsport.....Apr. 27-May 4.....	1	
Tennessee:	Memphis.....Apr. 20-May 4.....	40	2
	Nashville.....Apr. 27-May 4.....	6	
Utah:	Salt Lake City.....Apr. 20-27.....	18	
Virginia:	Roanoke.....Apr. 1-30.....	42	1
West Virginia:	Wheeling.....Apr. 20-May 4.....	8	1
Wisconsin:	Green Bay.....Apr. 28-May 5.....	1	
	Milwaukee.....Apr. 20-May 4.....	2	
Porto Rico:	Ponce.....Apr. 13-20.....	9	

SMALLPOX—FOREIGN.

Argentina:	Buenos Ayres.....Feb. 1-28.....		32
Austria:	Prague.....Apr. 6-20.....	11	
Belgium:	Antwerp.....Apr. 6-20.....	5	
Brazil:	Pernambuco.....Mar. 16-31.....		29
	Rio de Janeiro.....Mar. 16-31.....		9
Ceylon:	Colombo.....Mar. 23-30.....	1	1
China:	Hongkong.....Mar. 23-30.....	13	13
Colombia:	Panama.....Apr. 22-29.....	5	3
Egypt:	Cairo.....Apr. 8-15.....	1	1
France:	Marselles.....Mar. 1-31.....	3	
	Paris.....Apr. 13-20.....		11
Great Britain: Eng.,	Leeds.....Apr. 13-20.....	1	
	Liverpool.....Apr. 13-20.....	2	
Scotland,	Dundee.....Apr. 13-27.....	4	
	Glasgow.....Apr. 19-26.....		10
Gibraltar:	Apr. 7-21.....	2	
India:	Bombay.....Mar. 26-Apr. 9.....		10
	Karachi.....Mar. 1-Apr. 7.....	36	7
	Madras.....Mar. 16-29.....		21
Italy:	Sicily.....Apr. 6-13.....	Prevalent.	
Malta:	Apr. 1-13.....	6	
Mexico:	Mexico.....Apr. 21-28.....		2
	Nuevo Laredo.....Apr. 13-20.....		1
Netherlands:	Yucatan, Merida.....three or four deaths daily.		
Russia:	Rotterdam.....Apr. 13-29.....	1	
	Moscow.....Mar. 30-Apr. 13.....	15	4
	Odessa.....Apr. 6-10.....	13	3
	St. Petersburg.....Apr. 6-13.....	9	2
	Warsaw.....Mar. 31-Apr. 13.....		14
Straits Settlements:	Singapore.....Mar. 16-23.....		2
Spain:	Corunna.....Apr. 20-27.....		1
	Malaga.....Mar. 16-31.....		3
Turkey:	Smyrna.....Mar. 17-Apr. 14.....		1

YELLOW FEVER.

Brazil:	Rio de Janeiro.....Mar. 16-31.....		42
Cuba:	Havana.....Apr. 20-27.....	1	
Mexico:	Vera Cruz.....Apr. 20-27.....		1
	Resident for ten years.		

CHOLERA.

India:	Bombay.....Mar. 26-Apr. 2.....		10
	Madras.....Mar. 16-29.....		3

PLAGUE.

Africa:	Cape Town.....Apr. 6-13.....	43	22
China:	Hongkong.....Mar. 23-30.....	14	10
India:	Bombay.....Mar. 26-Apr. 9.....		1,407
	Karachi.....Mar. 24-Apr. 7.....	429	383
Japan:	Wakayama Kon.....Apr. 12.....	1	1

Changes in the U. S. Marine-Hospital Service for 7 days ended May 9, 1901:

- AUSTIN, H. W., surgeon, to proceed to Washington, D. C., for special temporary duty—May 9, 1901.
- WOODWARD, R. M., surgeon, granted leave of absence for 10 days from May 7—May 6, 1901.
- STIMPSON, W. G., passed assistant surgeon, to proceed to Coalgate, I. T., for special temporary duty—May 9, 1901.
- CLARK, TALIAFERRO, assistant surgeon, granted 30 days extension of leave of absence, on account of sickness, from April 21—May 6, 1901.
- ROBINSON, D. E., assistant surgeon, to proceed to Port Townsend (Washington) quarantine station, and report to the Medical Officer in Command for special temporary duty—May 8, 1901.
- MOORE, DUNLOP, assistant surgeon, that portion of Bureau order of April 18, 1901, directing Assistant Surgeon Moore to proceed to San Francisco, Cal., revoked—May 6, 1901.
- RYDER, L. W., hospital steward, granted leave of absence for 15 days from May 6—May 7, 1901.

Changes in the Medical Corps of the U. S. Navy, for the week ended May 11, 1901:

- DERR, E. Z., medical director, detached from the Naval Academy and ordered home and to wait orders.
- WIEBER, F. W. F., surgeon, detached from the San Juan Naval Station and ordered to the Naval Academy as relief of Medical Director E. Z. Derr.
- LOWNDES, C. H. T., surgeon, detached from the Lancaster, May 11, and ordered to the San Juan Naval Station, via the Mayflower, as relief of Surgeon F. W. F. Wieber.
- BOBERT, E. S., passed assistant surgeon, ordered to the Laneaster, May 11, as relief of Surgeon C. H. T. Lowndes.
- CURTIS, L. W., surgeon, detached from the Vermont, May 11, ordered home and directed to hold himself in readiness for sea duty.
- PICKRELL, G., surgeon, ordered to the Vermont, May 11, as relief of Surgeon L. W. Curtis.
- TAYLOR, J. S., assistant surgeon, detached from the Manila and ordered to the naval hospital, Yokohama, Japan, for duty, as relief of Assistant Surgeon F. L. Benton, detached from the naval hospital, Yokohama, Japan, and ordered to duty on the Asiatic Station.
- BENTON, F. L., assistant surgeon, detached from the Naval Hospital, Yokohama, and ordered to duty on the Asiatic Station.
- STOKES, C. F., surgeon, detached from the Asiatic Station and ordered home, via mail steamer.

Changes in the Medical Corps of the U. S. Army for the week ended May 11, 1901:

- REAGLES, J., acting assistant surgeon, will proceed from Fort Stevens to Portland, Oreg., on business in connection with the furnishing of the hospital at that post. Upon completion of this duty Acting Assistant Surgeon Reagles will return to his proper station.
- HUTTON, First Lieutenant PAUL C., assistant surgeon, is granted leave for 15 days.
- AMES, Captain ROGER P., assistant surgeon, recently appointed, is relieved from duty in the department of Cuba, to take effect when his services can be spared by the commanding general of that department, and will then proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
- GIRARD, Lieutenant Colonel JOSEPH B., D. S. G., is granted leave for 7 days, from about May 10.
- EBER, Captain ALBERT H., assistant surgeon, leave granted April 11 is extended 14 days.
- BLOCK, Captain WILLIAM H., assistant surgeon, recently appointed, is relieved from duty in the department of Cuba, to take effect when his services can be spared by the commanding general of that department, and will then proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
- DOUGHERTY, JAMES C., contract surgeon, is relieved from duty on the transport McPherson, now near Matanzas, Cuba, and will proceed to New York City and report to the medical superintendent of the Army transport service for assignment to duty.
- MADARA, Captain JAMES W., assistant surgeon, will proceed to Fort McDowell for temporary duty, awaiting transportation to the Philippine Islands.
- CHALMERS, Major THOMAS C., surgeon, will proceed to the Presidio, where he will report to the commanding officer, 28th infantry, U. S. volunteers, for temporary duty until muster out of that regiment. When his services are no longer required with that regiment, Major Chalmers is authorized to take advantage of the leave granted him.
- BOWEN, Major WILLIAM, surgeon, is assigned to temporary duty with troops on the Army transport Lawton, to sail for the Philippine Islands about May 12. Upon arrival of the transport at Manila, Major Bowen will report for assignment to duty.
- SPARRERBERGER, Captain FREDERICK H., assistant surgeon, is granted leave for 1 month.
- WHEATE, Captain JUSTUS M., assistant surgeon, is assigned to temporary duty with troops on the Army transport Lawton, to sail for the Philippine Islands about May 12. Upon arrival of the transport

at Manila, Captain Wheate, assistant surgeon, will report for assignment to duty.

- GRANDY, Major LUTHER B., surgeon, is granted leave for 1 month.
- FOGG, Captain JOHN S., assistant surgeon, is assigned to temporary duty with troops on the Army transport Lawton. Upon arrival of the transport at Manila, Captain Fogg, assistant surgeon, will report for assignment to duty.
- CARLING, Captain JOHN, assistant surgeon, is granted leave for 1 month.
- BYRNE, Colonel CHARLES C., assistant surgeon general, the retirement from active service May 7, 1901, by operation of law, under the provisions of the act of Congress, approved June 30, 1882, is announced.
- SWIFT, Major EUGENE L., surgeon, now at San Francisco, Cal., will repair to Washington, D. C., and report to the surgeon general of the Army for instructions.
- CARDWELL, Major HERBERT W., TURNBULL, Major WILFRID, WINN, Major WILLIAM B., TITUS, Major FRANK H., surgeons, U. S. volunteers, are honorably discharged from the service, to take effect June 30, 1901, their services being no longer required. The officers named will proceed to their homes.
- JONES, Captain PERCY J., assistant surgeon, recently appointed, now at San Francisco, Cal., will report for transportation to Manila, P. I., where he will report for assignment to duty.
- PALMER, Captain FRED W., assistant surgeon, recently appointed, now at Brooklyn, Mich., will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
- WADDELL, RALPH W., contract dental surgeon, will proceed from Washington, D. C., to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
- SMITH, A. B., contract surgeon, leave granted is extended 5 days.
- JONES, JOHN F., contract surgeon, now at Leroy, Ill., will proceed to Fort Washakie for duty.
- FIELD, P. CONOVER, contract surgeon, will proceed from Washington, D. C., to New Brunswick, N. J., for annulment of contract.
- SCHERRER, ELMER A., contract surgeon, is relieved from duty at Fort Grant and will proceed to Denver, Colo., for annulment of contract.

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"The Microbian Flora of the Human Body"

was the subject of a lecture recently delivered by Dr. Metchnikoff, of the Pasteur Institute, Paris, before the Manchester (England) Literary and Philosophical Society. The child, he said, is born microbe-free, but within a few hours even the intestine is invaded. The digestive organs continue the favorite homes, although the hair-follicles and mucous membranes are also thickly inhabited. Something like thirty species are found in the mouth, 30 more in the stomach, and 45 in the large intestine. Many, of course, are beneficial in function, and as an example Dr. Metchnikoff explained the fact that wounds of the mouth heal more quickly than those of the skin, is due to the presence of microbes which by their secretions attack the white blood-corpuscles, "the scavengers of the body." In the small intestine, also, certain bacterial acids prevent the development of other and injurious bacterial types. The lecturer appeared to think the large intestine is a useless organ, and seemed to suggest that the appendicitis specialist in lessening the number of useless and atrophying organs, "propitious to the growth of microbes," might encourage the rise of another-ectomy man. Is it possible that there is a theory-forming center which, under too active irritation by *Bacillus exhypothesi*, may have to be excised occasionally in the interest of conservative science?

Business Control by the A. M. A. Delegates.—

In response to our suggestion that the business of the American Medical Association should be given over to a reorganized small senate or house of delegates, a protesting query has been sent us, the purport of which is that the Executive Committee is precisely such a body and that its work has proved very satisfactory. We beg leave to differ. It is true that it has been a great improvement over the past wrangling inefficiency and injustice of the general session, but—(1) a reduced and reorganized delegate-body is absolutely required, if real representation as a national society is to be secured; with such a properly constituted house of delegates the work of the Executive Committee necessarily becomes that of the direct representatives, or legislators; (2) the Executive Committee is made up of the ex-chairmen of the sections. This is not direct or democratic representation, but is distinctly the reverse, and subject to the political and other abuses always existing in indirect systems of government; (3) the section-chairmen are necessarily more interested in the scientific than in the

business side of association work. The business aspect is different and requires a different order of talent and interest. It moreover demands the whole time of the legislator during the meeting. This the section-chairmen do not want to give, and, as a result, the meetings of the Executive Committee have been poorly attended. The work of this committee is not and cannot be final, but requires ratification (with debate, also!) by the general body. A limited house of delegates need not refer its decisions to the general session.

The annual money-equivalent for charitable work of the staff of a single hospital is thus calculated by the secretary of the Massachusetts General Hospital. It is based upon the lowest rates charged for similar services in private practice. Such a valuation for the year 1899 is as follows:

2,421 surgical operations at \$25	\$ 60,525
95,265 house visits at \$2	190,530
104,205 out-patients visits at \$2	208,410
Total	\$459,465
Cost of free patients [vide statement]	256,107
Total	\$715,572

In other words, this institution is returning more than 13% (in charitable work) on a beneficent investment of about five and a half million dollars.

Is Diphtheria Quarantinable?—In reference to the cases of diphtheria upon the *Rhynland*, the action of the quarantine and city health officials of Philadelphia in permitting the passengers to land without detention and observation, has been severely criticized. Yet it would seem as if the measures taken were amply adequate to the emergency.

If the disease had been raging aboard ship, owing to improper isolation of those attacked, the case would have been different.

With regard to yellow fever, cholera, and plague, the necessity of strict quarantine, even though there had been but one case on board, cannot be questioned.

These diseases do not exist in the United States, and can surely be kept out, so far at least as their introduction through marine channels is concerned. Smallpox also belongs to a different class from diphtheria. The health authorities recognize this in that they ordinarily would permit variola patients to be treated at home, while the transfer to hospital of diphtheria cases is more or less optional with the doctor and the family.

Diphtheria is not nearly as contagious as is smallpox (for the unvaccinated) and in making sanitary regulations, it must always be assumed that the number of unvaccinated in the country is large.

Quarantine laws in the present state of municipal sanitation should be as mild as is consistent with the protection of the community. It is cruel and inhuman to detain poor ignorant immigrants, arriving after a trying steerage voyage, for a long period, if there are other means of guarding the public health.

Disinfection of the cargo and of the ship is another matter—that is always feasible, and, as a rule, causes no undue suffering to anyone. Experience is a guide in matters of quarantine at sea-boards as well as in cities. If no cases of diphtheria develop in consequence of the action of the health authorities of this port, their action will afford a precedent for the future. We are not prepared to express a definite opinion as to the wisdom of not making diphtheria quarantinable, but are heartily in favor of the most lenient and most humane interpretation and enforcement of the quarantine laws.

Consumptive Aliens Denied Admission at United States Ports.—Such is the ruling of the Acting Commissioner General of Immigration. Pulmonary tuberculosis is a contagious disease, and the law of 1891 is henceforth to be carried out, that aliens with contagious diseases will not be allowed to land. The first effect of the ruling will be to restrict immigration, because it will not only directly exclude those suffering from the disease, but it will make the steamship companies greater expense, and hence will, in the long run, raise fares, create delays, etc. The companies being compelled to return all rejected passengers, will have to conduct rigid examinations at foreign ports, in order to be spared the expense of the double voyage. But it is only by the bacteriologist that the decisive test can be made. By union the expense and trouble of the companies may be somewhat lessened, but at best there seems to be a large measure of injustice to them, and it is possible that commercial interests may render the law ineffectual or may even annul it. But the American stomach, however great its digestive power, has probably a sufficiently large meal to attend to already in the tremendous mass of aliens already landed and unassimilated. When disease is added to the labor, it may help to the decision that restriction of undesirable immigration is ordered by sanitary as well as by commercial considerations.

The American Association of Pathologists and Bacteriologists.—Although nearly every branch of medicine has its national society, it was not until last year that an effort was made to organize a society of pathologists and bacteriologists. That the workers in these departments of scientific medicine were desirous of forming such an organization was demonstrated at the first meeting, held in Boston on April 5 and 6, when a membership of 123 was announced, and over thirty papers were read. This meeting was very successful, over two-thirds of the members, representing nearly all medical centers, being present. The officers of this meeting, who were also reelected for the present year, were:

W. T. Councilman, President; W. T. Howard, Jr., Vice-President; H. C. Ernst, Secretary; E. Hodenpyl, Treasurer; L. Hektoen, S. Flexner, C. F. Martin, Council. The next meeting will be held at Cleveland, Ohio, on the Friday and Saturday before Easter, 1902. The Association has no numerical limit to membership. Any one who has accomplished creditable work in pathology or bacteriology is eligible for membership. Thus also the membership is not limited to professional pathologists and bacteriologists, but is open to any one sufficiently interested in pathology and bacteriology to do research work. To the great body of men interested in these subjects the Association will afford an annual opportunity for presentation of new work, for discussion and closer acquaintance, not offered by any other organization. In this way it cannot but aid greatly the future development of pathology in this country; and it is safe to say that the Transactions to be published annually will become the most important record of this development.

New Medical Laboratories at the University of Pennsylvania.—It is with justifiable pride that the American profession can point to our progress achieved or determined upon in medical education. It is true that buildings and equipment do not constitute education or an educational institution, but we can truly say we also "have the men." These splendid machines will give them the better means of speedily placing the American medical colleges at the head of the teaching institutions of the world, as has been prophesied by one of our greatest physicians. Among the noteworthy evidences of progress is the determination of the University of Pennsylvania to build a great laboratory at a cost of \$500,000, for the use of the departments of physiology, pathology, and pharmacodynamics. For the teaching of students and the carrying out of research work in these branches of medical knowledge the new building with its equipment will afford opportunities unrivaled in this country. The building will be two stories in height, with a central court, thus insuring perfect lighting. The first floor will be devoted to the departments of physiology, pharmacodynamics, and pharmacy; the entire second floor to the department of pathology. The plans include two lecture rooms, with a seating capacity of 400, and two demonstration rooms to accommodate 185 students. In all departments, abundant space has been reserved for advance and research work. In the laboratory of pathology there will be also special laboratories for work in surgical, comparative, and experimental pathology, the pathology of the nervous system, and advanced bacteriology, thus making of this department a pathologic institute, in which opportunity will be afforded for any line of work in pathology or bacteriology. The unusual opportunities for investigation thus offered will undoubtedly have a great influence on the development of medical teaching and knowledge in this country, and will aid in securing for American medicine that scientific prominence which it is so rapidly achieving.

The Reorganization of the Lunacy Commission of New York and the appointment of Dr. Frederick

Peterson as the medical member and president promises most excellent results in many ways. The profession has great confidence that under Dr. Peterson's judgment and guidance there will be the best attainable benefit both to science and to the patients. We are sorry that the salary offered by the State allows him to give but a portion of his time from private practice to the work of the commission, but we are learning that there is no money payment for the services of public-spirited citizens who labor for the communal good. It is gratifying to know that Dr. Peterson has the greatest sympathy for the work heretofore carried on by the Institute under Dr. Van Giesen and that there will soon be a resumption of it under the new commission. It would be a great calamity to science and social progress if a noble cause such as that represented by the Institute were to fail of encouragement. There are few movements more worthy of help than that representing the scientific study, cure and prevention of insanity. A committee of the Neurologic Society last year passed the following resolutions. Dr. Peterson today aims to carry out the policy thus outlined:—

(1) It is to the interest of the State that original research work should be carried on in relation to insanity, in order that the science should be advanced and better methods of prevention, treatment and cure discovered. This is of direct interest to the taxpayers, upon whom falls the burden of the care of the insane.

(2) There should be one central laboratory in the State, wherein the energies of the best scientific men in the various departments of medicine related to insanity should be devoted wholly and exclusively to the prosecution of original research.

(3) Such a laboratory, combining the labors of well-qualified workers in general pathology, psychology, chemistry, anthropology, and any other requisite branches, should be able to produce from year to year results which would be creditable to the State as a patron of science, as well as invaluable in advancing the knowledge of the method of treatment and cure of mental disorders.

(4) Each hospital for the insane should have upon its staff of medical officers one physician whose sole duty it should be to conduct ordinary autopsies and to carry on the routine duties of a clinico-pathologic microscopist.

(5) The central laboratory, or Pathologic Institute, should be freely open to any qualified scientific men for the prosecution of original research work under the direction of the laboratory experts, preference always being given to the qualified men in the State hospitals. But systematic teaching of fundamental principles should not be required from any of the departments of the laboratory. The scientific men in charge of the various departments of the Pathologic Institute should devote all their energies to original investigation, and not be taxed, hampered or interfered with by medical men who are able to obtain instruction in fundamental principles elsewhere, without cost to the State.

(6) The central laboratory for original research should be a part of a reception hospital for the insane, situated on Manhattan island.

Popularizing Medical Science.—There is no work more needed than that of the popularization and realization of the teachings of medical and sanitary science. If the better classes could be aroused to the importance and effectiveness of carrying into execution the known means of lengthening life and making it healthy and happy, how tremendously would our civilization be bettered and hastened. It has been demonstrated that the death rate of great cities (*e. g.* Buffalo) can, in a few years,

be reduced one-third by the labors almost of a single earnest man. If one-hundredth of the money wasted by selfish charity and foolish philanthropy could be wisely spent in teaching the people the value of health and the prevention of disease, there would be accomplished one hundred times the good now derived from misguided endowers. We are moved to these thoughts by the report of a meeting held in South Orange, N. J., at which an entomologist set forth the methods of exterminating the mosquito. "Subscriptions for the proposed war came in with alacrity." The method of draining pools, the film of petroleum on stagnant water, etc., were explained and the success attained elsewhere described. If the property holders of the New Jersey coast would unite to rid the State of the mosquito they would also probably make more money in a short time than in a lifetime of *laissez-faire*. The report to the British Government by Mr. Neville-Rolfe, Consul at Naples, shows the commercial and industrial gains to be got from protection against mosquitos. He holds that the extermination of malaria is Italy's most important social and economic question. The Mediterranean Railway Company has fitted its station-houses with wire blinds and screens, and its agents with mosquito-proof clothing, and has thus demonstrated that absolute immunity is secured to employes who before looked upon life at these places as "a sentence of death."

Vasomotor Nerves in the Brain.—In a recent editorial, in which we called attention to some observations by Dereum and Spiller on the presence of myelinated nerve fibers in the spinal pia, we referred to Obersteiner's and Gulland's discoveries of the existence of nerves in the bloodvessels of the pia. We expressed the belief that these nerves were unquestionably vasomotor, and that the circulation in the central nervous system was not entirely at the mercy of the blood-pressure, but could be influenced by the action of vasoconstrictor nerves, just as the blood-supply of other organs. When writing this editorial we were unaware of the valuable and important studies of Huber, of the University of Michigan, who, by means of the Ehrlich intravital method of staining with methylene blue, was able to demonstrate unequivocally the presence of nerve fibers in the pia mater. These nerve fibers he found to be of two kinds: sensory and vasomotor. The differentiation was based upon the following grounds: The nerves considered sensory were distinctly medullated; they occurred in relatively large bundles, especially when in relation with the vessels at the base of the brain; they anastomosed to form wide-meshed plexuses surrounding the vessels; their neuraxons were larger than those of the sympathetic nerves; they branched and rebranched, and presented the short internodular segments usually observed when the sensory fibers approach their termination; and their terminal branches, which were varicose and nonmedullated, ended in fibrous tissue—the adventitia of vessels—or in the pia; the vasomotor fibers, on the other hand, ended in the muscular coat of vessels. Where the entire ending of the medullary fibers could be made out, the ends resembled the peripheral termination of sensory nerves in other parts of the body. The

vasomotor nerves were nonmedullated and form an interlacing network around the vessels. The fibrils terminated in the muscular coat of the pial vessels, in a manner in every respect identical with that of the vasomotor nerves in other parts of the body.

In order to determine whether the vasomotor nerves are derived from the ganglion cells of the cervical sympathetic ganglia, Huber extirpated the latter and endeavored to demonstrate degenerative changes in the pial nerves; but the results were not very satisfactory. An attempt was also made to find nerve fibers in the choroid plexuses of the ventricles, but without success; nor was it possible to trace nerves along the vessels penetrating from the pia into the brain.

In the dura mater two types of nerves were likewise found, of the same character as those in the pia; namely, sympathetic nerves, forming perivascular plexuses, and medullated sensory nerves terminating in the tissues of the dura.

Physiologists have hitherto denied the existence of vasomotor nerves in the brain, because experiments undertaken to demonstrate their presence have failed; we may, however, with Mosso and Obersteiner, attribute the negative results of these experiments to the probable fact that the vasomotor nerves of the brain are very quickly exhausted, and fail to respond to stimuli when the vasomotor nerves in other parts of the body still react.

Autepartum Examination.—A famous French litterateur once said that "a woman only escaped being sick twelve times a year by having an illness that lasts nine months." While this may be a sweeping statement, yet it clearly indicates the necessity of careful attention being given to the pregnant woman, in order to ameliorate or avert any complication of pregnancy and parturition. Ballantyne (*British Medical Journal*, April 6, 1901) has made a strong plea for the establishment of pro-maternity hospitals, where cases may be admitted early in pregnancy, particularly those patients who have suffered in previous pregnancies from one or more of the complications in which some anomaly of gestation has been diagnosed. More thorough examination and more careful study of the individual case could be made in a hospital; and such an institution would undoubtedly prevent disaster to the mother and lead to the conservation of fetal life. Ayers (*Physical Diagnosis in Obstetrics*) has spoken in eloquent terms of the crying need for improvement in medical practice of antepartum diagnosis in obstetrics, and of the value of pelvimetry, uterometry, and abdominal palpation, so that the best time may be selected for the induction or completion of delivery. Too much attention can not be given to the mensuration of the pelvic cavity, particularly when the general average of contracted pelvis, as given by Williams, is 13.1%. Nearly all of the major operations of labor are necessary because of the failure to recognize the probable causes of dystocia earlier in gestation.

The Consumption of Alcoholic Beverages.—That this subject is of great importance for the future of all countries every one is agreed. Indeed, it seems to

have as much interest for those who do not drink as for those who do. Statistics are constantly being twisted by people interested in one or the other side of the alcohol question to support their own side and an impartial study of the subject rarely appears. Such a study we believe is that of H. Bence-Jones, which appears in the *Journal of the Royal Statistical Society*, 1900, Vol. lxiii, p. 272. Even a mention of the many interesting facts brought out in this paper is impossible in the space allowed in these columns. But one fact will certainly be interesting to all Americans who believe in the importance of temperance: He states that the consumption of drink in Canada is smaller than that of any country of the world for which statistics exist; that in the United States is also small, and he is able to trace a comparative decrease in the consumption of spirits in recent years in both the United States and Canada. In the United States in 1890 the consumption of spirits per head was 1.17 gallons; in 1898 it had fallen to 0.92 of a gallon. There is perhaps a slight increase in the consumption of beer and light wines, but the quantities used are still quite small, as compared with some of the beer drinking countries of the world. In Bavaria the consumption of beer per inhabitant is given at 56 gallons; while in Germany as a whole, it is 27 gallons; in the United Kingdom not quite 32 gallons; in the United States 13 gallons per inhabitant. However, the consumption of beer does not indicate the entire consumption of alcoholic beverages. For in North Germany, for example, very little beer is drunk, the consumption of the inhabitants of those parts being spirits rather than beer. Thus, also, there is comparatively little beer consumed in Scotland and Ireland, while the consumption of spirits is proportionately larger.

The question of the desirability of drinks is not discussed, the question being as to what is drunk in the civilized countries of the world rather than whether it should be drunk or otherwise. As to the latter question there can be no doubt but that alcoholic beverages have their important uses in disease and whatever the tectotalers may believe with regard to the use of alcohol in a state of health, they cannot afford to deny its value as medicine. As to the hygienic side of the question it is certain that alcohol is not needed ordinarily by persons in a state of health, but it is also equally true that a large proportion of the people of civilized countries will consume a certain amount of alcohol quite regardless of this fact. If alcoholic drinks are to be used at all it is important that a pure article should be sold which will do as little damage as possible. The increase in the use of beers and light wines is encouraging rather than otherwise; for it is the experience of the countries in which they are most generally used that they are not as commonly adulterated and that drunkenness, poverty and disease are caused less often by them than by spirituous liquors.

A decrease in the amount of alcoholic beverages used is no doubt very desirable, but this will certainly not be brought about by the efforts of fanatics. We may be sure that the decrease in the use of alcoholic beverages in the United States is due to an increased intelligence of its people as a whole and this is highly encouraging.

Temperance in all things and not teetotalism is what is needed.

The Psychology of the Consumptive.—“The effect of bodily disease on the mind” says the editor of the *British Medical Journal*, “is a comparatively unexplored region of psychology. We, indeed, believe in a general way that long-continued severe pain may derange the reason; that cutaneous irritation may give rise to a kind of frenzy; that gout engenders an almost savage irascibility; that dyspepsia obfuscates the intellect and engenders spiritual gloom; that a disordered liver breeds melancholy; that a loaded colon disables the judgment; that fissures or fistula of the anus causes a peculiar irritability of temper. These facts suggest that every organic lesion, and, indeed, every pathologic condition, may reflect itself in a corresponding mental disturbance, so as to supply a scientific basis for the charitable maxim, ‘*Tout comprendre c'est tout pardonner.*’”

An interesting contribution to this field of clinical research has been made by Dr. Maurice Letulle, who in a recent number of the *Archives Generales de Médecine* gives the result of an investigation which he has lately carried out as to the psychology of tuberculosis. Mental energy, he says, and possibly a hyperexcitability characterize the early stages, but when ulceration begins there is lassitude and intellectual neurasthenia. M. Letulle thinks that in the last stages of illness there is none of the illusion as to recovery commonly supposed, except in medical men, who strangely enough, he says, are full of hope. As a rule defects of soul are exaggerated, but “melancholy is the badge of all the tribe of consumptives”—melancholy and egoism. For all are said to be selfish and exacting, thoughtless of the rights and sacrifices of others, and even spiteful, and vindictive. The editor of the *British Medical Journal* holds that M. Letulle's view is entirely too gloomy, and we would even go farther and say it is untrue. Is it not a question, partly, of race and of racial characteristics? According to M. Letulle's own expression psychic defects are exaggerated, not only in the tuberculous, but, as we think, in all diseases. When we are ill we indulge ourselves more than ever in the universal weakness of self-pity, and in chronic illness this indulgence is increased by the habit of being spared, of being waited upon, and coddled by everybody. Then, alas, it is a horrid thing to stare death in the face, to know that one's just chance at life has been denied, and all through no fault of one's self. It is wonderful so many patients do preserve the kindness and sweetness of which all physicians know.

Prize-Essays for Public Instruction—A Suggestion.—The close observer of medical superstition and abuses has constantly borne in upon his mind that these flourish because of popular ignorance. This ignorance is of course well supplemented by that egotism which usually accompanies lack of knowledge and perhaps is even better fortified by the greed of the money-getter. But at the bottom is the conditioning basis of utter ignorance of and scorn for the world's past or present experience. The mobs of the antis have the shallow enthusiasms which make them rush into print with the millions of

pamphlets, books, and journals of their propagandic literature, all filled with fallacies and untruths easily detected by the expert, but bringing conviction to the foolish. Against this torrent of folly and nonsense we have nothing of a popular kind to offer. What, for example, has the physician to give his rabid neighbors and patients that shall enlighten them as to the real facts of the antivaccination or the antivivisection literatures and controversies. For a philanthropist we can imagine no more beneficent and fruitful way of spending money than to offer prizes for the best essays on these and a hundred other subjects, and to place the pamphlets in the hands of every physician for free distribution. It is a work which AMERICAN MEDICINE would like to undertake or to act as the medium of, if such a measure of success should come to us as to enable us to do it. Could not your rich patient be incited to act in the meantime?

Since the foregoing was in print we have learned that the Colorado State Medical Society offers a prize of \$25.00 for the best essay, if deemed worthy of the prize, pointing out the dangers to public health and morals, especially to young persons, from quackery as promulgated by public advertisements. Essays should be sent to the Literature Committee, Room 315, McPhee Building, Denver, Colorado.

The Influence of Smoking in the Causation of Epithelioma of the Tongue.—The question of the influence of smoking in the production of epithelioma of the lip has often been raised and there is a general belief among surgeons that the use of tobacco is an important factor. Carcinoma of the tongue is fortunately a much rarer disease and the influence of smoking in its production has not been as frequently considered. In his latest edition of “Diseases of the Tongue,” Henry T. Butlin states that he feels justified in speaking much more strongly on this subject than he ventured to do some years ago at the time of the appearance of the former edition of his work. He believes that smoking is a decided factor in the causation of cancer, not so much directly as indirectly, rather by producing or tending to produce those conditions of the surface of the tongue which predispose to carcinoma than by immediately leading to the development of carcinoma in such tongues. He states that he does not rely so much on the statistics in support of this view as his personal experience with individuals suffering from precancerous conditions of the tongue and actual carcinoma. Thus Whitehead found only 61 smokers among 104 persons suffering from carcinoma of the tongue, which seems almost a small proportion, but the common history which we receive of much smoking, the great frequency with which carcinoma of the tongue is preceded by chronic inflammation of the surface of the tongue which has occurred in smokers and has been maintained by smoking and the much greater liability of males to the disease than females, leads to this view. Further confirmation of this belief is found in the fact that up to the present century little attention was paid to the diseases of the tongue. The introduction of tobacco into Europe at the end of the Middle Ages is thought to have had a great influence in the production of this increase.

Whatever influence tobacco may have in the production of carcinoma of the lips or tongue, it is exceedingly improbable that this fact will have much influence in preventing the habit of smoking. But as Butlin suggests it is probably more the irritation than any specific injurious quality in the tobacco itself. Hence smokers who would be wise should avoid the use of the stronger grades of tobacco, those forms of tobacco which to give aroma are mixed with various chemical and other substances which may be irritating, and the use of short stemmed pipes, and they should discontinue smoking the stubs of their cigars and cigarettes until they burn the lips and tongue. Those who have sufficient belief in the influence of tobacco as a specific factor in producing carcinoma can hardly have any other resort than to discontinue the habit.

Ovarian Transplantation.—The work of Morris, Knauer, and Gregorieff in experimental transplantation of the ovary has been attended with surprising and gratifying results. Knauer successfully transplanted ovaries from one rabbit to another, and the transplanted organs continued their functional activity, and many animals became impregnated subsequently. But it has remained for an American investigator, Dr. Robert T. Morris, to secure the interesting result of having successfully transplanted ovarian tissue from a healthy woman to a castrated one, with a subsequent pregnancy. The possibility of gestation following such transplantation presents some perplexing problems. The old query, which is the mother of the chick, the hen or the incubator, may be revived. With the greater dangers and possibilities lurking in artificial impregnation, some French writer may soon be basing a novel on the fact that neither reputed parent is the real one. May the medical forum become the scene of animated discussion upon the possibility of disease being transmitted by a fragment of foreign tissue? May the progeny of a healthy and innocent mother thus inherit tuberculosis, syphilis, or other horrible disease? May a thrifty traffic in healthy ovaries develop? Even the rehabilitation of an effete aristocracy is thus rendered possible, and the introduction of fresh energy assured without diluting the cerulean sanguinary fluid or compromising family traditions by unwelcome mesalliances. When sterility exists, due to ovarian disease, a remedy is at hand, and Napoleon might have been spared a disgraceful divorce had this procedure been adopted earlier. Advocates of female suffrage refer to the period when eminent English jurists discussed the profound subject whether a woman was related to her own child, and it is barely possible that American jurists of the twentieth century may have to decide whether a woman who supplies a diseased ovary is liable to a suit for damages, if a diseased child is born.

Atropin in Intestinal Obstruction.—The treatment of intestinal obstruction by medical means is often unsuccessful. Operation, although often indicated, cannot always be undertaken: in the first place, because of the age of the patient, many cases of intestinal obstruction occurring in advanced life; in the second, because, owing to delay for the purpose of trying medical meas-

ures, the patient has been brought to so low a state that the outlook for an operation is almost hopeless. It would seem, therefore, that a remedy which gives promise of cure should be most welcome. The German papers have recently contained numerous articles upon the use of atropin sulfate in intestinal obstruction, and, so far as can be learned, the treatment has frequently been successful. Large, almost poisonous doses, are necessary. The majority of writers recommend from 2 to 3 milligrams ($\frac{3}{8}$ to $\frac{1}{4}$ of a grain) at a dose, hypodermically. Toxic symptoms, such as delirium and restlessness, or stupor and unconsciousness, generally follow the use of such large doses; but, at the same time, these doses bring about movement of the bowels and the passage of gas. In an unsuccessful case reported by Höchtlén, autopsy showed that the obstruction was due to constriction of the intestines at two points by peritonitic adhesions. In such a case, atropin, could not, of course, be expected to give any results.

Extremism in the Antispitting Crusade is a danger which we should not run. The passage of an ordinance by the New Orleans Council against spitting, not only upon floors and cars, but upon sidewalks as well, seems very likely to defeat the object in view. It will probably result in utter indifference to the law. People will balk at such extremism and the world will go on as it did before the reform was started. It is useless to enact laws and attempt reforms too far in advance of public sentiment, and which will not be executed. In the prohibition State of Vermont, for instance, it is found that the sale of liquor for medicinal, mechanical or chemical purposes is as great as in other States for all purposes. In one town, Bradford, this reached the enormous sum of an average of \$3.89 for every man, woman and child. A little real progress is better than a failed attempt at impossible greater things.

EDITORIAL ECHOES

Immunity to Typhoid Fever.—Comparison of the results obtained by many observers seems to show that, while immunity is not constant after one attack of typhoid, it appears to be established for an extremely variable period in many cases. The results obtained among the British troops in South Africa and India apparently justify the idea that inoculation confers immunity frequently enough and of sufficient duration to lead to further use of this procedure, at least in cases where large bodies of men are exposed to the disease under unfavorable circumstances.—[*Medical News.*]

The Need of Pipe Galleries in New York.—The condition of the multitude of pipes uncovered in the excavations for New York's underground railway should arouse an overwhelming demand for a system of pipe galleries. Such a system would be a civic economy and a conservator of health. It would place all pipes where they could be rigidly inspected at frequent intervals. They would be accessible in case of leak or break. There would thus be no opportunity for the contents of the pipes to percolate through the soil and jeopardize the health of those living near. There would be no interference with traffic or with business along the line of any pipe route. Thus money would be saved and health conserved.—[*North American Journal of Homeopathy.*]

BOOK REVIEWS

A Compend of Human Physiology.—Especially adapted for the use of medical students. By Albert P. Brubaker, A.M., M.D., adjunct professor of physiology and hygiene in the Jefferson Medical College, etc., etc. Tenth edition, revised and enlarged, with illustrations and a table of physiologic constants. Philadelphia: P. Blakiston's Son & Co., 1900. Pp. 270. Price 80c. net.

To say that any book has passed through 9 editions and warrants a tenth, now issued revised and enlarged, is praise enough. Of all the admirable quiz-compendis issued by this firm none have enjoyed a greater continuous popularity than this by Dr. Brubaker.

Tuberculosis as a Disease of the Masses, and How to Combat It.—Prize Essay, Berlin, 1899. S. A. KNORF, M.D. Price, 25 cents; cloth, 50 cents. M. Firestack, 200 West 96th street, New York.

This excellent monograph was written for the laity, but the general practitioner will find it suggestive and its practical details helpful in cases in which he is obliged to give instruction to those suffering with or exposed to the disease. It should be widely circulated.

Anomalies and Curiosities of Medicine, being an Encyclopedic Collection of Rare and Extraordinary Cases, and of the Most Striking Instances of Abnormality in all Branches of Medicine and Surgery, Derived from an Exhaustive Research of Medical Literature from its Origin to the Present Day, Abstracted, Classified, Annotated and Indexed by GEORGE M. GOULD, A.M., M.D., and WALTER L. PYLE, A.M., M.D., with 295 illustrations in the text, and 12 half-tone and colored plates.

The popular edition of this work is offered 5 years after the first edition, forming a handsome imperial octavo volume of 968 pages. It appears to be the first attempt to briefly summarize and to arrange in order the records of the most curious, bizarre and abnormal cases that are found in medical literature of all ages and of all languages, and is a work of the greatest interest to the physician, physiologist and psychologist. To know extremes gives directly some knowledge of means and by implication and inference it frequently does more. A glance at the bibliographic index shows that several years of exhaustive research have been spent in the great medical libraries in the United States and Europe in collecting the material presented. Complete references are given to those facts that are comparatively unknown or unique or that are worthy of particular interest or further investigation. A complete general index is also added in which may be found not only the subjects under consideration and numerous cross-references, but also the names of the authors and most important reports.

Sexual Debility in Man, by F. R. Sturgis, M.D., formerly Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York, etc., etc. E. B. Treat & Co., Publishers, 241 and 243 West Twenty-third street, New York City. 1900. Price \$3.00.

The singularly naïve acknowledgment in the dedication of this book would lead us to expect something worth while in its subsequent pages. Nor are we disappointed. The candor evident in the preface, where the author disclaims any desire to fill a "long felt want," is certainly refreshing. He frankly states that his object is to promulgate certain opinions on these matters which are at variance with the usual teaching. He first takes up the anatomy and physiology of the organs under consideration, then proceeds to discuss the various phases of debility and impotence, their causes and curative treatment. The views expressed are often novel, particularly with respect to cause and effect in many diseases of the male, but his conclusions are so fairly stated and based upon observations so keen and illustrations so plain that we are almost compelled to accept them. Good wholesome common sense is the chief characteristic of the book throughout. Occasional lapses from a high moral plane are evident which are deplorable, but as the work is scientific and not ethical these may be condoned. It is eminently candid and truthful throughout, free from prudery on the one hand and devoid of pruriency on the other.

Chloroform. A Manual for Students and Practitioners. By Edward Lawrie, M.B., Edin., M.R.C.S., Eng. Residency Surgeon Hyderabad, Lieutenant-Colonel I.M.S., etc. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co.

This manual is exceptionally well written, and incorporates the results of the experiments which were performed by the Hyderabad Chloroform Commission. The physiologic action of chloroform is fully described, and the method of its administration is detailed. The manual is of inestimable value to the student of medicine, the practitioner, and to the anesthesia specialist. Lawrie has done much to eliminate the universal fear of the employment of this anesthetic, and has formulated definite rules, which if adhered to, will obviate to a great extent untoward results.

A Textbook of Pathology. By ALFRED STENGEL, M.D., Professor of Clinical Medicine in the University of Pennsylvania, etc. With 272 illustrations, 873 pages. Third edition, revised. W. B. Saunders & Co., Philadelphia and London, 1900. Price, net, cloth, \$5.00; half morocco, \$6.00.

The final end of medicine, surgery, gynecology and obstetrics is the direct application of the physician's knowledge to the patient's condition. But the doctor who hopes to avoid the dangers of empiricism must keep alive his interest in the causes and conditions underlying disease processes. Where can the knowledge desired be better found than in a good general pathology? He will not need a volume filled with laboratory technique, nor containing methods for original research, but one in which he can find stated the essential pathologic facts relating to each class of diseases and region of the body. Moreover, these facts should be so stated that the clinical features of each disease may be elucidated. The efficiency of such a work will depend upon the breadth and reliability of the author's knowledge, his skill in selecting essentials, the arrangement of the subject-matter and his skill in presenting these materials in a manner which shall insure their assimilation by the seeker after truth. Such is the object of the present volume, and, after a careful perusal and a comparison with other textbooks, we do not hesitate to say that it fulfills the requirements. The field is well covered. It is thoroughly abreast of the latest conclusions. It is enriched by the wide observation and experience of the author. Moreover, being primarily written for the use of students, it is so plainly couched that its meaning is never obscured. No controversial matters are admitted, except an occasional reference to explain the author's position.

In the first division of the book, or General Pathology, the chapter on Bacteria and Bacterial Diseases is the most noteworthy. Nearly a hundred pages are devoted to this topic. This evinces the author's wisdom, since it is along this line that so much new truth has entered the domain of pathology. Here, too, a clear description of ground already won may prepare the way for advances.

In the second division, or Special Pathology, the chapter on Diseases of the Blood is worthy of special mention. We may also note in passing that the obstetrical field is not neglected. The entire subject of Nervous Pathology is carefully treated. An admirable 6-page epitome is inserted, covering the embryology, histology, anatomy and physiology of the nervous system, with a statement of the neuron theory. This little interpolation will be especially valuable to men who cannot consult more extended works.

The book is beautifully illustrated and well indexed. The paper, type and binding are all that could be desired.

Food for the Sick; How to Prepare It. Food for the Baby, by EDWIN CHARLES FRENCH, M.D. Pp. 171. Price \$1.00, postpaid. Louisville: John P. Morton & Co., 1900.

There seems to be just enough therapeutics in this little book to make it undesirable to put into the hands of the laity. In diarrhea milk is *not* always the best diet—it is sometimes rank poison, as in the enterocolitis of infants. Nor is it much safer to prescribe milk (whether predigested or otherwise) as the final word on the diet of dysenteries. It is often nearly the last thing which the patient can digest. The cooking recipes are clear, and generally practical.

Atlas and Epitome of Labor and Operative Obstetrics.—By Dr. Oskar Schaeffer, Privatdocent in Obstetrics and Gynecology in the University of Heidelberg. Authorized translation from the fifth revised German edition, edited by J. Clifton Edgar, Professor of Obstetrics in Cornell University Medical College, etc., with 14 lithographic plates in colors and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co., 1901.

This work is an excellent example of that class of textbooks which aim to set forth concisely primary principles and tested methods, knowledge that can be "snatched," rather than to elaborate and exhaust the subject. The classification of fetal positions, at discord with the usual American one, is somewhat confusing. Fetal presentations which are rare and more rarely diagnosed, are given undue prominence; and simplification of the multitude of references to figures and plates would be an improvement. The general classification, however, is simple, clear and logical. The method of presenting obstetric operations is admirable. The conservative, least dangerous, and, therefore, usually the best methods, are emphasized. The drawings, representing original work, have the commendable merit of illustrating instead of confusing. It would be difficult to find 100 pages in better form or containing more practical points for students or practitioners of obstetrics.

The Students' Manual of Venereal Diseases.—By F. R. Sturgis, M.D., sometime Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York; formerly one of the Visiting Surgeons to Charity Hospital, B. I., Department of Venereal Diseases; Member of the American Association of Genitourinary Surgeons, etc. Seventh edition, revised and in part rewritten by F. R. Sturgis, M.D., and Follen Cabot, M.D., Instructor in Genitourinary and Venereal Diseases in the Cornell University Medical College; Genitourinary Surgeon to Bellevue Hospital, Outpatients' Department; Visiting Dermatologist to the New York City (Charity) Hospital; Lecturer on Venereal and Genitourinary Diseases in the University of Vermont. Pp. 216; price, \$1.25 net.

A careful, and at the same time condensed, description of the commoner forms of venereal diseases which the average young practitioner will be called upon to treat, together with the most appropriate remedies, is offered in this work. It is concise and at the same time thoroughly practical, the mooted points in venereal medicine having been omitted.

A Manual of Practical Hygiene for Students, Physicians and Medical Officers.—By Charles Harrington, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Illustrated with 12 plates and 105 engravings; 8vo. Pp. 72. Cloth, \$4.75 net. Lea Brothers & Co. Philadelphia and New York, 1901.

In the 17 chapters of this work are considered the following general topics: Foods, Air, The Soil, Water, Habitations, Schools, etc., Disposal of Sewage, Disposal of Garbage, Disinfectants and Disinfection, Quarantine, Military Hygiene, Naval and Marine Hygiene, Tropical Hygiene, Hygiene of Occupation, Vital Statistics, Personal Hygiene, Vaccination, Disposal of the Dead. Notwithstanding the necessity for conciseness in an attempt to cover so extensive a field, the author has succeeded in bringing together a vast fund of information, and in presenting the same in a most attractive and interesting manner. The chapter on foods is particularly interesting, incorporating as it does the results of the extensive investigations concerning American food materials carried on under the auspices of the U. S. Department of Agriculture. Many readers will probably be surprised to learn of the extent to which dogs are slaughtered for food in the large cities of Germany, *e. g.*, in Dessau an average of 251 yearly. The thorough treatment of the subject of food adulterations and their detection would, in itself, render the book of permanent value; but the same may be said of the chapters on Water, the Disposal of Sewage and the Disposal of Garbage. The book should be placed in the hands of every official in every large city of the land; it is truly a "Practical Hygiene," better fitted for the use of those controlling public works, city officials, builders, plumbers, teachers, and of physicians than any book available. The illustrations are good, but the index is not altogether satisfactory.

Nursing Ethics, by ISABEL HAMPTON ROBB, Graduate of the New York Training School for Nurses attached to Bellevue Hospital; late Superintendent of Nurses and Principal of the Training School for Nurses, Johns Hopkins Hospital, Baltimore, Md.; late Superintendent of Nurses, Illinois Training School for Nurses, Chicago, Ill.; Member of the Board of Lady Managers, Lakeside Hospital, Cleveland, Ohio; Honorary Member of the Matrons' Council, London, England. Pp. 273. Price Cleveland: J. B. Savage, 90-92 Wood street, 1901.

This little book contains many words of wisdom, and should be in the hands of every nurse. It has long been needed. The advice given is sound and practical. Mrs. Robb emphasizes the fact that no set of rules can alone make a perfect nurse or even a fairly good one; and that 2 or 3 years in a hospital cannot supply the lack of home training, a good general education, and the early implantation of ideals which lead to love of the "beauty of holiness," of truth, honesty, and consideration of others. But in many ways this unpretending volume is a finger post on the road to that "perfect conduct" which Herbert Spencer defines as "Ethics."

Manual of the Diseases of the Eye.—For Students and General Practitioners. With 243 original illustrations, including 12 colored figures. CHAS. H. MAY, M.D., Chief of Clinic and Instructor in Ophthalmology, Eye Department College of Physicians and Surgeons, Medical Department, Columbia University, New York. Price, \$2.00. Wm. Wood & Co.

The manual is clearly written and the necessary condensation is judiciously done. Philadelphia refractionists will not agree with the statement that we may assume the absence of astigmatism when the patient reads 20-20, and will find the teaching on the use of mydriatics unsatisfactory, and would change the emphasis somewhat in the treatment of muscular anomalies. The illustrations on the whole are good, although many of those for diseases of the eye are too diagrammatic. The volume is attractively bound and printed.

A Manual of Syphilis and the Venereal Diseases.—By JAMES NEVINS HYDE, A.M., M.D., Professor of Skin, Genitourinary and Venereal Diseases, Rush Medical College, Chicago; Dermatologist to Presbyterian, Michael Reese, and Angustana Hospitals, of Chicago; Consulting Dermatologist to the Chicago Hospital Society for Women and Children, and to the Chicago Orphan Asylum; and FRANK HUGH MONTGOMERY, M.D., Associate Professor of Skin, Genitourinary and Venereal Diseases, Rush Medical College, Chicago; Professor of Skin and Venereal Diseases, Chicago Clinical School; Dermatologist to St. Elizabeth's Hospital, Chicago. Second Edition, Revised and Enlarged.

We notice with pleasure the appearance of the second edition, revised and enlarged, of Hyde and Montgomery's "Syphilis and the Venereal Diseases." The work consists of a volume of 594 pages and contains 58 illustrations and 19 full-page lithographic plates. The authors state that the work is intended for students and practitioners rather than specialists. For this purpose it is well adapted, constituting as it does a convenient medium between the ordinary compend and the voluminous "American Textbook of Genitourinary Diseases." The discussion on syphilis is full, comprising rather more than one-half the volume, and leaving little in addition to be desired. Besides syphilis the authors have discussed chancreoid, diseases not invariably venereal, hypochondriasis, acute urethritis, chronic urethritis, complications of urethritis, stricture of the urethra and gonorrhoea in women. The discussion on gonorrhoea is fully up to date and coincides in pathology and treatment with the teaching of the most advanced genitourinary specialists. Throughout the work, useless theories and controversial matter have been wisely omitted, and a practical common sense pervades the whole. The treatment recommended for the various disorders appears to be that fully approved by the best practitioners, though less exhaustive than that in more voluminous works. The work is written in clear, concise and easily comprehended English. There is a place even in the very crowded and exhaustive medical literature for this work, and it will doubtless be received by the profession in the spirit hoped for by the authors.

AMERICAN NEWS AND NOTES

GENERAL.

Correction.—In AMERICAN MEDICINE, May 11, page 247, the election of officers for the Gastroenterological Association should read: President, Dr. John C. Hemmeter, Baltimore; first vice-president, Dr. W. D. Booker, Baltimore; second vice-president, Dr. S. J. Meltzer, New York; secretary and treasurer, Dr. Charles D. Aaron, Detroit.

The National Confederation of State Medical Examining and Licensing Boards will hold its next meeting at St. Paul, Minn., June 3, 1901. A cordial invitation is extended to members and exmembers of State Medical Examining Boards, physicians and educators interested in the cause of higher medical education. There will be a discussion of the question—What should be the legal definition of the practice of medicine?—following a paper on that subject by Dr. Henry Beates, Jr., of Philadelphia. Also a discussion following the report of the Committee on Interstate Reciprocity and Uniform Legislation.

Smallpox.—In Massachusetts, 6 cases of a mild type, at first thought to be chickenpox, have been diagnosed at Roxbury; 2 cases in a family at Adams, a member of which had been at Cohoes, N. Y., and at Pownal, Vt., where the disease has prevailed; 2 more cases at Leominster, and 2 cases at Southbridge, and 1 case is in the isolated ward in the Marine Hospital at Chelsea.

The New York Board of Health denies that the disease has been more prevalent in that city this winter than in other parts of the country. From December 28, 1900, to May 3, 1901, there were 723 cases there out of a total in all the States and Territories of 22,344. In the northwestern section of Philadelphia 2 new cases were reported May 17, and on the same day, in Chester, 7 cases, 6 of which were in 1 family, were reported. The authorities have ordered the vaccination of all the school children.

At Camden, N. J., another case is reported and measures to prevent its spread are being considered by the Board of Health. Two more persons suffering from smallpox have been removed to the Isolation Hospital, at Paterson, N. J.

The patients and suspects quarantined at Salisbury, Md., have all been discharged. Compulsory vaccination has been declared imperative in Washington county, Md., owing to the importation of colored labor from infected districts. Smallpox exists in many localities in Canada, and has broken out again in Kentville, Nova Scotia.

In Detroit, Mich., 60 cases of a mild form of smallpox have been found in the St. Francis Polish Convent, and several cases of it and a great number of exposures are reported from Wild Rose, Wis., and in Sheboygan there is consternation in its discovery in the family of a man who conducts a milk route in that city. At Chippewa Falls, Wis., the lower rooms of the public and parochial schools and the public library have been closed, owing to the prevalence of smallpox and scarlet fever. Near Warsaw, Ind., 10 cases are quarantined and an epidemic is reported among the white people of the town of Rolla, N. D.

Prompt vaccination has prevented a spread of the disease in the Institution for the Deaf, Dumb and Blind, in Berkeley, Cal. Two steamers from Naples and 1 from Hamburg have each had a case of smallpox among the steerage passengers. Official reports from Merida, Mexico, report the epidemic there as diminishing, and from Ponce, Porto Rico, April 29, a slow improvement in the situation.

Preliminary Report of the Committee on Organization of the American Medical Association.—The following embody the recommendations which will be incorporated in the Constitution and By-Laws to be submitted at the St. Paul meeting:

1. The delegate body shall hereafter be known as the "House of Delegates of the American Medical Association."
2. The House of Delegates shall consist of not more than 150 members and shall be created as follows: (a) 1 delegate for every 500 members or fraction thereof of the State and Territorial societies recognized by the American Medical Association; (b) 1 delegate from each of the Sections of the American Medical Association, to be elected as are other officers of the Section; (c) 1 representative each from the U. S. Army, the U. S. Navy, and the U. S. Marine-Hospital Service.
3. Delegates representing the State societies shall serve for 2 years, $\frac{1}{2}$, or as near as may be, of such delegates to be elected the first year for 1 year only.
4. Whenever the number of delegates exceeds 150 there shall be such a reapportionment among the affiliated State societies as will bring the total membership of the House of Delegates below that number.
5. The House of Delegates—as the Sections—shall hold its sessions daily, from 9 a. m. to 12 m., and from 2 p. m. to 5 p. m., or so much of such time as may be necessary, provided that it shall hold no session on the morning of the first day of the annual meeting, nor during the time of the General Sessions.
6. The General Sessions of the American Medical Association shall be composed of members and delegates who may be in attendance at the annual meeting, and the time of meeting

shall be 11 a. m. on the first day of the annual meeting, 7.30 p. m. on the first 3 days of the annual meeting, and 12 noon (or such other hour as may be agreed upon) on the last day of the meeting, which session shall be for the installation of the officers for the ensuing year and other concluding exercises.

7. All the officers of the Association shall be elected by the House of Delegates, but no member of the House of Delegates shall be eligible to any office whose incumbent is elected by that body.

8. No one shall be elected a member of the House of Delegates who has not been a permanent member of the American Medical Association for at least 2 years.

9. The election shall take place on the morning of the fourth day of each annual meeting.

10. No one shall be elected to any office who is not present at the annual meeting at which the election occurs.

11. The officers elected shall be installed at 12 o'clock on the last day of the annual meeting.

12. The membership of the Association, in addition to the delegates, shall be composed of permanent members, honorary members, and associate members.

While the Committee fully appreciates the fact that its duties do not extend below the American Medical Association, nevertheless it has in the interest of a complete organization considered the State and local societies, and to complete this urgently required organization of the regular medical profession, offers the following recommendations to the various State and territorial medical societies:

(a) That each State society shall at the earliest possible moment appoint a "Committee on Organization," to which shall be referred, with the Association's endorsement, the report of your Committee, and especially that part which refers to State and county societies.

(b) That each State society immediately raise funds and employ an organizer to organize the profession in its territory.

(c) That the State societies unitedly agree to federate themselves in the American Medical Association, and as a preliminary to this adopt a uniform organic law in regard to certain fundamental principles: viz., to divide their annual meeting into 2 branches, legislative and scientific; the legislative branch to be as small as is compatible with representation from all the county societies, and to be composed of delegates elected by the county societies.

(d) That membership in the county or district societies shall constitute membership in the respective State society without further dues, and that no one be admitted to membership in the State society except through county or regular district societies.

(e) That funds to meet the expenses of the State society be raised by a per capita assessment on the county and district societies.

(f) That a united effort be made to influence special societies to limit their membership to those who support the regular organization, and the seminational and miscellaneous societies to encourage systematic organization, by covering a definite territory and also by limiting their membership to supporters of the regular organization.

(g) That each State society create a permanent committee and a fund for the purpose of enforcing all medical laws in every part of its territory.

(h) That each State society cooperate with the American Medical Association and with the other State societies in solving the problem now before the profession relating to medical education, medical legislation, reciprocity, licensing, etc.

Your Committee further recommends that a committee of 3 be appointed at the St. Paul meeting to continue, in behalf of the American Medical Association, the plans authorized in this report, and to act in conjunction with the large Committee to be appointed by the various State societies. Your Committee also presents herewith supplementary arguments in favor of organization, all of which is respectfully submitted.

[Signed:]

J. N. McCORMACK, Bowling Green, Ky.
P. MAXWELL FOSHAY, Cleveland, Ohio.
GEORGE H. SIMMONS, Chicago.

NEW YORK.

Dr. Nathaniel D. McDowell has been appointed optical surgeon of the State Industrial School.

Harriet E. Blach, of Amityville, has been appointed physician in the Long Island State Hospital.

Dr. Louis Fisher has been appointed a visiting physician to the Willard Parker and Reception Hospitals of New York City.

L. Emmett Holt has been appointed clinical professor of diseases of children at the College of Physicians and Surgeons, New York.

New Lunacy Commissioner.—Dr. Frederic Peterson of New York City has been appointed medical member of the New York State Lunacy Commission, to succeed Dr. Wise. Dr. Peterson has made nervous and mental diseases a special study for a number of years.

An **Emergency Hospital** has been established at Buffalo, for the use of the public at the Pan-American Exposition. It comprises 2 male and 1 female wards, accommodating in all 26 beds, and is supplied with all modern medical and surgical appliances. Dr. Roswell Park is the head of the staff of 3 physicians.

Hospital Appointments.—Drs. Frederick Zingsheim and Paul O. Lendeke have been appointed medical internes in the German Hospital of Buffalo. Drs. Tripp and Leonard of the University of Buffalo, class of 1901, have been appointed resident physicians of the Buffalo General Hospital.

PHILADELPHIA, PENNSYLVANIA, ETC.

The Children's Seashore House at Atlantic City opens June 1 and during the month of June will receive free, as far as accommodations allow, sick or convalescent children from the various city hospitals.

The University of Pennsylvania will soon erect a new medical laboratory at a cost of at least \$500,000. The authorities are also contemplating the construction of a new medical hall, anatomical building, and auxiliary buildings. These buildings will adjoin the new laboratory about to be erected.

Honors to a Philadelphia Physician.—Dr. Joseph Leidy has received from the French Government the decoration of Chevalier of the Legion of Honor and the decoration of "Officier Instruction Publique." These have been bestowed for services rendered the French Government during the Paris Exposition as member of the International Jury on Hygiene.

The Western University of Pennsylvania, at Pittsburg, has appointed a committee to appear before the Appropriations Committee of the State Legislature demanding why the institution should be neglected in the State appropriations. A number of physicians, members of the school faculty, were recently summarily dismissed from the staff of the West Penn Hospital. The committee will likewise demand an explanation for this.

WESTERN STATES.

Compulsory Vaccination.—Governor La Follette, of Wisconsin, vetoed the Collins Compulsory Vaccination Bill as he did not believe the emergency existed which required a law that was so bitterly opposed by many of the citizens.

American Medical Association's members are invited to avail themselves of the headquarters secured by the *St. Paul Medical Journal* in a room adjacent to the general exhibits, during the St. Paul meeting, for writing, reading, smoking, and general lounging.

Carl Krueger, whose stomach was removed 3 weeks ago by Dr. B. B. Eads, of the Illinois Medical College, is reported to be fully recovered. He is able to partake of vegetable foods and predigested meats. A similar case in San Francisco, performed successfully 2 years ago, was the first of its kind in this country.

Cats Stricken with Diphtheria.—The cats in a certain district of Chicago are afflicted with a throat disease which many claim is diphtheria. The felines are dying by wholesale, but so far there has not been a case reported in which the disease has been communicated to the persons who feed and caress the animals.

The Ohio Hospital for Epileptics held a meeting of the Board of Trustees May 17. Dr. H. C. Rutter, manager, formally tendered his resignation, which had been requested by Governor Nash. At this time an effort was made by Dr. Rutter to obtain the support of the trustees in his discharge of the director of the Pathologic Laboratory, Dr. A. P. Ohlmacher, but a letter from the Governor to the Board of Trustees was read expressly forbidding this action.

Hospital Investigation.—A special committee of 9 members, composed of representative citizens from civic clubs and associations, and 3 county commissioners, of Chicago, chosen to make an impartial investigation of charges of cruelty and neglect made against officials of the County hospital by discharged patients, found the nurses in the main faithful, conscientious and able but overworked, and an increased force was recommended also an improvement in the quality of the food and the manner of serving it.

Hospital Insufficiently Heated.—Patients who have been recently dismissed from the Cook County hospital, Illinois, complained that the institution was not properly heated and that the sick wards suffered from the low temperature. Commissioner Beer, a member of the hospital committee, when questioned stated that this condition of affairs had existed for 20 years, the temperature running anywhere from 15° to 20° below what it should be for the sick. The remedy of the introduction of a new heating plant is strongly recommended by a committee of investigation, and in the future that the warden, chief engineer and the Board of County Commissioners should jointly and severally be held responsible for any negligence in this department.

FOREIGN NEWS AND NOTES

GENERAL.

Treatment of Tuberculosis.—Dr. Brunon, Director of the Rouen School of Medicine, says the English method of fighting tuberculosis with beefsteak and tennis is more efficacious than the sanatorium system observed throughout Germany.

Soda Water Sparklets are proved to have explosive propertics as illustrated in the case of a young Boer girl in South Africa who picked up a sparklet and in attempting to open it with a nail it exploded blowing off the distal and second phalanges of the 3 fingers and wounding the palm and little fingers.

In the Interest of Public Health the Mayor of Lyons has issued an order, authorized by a statute of 1880, forbidding the establishment of all new public houses within 250 yards of a cemetery, school, church, or other religious building. The reason for the law is to stop the increase of alcoholism by preventing the creation of new public houses.

Obituary.—JOHN PENN HARTREE of Cambridge, England, aged 57. WILLIAM BEALE WALLIS of Colchester, England, May 6, aged 71. EARNEST HENRY RICHMOND WATTS of Kensington, England, May 5, aged 41. W. LANGFORD, at Kyneton, Australia, March 21. THOMAS ALEXANDER PAPILLON of St. Leonards-on-Sea, England, April 2, aged 42. HENRI NAPIAS of Paris, April 28, aged 59. Dr. GEORG ASP, professor of anatomy at the University of Helsingfors, April 25, 1901, aged 67.

Human influence on weather conditions is involuntary, says Dr. Trabert, of the Paris Meteorological Society. The change in the weather he attributes to deforestation and the extensive burning and incomplete combustion of coal. The dust being scattered through the air forms a basis for condensation, and this tends to produce rain. He rejects the theory that the abundant production of steam increases the number of storms, stating that in Germany, which has many large industrial plants, the evaporation would scarcely be $\frac{1}{4}$ inch to the square mile.

GREAT BRITAIN.

Smallpox in Glasgow continues to decline. Since the beginning of the year, 302,000 of the citizens have been vaccinated.

Scientific Disposal of Sewage.—An investigation of a number of the larger cities of Great Britain shows that in nearly all of them a scientific disposal of all sewage is made, either by filtration or precipitation or irrigation on sewage farms.

Glass Particles in Candy.—The *Lancet* calls attention to the dangerous ingredient of finely crushed glass splinters added to some high grade candy to give it a sparkling appearance, and supposed to be adopted to compensate for the absence of any crystalline appearance in glucose which is used so largely as a substitute for cane sugar in confectionery. When the candy is dissolved in warm water, the splinters fall to the bottom of the tumbler in a tiny heap of broken glass. Two children who ate of this candy shortly afterwards suffered from severe abdominal pain, in the one case in the region of the appendix. The pain persisted for several days.

Dietetic Value of Sugar.—Dr. Gardiner, of England, in his researches on this subject finds that sugar is a potent creator of energy and maintainer of stamina, and in confirmation of his laboratory experiments cites the endurance of the date-eating Arabs, the fine health of the sugarcane-eating negroes, and the results achieved by mountain climbers, explorers, athletes, and soldiers who were fed on this diet. He attributes in great measure the increased height and weight, and better health of the English people in the last century to the increased consumption of sugar, which in England has trebled per head in the last 40 years.

CONTINENTAL EUROPE.

Support of Paupers.—France is said to maintain its paupers by means of a tax of 10% on all theater tickets sold.

The Saccharine Bill has been passed by the Reichstag Committee. It is a measure designed to prohibit the sale of saccharine under the name of sugar.

Turf wadding used as absorbent bandages for men and animals in cases of wounds, padding for splints, etc., was first spun from turf fiber by Zsehorer, a civil engineer of Vienna. Karl Geige, of Düsseldorf, improved it by getting from turf a finer material and by action of chemicals and washing has removed all impurities, so that the turf wool consists of almost pure cellulose, is soft and elastic and from it clothing and rugs are also largely manufactured.

SOCIETY REPORTS

AMERICAN SURGICAL ASSOCIATION.

ANNUAL MEETING HELD IN BALTIMORE, MD., MAY 7, 8, AND 9, 1901.

[Specially reported for AMERICAN MEDICINE.]

[Concluded from page 291.]

Demonstration of Fractures of the Pelvis: OSCAR H. ALLIS, M.D. The speaker, by extensive apparatus, demonstrated how fractures of the pelvis may be made. The demonstration was upon the cadaver, and by applying force, by means of a lever, to the femur, it was demonstrated how different luxations and fractures are produced. One marked feature was resisting strength and solidity of the pelvis of the cadaver; another was the remarkable resiliency of the green femur, stripped of all supporting muscles.

Pancreatitis: MAYO ROBSON (Leeds, England) said all diseases of the pancreas except those producing gross organic changes have been practically overlooked, notwithstanding the proof evinced by observation and experience that the pancreatic ducts share in the same inflammatory processes as the bile ducts, and he regretted that there is as yet no reliable signs to aid in the diagnosis of occlusion of the pancreatic ducts. In the near future he has grounds for hope that an examination of the urine, blood and feces will give this diagnostic aid. The frequent association of gallstones with chronic pancreatitis, found in his own experience, and the theory deduced that pancreatitis and gallstone troubles are intimately related, is confirmed by cases cited from literature. The condition giving rise to fat necrosis he does not regard as essentially a pancreatitis, as has been suggested. The ill effects of the recognized hemorrhagic condition, coexisting with carcinoma of the head of the pancreas, he overcomes by the administration of 30-60 grains of calcium chloride, twice daily, from 24 to 48 hours previous to operation. He pointed out the possibility that glycerin set free in the tissues by the fat necrosis may be the true cause of the local hemorrhagic tendency in pancreatic disorders. He classified pancreatitis as acute, subacute and chronic, and gave indications, treatment and illustrative cases.

Treatment of Chronic Ulcer of the Stomach: A. W. MAYO ROBSON, F.R.C.S., Leeds, England. Medical treatment, said the speaker, is the first to be applied in chronic ulcer of the stomach; this is successful in most cases. But we should operate earlier than has been the practice. Chronic gastric ulcer is more serious than is usually supposed, and treatment, medical or surgical, as indicated, should be urged, and that early. The diagnosis, as a result of late investigations and experiments, is comparatively easy. Under proper surgical treatment the mortality is now not more than 5% or 10%, though formerly it was much higher. There had been but 188 operations for gastric ulcer up to 1890. The number of operations has increased greatly since then. Even when immediate operation is not demanded the elaborate previous preparation of the patient by continued lavage is unnecessary. The previous preparation may be limited to making the mouth surgically clean, giving aseptic food, and lavage with sterile water for 2 days. The last meal should be given 12 hours before the operation, enemas being used thereafter. A suit of cotton-wool should be worn, and a grain of strichnia given previous to operation. Exploratory gastrotony may be necessary for diagnosis. Excision of the ulcer is not always necessary. Pylorotomy is simply a form of excision. The speaker has had the lowest mortality in the posterior operation, it being but 5% in 40 cases.

Treatment of the Arteriovenous Aneurysms of the Subclavian Vessels: R. MATAS (New Orleans) reported a case of bullet injury occurring in a man aged 24 years, in whom the right subclavian artery and vein had been perforated through the scalenus anticus. The bullet had also injured the brachial plexus, causing paralysis of the corresponding upper extremity. The operation was performed 10 days after the injury. An osteoplastic resection of the clavicle with disarticulation at the sternoclavicular joint was made under local infiltration. Anesthesia with eucaïn B., and a temporary traction loop of silk was applied under the first portion of an anomalous subclavian artery, the innominate being absent. The vein was provisionally compressed above and below the anastomotic orifice. Notwithstanding complete control of the subclavian at its origin, profuse hemorrhage took place from the anastomotic orifice when the vein was detached from the artery, the bleeding stopping when double ligatures were applied above and below the perforation in the artery. The bleeding indirectly came from the vertebral and internal mammary. After dividing the artery between the ligatures, the orifice in the vein was closed by lateral suture, and the venous circulation was reestablished. A bullet, undeformed, 38 caliber, was extracted. Shock followed, but patient was restored by saline infusion. Recovery with partial loss of hand and forearm from mortification caused by arterial ischemia and insufficient collateral circulation. Primary healing of operative wound. In reviewing the literature of the subject, the author referred to 15 cases of this rare injury which had been recorded since 1829, when Larrey described the first case. Of these, only 4 had been operated

upon. The indications for intervention, the prognosis and details of the operative technic closed the paper.

Operative Intervention of Tumors of the Liver, with a Report of Cases: W. G. MACDONALD (Albany). This paper will appear in a future number of AMERICAN MEDICINE.

Subtrochanteric Osteotomy: E. H. BRADFORD (Boston). This paper will appear in a future number of AMERICAN MEDICINE.

Phlebitis Following Abdominal Operations: A. VANDER VEER (Albany). This paper will appear in a future number of AMERICAN MEDICINE.

An Operation for the Radical Cure of Umbilical Hernia: Dr. W. J. MAYO makes a transverse elliptical incision at the base of the hernial tumor, entirely through the peritoneum. The sac is loosened from the surrounding tissues and opened. If the hernia consists of omentum it is ligated in sections and removed, if of bowel the latter is returned. The aponeurosis both above and below the incision is exposed. The lower flap of the aponeurosis and peritoneum is slid upward about $\frac{3}{4}$ of an inch, between the upper margin of the aponeurosis and the peritoneum. The wound edges are held in this position by 2 rows of buried sutures. The author has had better results by this method of treatment than by any other.

The Prevention and Cure of Postoperative Hernia: JAMES E. MOORE (Minneapolis).—This paper will appear in a future number of AMERICAN MEDICINE.

Fractures and Dislocations of the Spine: Dr. S. H. WEEKS (Portland). See Author's Abstract in this issue.

Radical Cure of Inguinal and Femoral Hernia, with a Report of 800 Cases Operated Upon from 1891-1901: Dr. W. B. COLEY (New York) says the mortality now in inguinal hernia is not more than $\frac{1}{3}$ %. Since he has been using rubber gloves he has had but 1 case of infection following operation. He prefers not to use the buried silver suture, for though a sinus may occur rarely, it is of sufficient frequency to lead him to prefer not to use it. A sinus may even occur after primary union has taken place. An undescended testicle in an inguinal hernia can almost always be brought into the scrotum.

The above paper was discussed by WARREN, of Boston, and by HALSTED, of Baltimore. The latter does not now transplant the cord as formerly, but is particular to remove any enlarged veins of the cord, thus diminishing the tendency to recurrence. He still uses the buried silver sutures and is satisfied with the results so obtained. Out of 520 cases sutured with wire there were but 25 cases of suppuration, and in only 2 cases did sutures have to be removed, while in the hospital, and in 3 cases after leaving the hospital. But 1 suture was removed for fancied cause of pain in a neurasthenic patient. There was but 1 secondary stitch-abscess.

Resection of a Large Part of the Chest Wall for Sarcoma; use of Fell's Apparatus for Artificial Respiration; Late Continuous Fever due to Staphylococcus Blood-infection; Successful use of the Antistreptococcal Serum; Complete Recovery: Dr. W. W. KEEN. The case of a colored woman, aged 26, was cited. A fall injured her left side 2 years ago, later a tumor appeared at the lower angle of the right scapula, and had continued to grow. Operation was performed in the Jefferson Hospital and the tumor, which had become very large, was removed. It measured 15 cm. vertically, 26 cm. horizontally and was elevated 7 cm. above the general level of the chest. A horseshoe-shaped incision was made, beginning at the outer border of the right breast, thence down to the eleventh rib and backward and upward near the spinous processes as far as the level of the inferior angle of the scapula. A skinflap was turned up. The tumor being adherent to the ribs it was gradually peeled away. The fifth, sixth, seventh and eighth ribs were found involved. A portion of each of these was resected and the underlying pleura found diseased. A portion of the pleura 18 cm. by 12 cm. was quickly cut away. The lung at once collapsed but the Fell apparatus was used to induce artificial respiration. Deep sutures of catgut were carried through the lung tissue and the edge of the wound to prevent complete collapse. The patient at first progressed well but later there was a continued and persistent rise in the patient's temperature. An examination revealed the streptococcus in the blood. Injections of antistreptococcal serum were used, and the temperature gradually went to normal. The patient made a good recovery from the operation. A microscopic examination proved the tumors to be a spindle-cell sarcoma. Attention is called to the following points: First, the method of separating the tumor from the chest-wall so as to determine more exactly the limits of the disease and lessen the size of the opening to be made in the chest. Second, the division of the ribs anteriorly and posteriorly prior to opening the pleural cavity, thus diminishing the period of danger in collapse of the lung. Third, the use of Fell's apparatus, which was not satisfactory in this case and for which the speaker would prefer to substitute the apparatus of Bloom or that of Matas, of New Orleans. (These were demonstrated to the Fellows.) Fourth, the suture of the lung to the chest-wall. This was followed by no untoward surgical results, and it diminished very greatly the postoperative pneumothorax, almost abolishing it. Fifth, whether the use of the antistreptococcal serum was the cause of the fall in the temperature, one can hardly say, but the results were striking. Sixth, the examination of the blood was of great value as showing the reason for the continued high temperature, and led to what is believed to

have been the proper treatment for the condition. Seventh, it is too early to determine what the future of the patient will be, but after nearly 7 months her condition is eminently satisfactory.

Artificial Respiration in Medical and Surgical Practice by Means of an Air Pump Attached to a Modified O'Dwyer Cannula: R. MATAS (New Orleans). This apparatus was exhibited and its uses demonstrated on a larynx connected with rubber balloons which acted as artificial lungs. He referred to his previous contributions on the subject of intralaryngeal insufflation in preventing and correcting acute traumatic pneumothorax and on the value of the Fell-O'Dwyer apparatus in treating other conditions of asphyxia. The instrument which he now presented he regards as an improvement on the bellows used in the Fell-O'Dwyer apparatus, not only because it exactly measures the quantity of air injected into the lungs, but also because the pressure under which air is insufflated is accurately measured by the mercurial manometer which is attached to the apparatus. The quantity of air injected with each stroke of the piston can not only be measured but is accurately regulated by a simple device connected with the accessory piston which controls the automatic cutoff. This pump had the great advantage over other appliances used for the same purpose in so far that it was accurate and could be regulated with the precision required of an instrument for physiologic research.

The Use of Silver Wire and Electricity in the Treatment of Aneurysms. Report of Cases: LEONARD FREEMAN, M.D. (Denver) reported 2 cases of his own in which he used the silver wire and electricity. He stated that most operators have advised the use of finely drawn silver wire, about No. 27 in size, and that about 20 feet of wire is all that should be used. He, however, is of opinion that the soft silver wire is better and he prefers to use a greater number of feet of it than is commonly used. The soft wire is better because it springs less and thus has less tendency to rebound when introduced into the sac, and also less tendency to suddenly change position in the sac and break up the newly formed clot. The glass-flask experiments and illustrations are misleading because the inside of the flask is smooth and regular, while that of the aneurysmal sac is not. A turnip hollowed out and wire introduced is a more trustworthy experiment. The author illustrated this and showed why he preferred the soft silver wire and plenty of it, to the smaller quantity of finely drawn silver wire. Up to the present time 87 cases have been wired, the most of them having not more than 20 feet of wire introduced. One case had 78 feet, another 72 feet of wire introduced.

Discussion.—FINNEY, of Baltimore, said there had been 2 cases of apparent cure by wiring in the Johns Hopkins Hospital, but the patients eventually died. He had wired 1 case 3 times, the tumor bulging at a new point after each operation. Temporary relief was obtained after each operation, but the patient finally died. In 2 cases wired death was hastened.

MATAS insisted on determining the indications for wiring, and said in the past there had been indiscriminate wiring. He called attention to the fact that wiring an aneurysm of the abdominal aorta was attended by great danger because the orifices of important arterial branches are likely to be occluded. This occurring, the organs supplied by these vessels are apt to become gangrenous. This is not a fancied danger because about 50% of abdominal aneurysms are in the vicinity of the celiac axis. He said several conditions should exist before wiring an abdominal aneurysm is safe: It should be sacular, should have strong walls, the lumen should be small, the patient's vessels should be in a fair condition, it should be low down in abdomen, or on the posterior wall if in the region of the celiac axis. Since these things cannot be predetermined the operation is a perilous one in abdominal cases.

Movable Kidney; its Cause and Treatment: M. L. HARRIS dealt largely with figures and measurements and his paper is not well adapted to abstract. The speaker insisted that body form is responsible for movable kidney. He has arranged a scheme of measurements whereby he states the presence or absence of movable kidney may be determined without palpation. This was too intricate for abstract. Repeated pregnancies and trauma, he concludes, have little or nothing to do with producing movable kidney. Treatment was considered only from an operative standpoint. The practice with most operators is to fix the kidney too high up in the abdominal cavity. Here the cavity is usually too small for it and pain results. We must take into consideration the body form.

Two Cases of Abdominal Contusion; (1) Fracture of the Spleen—Splenectomy—Recovery; (2) Fracture of the Kidney—Nephrectomy—Recovery: S. J. MIXTER, M.D. The paper was very short, detailing a case of rupture of the spleen by traumatism from machinery. The patient went into collapse. Operation was done early and the spleen removed. The patient made a good recovery. In the second case a girl of 10 was run over by an express wagon. There was great shock but no external sign of injury. She soon passed bloody urine. On opening the abdominal cavity the kidney was found fractured. The 2 fragments were removed and the child made a good recovery. These 2 cases, the speaker said, show the importance of early operation in cases of abdominal injury.

Nephrolithotomy on Both Kidneys: S. J. MIXTER. The case of a young man was recited. From his seventeenth to his twentieth year he had several attacks of colic, and often passed gravel in his urine. The x-ray picture showed concretions in

both kidneys. During September operation was performed, and 2 stones, together weighing 1,020 grains were removed from the left kidney. During February following, the right kidney was operated upon, and again 2 stones removed. The patient made a good recovery. The case illustrates the value of the x-ray, and shows that large stones may exist in the kidney and give rise to only mild symptoms.

Discussion.—HUNNER reported a case in which the x-ray showed a stone in the right kidney. Operation showed the kidney in such condition that its removal was deemed wise. The patient secreted no urine after the operation, and death occurred. Necropsy showed a double ureter on the left side. A stone had completely occluded the opening at the bifurcation, and only $\frac{1}{2}$ of the kidney was functioning.

The Management of the More Malignant Forms of Rodent Ulcer: J. COLLINS WARREN. This paper will appear in a future number of AMERICAN MEDICINE.

New Method of Closing Defect Following Thorough Removal of the Breast: S. J. MIXTER. The method advocated cannot be well illustrated except by diagram. The skin incision begins well above the axilla of the affected side and is carried down on the external aspect of the diseased breast, thence across chest below the border of both breasts and up on external aspect of the sound breast to near axilla of sound side. The diseased breast and underlying muscles are removed, and the sound breast loosened and shifted to the center of chest. By this means the entire wound may be closed.

Discussion.—WARREN thought many women would object to this deformity for cosmetic reasons.

CARMALT, of New Haven, reported a case treated similarly to those of Mixter with good results.

Congenital Sacrococcygeal Tumor of Large Size, by CHARLES A. POWERS, M.D. (Denver.) Read by Title.

Vicious Circle After Gastroenterostomy: THEODORE A. MCGRAW, M.D. (Detroit.) This paper will appear in a later number of AMERICAN MEDICINE.

A Case of Splenectomy for Myelogenous Leukemia: M. H. RICHARDSON, M.D. (Boston.) This paper will appear in a future number of this journal.

Congenital Anterior Dislocation of the Tibia Treated by Arthrotoomy: JOHN B. ROBERTS, M.D. (Philadelphia.) Read by Title.

Pneumotomy, with Exhibition of the Patient: W. JOSEPH HEARN, M.D. (Philadelphia.) This paper will appear in a future number of AMERICAN MEDICINE.

XIX GERMAN MEDICAL CONGRESS.*

HELD AT BERLIN, APRIL 16, 17, 18 AND 19, 1901.

[Continued from page 288.]

SIXTH SESSION.

Uric Acid Formation in the Animal Body: WIENER (Prag) fed hens on various nitrogen free substances containing a chain of 3 carbon atoms, and at the same time injected urea. Among the substances used were glycerin, lactic, oxybutyric, glycuronic, tartaric, malic, et al., acids. After the use of all but a few exceptions, butyric, propionic et al., there followed an increased uric acid excretion, which was most marked when a dibasic acid was used. Similar but less marked results followed the same experiments on men. These same substances, however, when fed the isolated mammalian liver produced no increased uric acid formation, but did an increase of tartaric and dialuric acids. He concludes that in birds, and in a less degree in mammals, there is a synthetic formation of uric acid; that there is first the production of a dibasic acid with 3 carbon atoms, from which is built tartaric acid. The next step is the addition of a urea group, giving dialuric acid, which when another urea group is added gives uric acid. In men this synthesis is not very important normally, but may be in case of gout and other pathologic conditions.

Experimental Study of the Metabolism of Sugar in the Body: MAYER (Karlsbad). This paper has previously been published. Mayer points out the necessity of studying the metabolism in diabetes. He has proven glycuronic acid to be the first oxidation product of sugar. This acid may be excreted in considerable quantities in diabetes. An increase of glycuronic acid in the urine is an expression of imperfect oxidation of sugar and may be the first symptom of latent diabetes.

ROSIN (Berlin) then reported his observations (already published) on the quantitative relation between the sugar of the blood and the urine in diabetes.

Chronic Pentosuria: BIAL (Kissingen) gave a careful historic review of the subject, and then reported the experiments performed in conjunction with Blumenthal. The conclusion is that pentosuria is a disease totally distinct from glycosuria, since glucose is well used by a patient with pentosuria. Phloridzin produces a similar glycosuria as in a normal person, and the dextrose content of the blood is normal. Neither does it arise from albumin katabolism since feeding thymus does not

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increase it. Patients with pentosuria have normal oxidation power of the tissues. It is present in the blood, but beyond that its source is unknown.

The Physiologic Relations of the Three Arabinoses: WOHLGEMUTH and NEUBERG (Berlin). This was a report of a series of experiments to determine the physiologic relations of substances which differ alone in the arrangement of their atoms. The result showed that the configuration of the molecule, in the case of the 3 carbohydrates, is important from a physiologic point of view.

The Influence of Lesions of the Kidney on the Course of Pancreatic Diabetes of a Dog: ELLINGER and SEELING (Königsberg). A dog was first made diabetic by the extirpation of its pancreas, and then an acute nephritis produced by cantharides. The sugar in the urine diminished, both the percent and absolute amount, but also the quotient between sugar and nitrogen (D: N) in the urine became smaller. The effect on the sugar excretion is more transitory than that on the nitrogen. If acute nephritis develop spontaneously in a dog with pancreatic diabetes the sugar in the urine diminishes, even disappears, but since it increases in the blood its disappearance from the urine is due to diminished excretion, hence the renal lesion has not diminished the essential symptom of diabetes, the hyperglykemia.

NAUNYN (Strassburg) maintained that these experiments are not in accord with observations on patients and cannot be used (as the authors wished) to explain the latter. He had seen glycosuria disappear in cachectic conditions (lung tuberculosis *e. g.*) when there was no trace of a renal lesion.

The Analysis of Tremors, and Disturbances of Movement: SOMMER (Giessen), professor of Psychiatry at the University of Giessen, demonstrated several pieces of apparatus designed to analyze tremors of the hands, feet, acipito frontalis muscle, etc., by recording the components of the tremor, *i. e.*, the amount of motion in each of the 3 directions, also instruments for measuring the pupils of the eye, and for studying the kneekick. These instruments of the psychologic laboratory are useful in the study of various nervous and mental disorders, and have proved valuable in the differential diagnosis between hysteria and various nervous diseases.

SEVENTH SESSION.

Experimental Lesions of the Medulla Oblongata: ROTHMANN (Berlin) studied the effects of experimental lesions of the pyramidal and Monakow's tracts in the medulla of the dog and monkey. The paths were destroyed by as local a lesion as possible with a needle. In the dog, when the pyramidal path at the decussation, or Monakow's tract, was destroyed, in either case there was a perfect restitution of function. If, however, both were at the same time destroyed, there resulted spastic paralysis of the extremity of the corresponding side, and electrical stimulation of the motor cortex of the other side was without effect. If in monkeys the pyramidal decussation was cut, in a few weeks perfect restitution of function occurred.

HERING (Prague) considered the motor function of the pyramidal tracts proven beyond doubt, but admitted the justice of Rothmann's criticism of the modern view concerning their mode of function.

Porencephalia: v. KAHLDEN (Freiburg). The speaker pointed out that whereas it was admitted that cavities in the brain could result from embolism or thrombosis of an artery, resulting in a funnel-shaped cavity, yet neither of these processes had ever been observed in porencephalia of congenital origin, and yet were commonly assumed to explain the latter cases. Neither was there evidence of congenital lues in these cases. He believes that trauma (concussion) without fracture may explain these cases since it evidently was the cause of the process in the case of a 1-year-old child who fell from a table and died 14 days later, at whose section were found 2 such cavities.

BENDA (Berlin) remarked that much was in favor of the former view and doubted that Kahlden could explain all cases.

A Rare Cause of Rupture of the Aorta: v. KAHLDEN (Freiburg). The case was of a man of 30 in which the sequence was acute articular rheumatism, purulent pericarditis, which extended to the aorta and rupture of the latter.

Further Observations on the Etiology of Acute Articular Rheumatism: SINGER (Vienna) reported more cases in favor of his previously published opinion that acute articular rheumatism is a mild form of septicemia caused by the ordinary pus organisms. During the past 2 years he has had opportunity to study 5 cases of fatal acute articular rheumatism and 2 cases of chorea, which cases were reported at length. In all except 1 case of chorea were found in the various organs by cultures, fresh cover slip preparations, and in the sections of the tissues, *Streptococcus pyogenes*. The other case showed *Staphylococcus pyogenes albus*. The speaker then at length answers the criticisms made of his previous communication, and himself criticized the work of Wassermann and Meyer. He emphasized the points that between acute articular rheumatism and cryptogenic septicemias one sees clinically many transitions, that the streptococci show so many variations that it would be difficult to prove an organism specific with only slight differences from those ordinarily found, and that animal experiments have little value in this case since streptococci can in them easily produce joint inflammation.

The Bacteriology of Acute Articular Rheumatism: F. MEYER, (Berlin) whose work had received the particular

attention of the previous speaker, then read an already published paper. His work would tend to show that the cause of this disease is a specific organism, a diplococcus. This organism has been grown from exudate of the tonsils in 12 cases of tonsillitis, which disease, according to Meyer, is very intimately associated with acute articular rheumatism. The serous exudates in the joints in cases of rheumatism he has invariably found sterile. He has grown the organism once from the heart valves in a case with endocarditis. Cultures of this organism injected subcutaneously into animals in a few days will produce an inflammation of the joints with serous exudate such as occurs in rheumatism. This fluid at first contained the organism but later was sterile. In one case it produced endocarditis. In all cases in which he had produced inflammation of the joints by streptococci the fluid been purulent. He doubts much that his is an attenuated streptococcus.

Discussion.—Menzer (Berlin) supported Meyer in his opinion. He denied that the disease under discussion was a pyemia. He referred to the experiment performed by Meyer and himself by which a rabbit was infected in the tonsil with Meyer's organism and developed multiple arthritis and endocarditis.

GLASER (Berlin) supported Meyer and also reported experiments showing the possibility of producing by streptococci in animals an affection similar to polyarthritis without producing sepsis.

MICHAELIS (Berlin) reviewed the work done on the subject in v. Leyden's clinic and supported the claims of Meyer that the disease in question was a specific infection.

SINGER at this point read the opinion of Michaelis expressed in 1897, at which time Michaelis denied any specificity to the disease.

v. LEYDEN defended the work done in his clinic by Meyer and Michaelis. He considered the already mentioned production of polyarthritis and endocarditis from inoculation into the tonsil as evidence of great value.

The Development of Surgery of the Lung: GLUCK (Berlin) reviewed the work extending over the past 37 years on the surgery of the lung. He mentioned his experiments showing the possibility of in animals, removing the most of one lung, and then reported his cases, exhibiting a few of them in which he had removed several ribs and freely opened the lung, in some cases removing much of a lung. He has operated 14 times, 7 of which were for abscess, all recovering, some for bronchiectasis.

A Rare Cause of Unilateral Paralysis of the Recurrent Nerve. The Symptoms and Diagnosis of Patent Ductus Botalli: SCHRÖTTER (Vienna) first mentioned the 2 cases of Ortner in which the nerve was compressed by a left auricle dilated by mitral stenosis. In his own case the compression was produced by the dilated ductus botalli. The diagnosis of persistence of the ductus botalli can be made by the skiagraph, its shadows being seen in the second left intercostal space.

Paralysis of the Left Recurrent Laryngeal Nerve in Mitral Stenosis: KRAUS (Graz). In this case there was considerable dilation of the right ventricle and left auricle in consequence of which the relations between the pulmonary artery, ligamentum arteriosum and aorta were altered. The left recurrent laryngeal nerve was compressed in the angle between the left pulmonary artery and ligamentum arteriosum, and not at all by the enlarged left auricle which Ortner considered the cause in such cases.

Centralization of the Work on Brain Anatomy: VOGT (Berlin) discussed the advantages of a central place for the study of brain anatomy where the work could be done according to uniform methods.

The Pneumonia Mortality in Hospitals: HAMPELN (Riga) explains the high mortality of pneumonia as not due so the disease as such as to injury received (exposure, etc.), during transportation to hospital; hence the mortality among those treated in their own homes is lower than in the hospitals. The remedy is better means of transportation.

S. MEYER (Berlin) replied that that did not apply to Germany where the facilities for transporting the sick were excellent.

Fatty Degeneration of Organs: ROSENFELD (Breslau) Rosenfeld believes the prevalent ideas concerning fatty degeneration to be erroneous. According to his view in phosphorus, et al., poisoning the preformed fat from the various fat depots of the body goes to the liver to cover the glycogen deficit. His reasons are, that a glycogen deficit is always present in cases of phosphorus, et al., poisoning; that the fat disappears from the cells and is replaced by glycogen if the dog is allowed to hunger or more rapidly if the dog is well fed; and the fatty "degeneration" is prevented if the liver is not allowed to lose its glycogen, hence fatty liver is not common in man since our food furnishes plenty of glycogen. Also, only a healthy cell can become thus filled with fat; neither in the necrotic tissue of infants nor in coagulative necrosis does one find fatty degeneration. Hence there is no "fatty degeneration" since (1) the fat can be proven to have been deposited there; (2) a degenerated cell does not become fatty.

A Comparison of the Results Obtained in Determining the Size of the Heart by the Orthoröntgenographic Method and by Percussion: MORITZ (Munich). Moritz has tested these 2 methods of determining the size of the heart in a series of 89 cases. On the same patient the heart outline was percussed and then determined by the speaker's apparatus by

means of which the outline of the heart in its true dimensions may be determined (by means of x-rays.) In 68% of the cases the outlines agreed. The lines did not correspond in the remaining cases, sometimes the right border, about as often as the left, and in 4% of the cases, neither. Moritz uses only his fingers in percussion, holding the pleximeter finger firmly against the chest and striking it in such a manner as to use the sense of touch to the utmost. He pointed out the errors made determining the position of the apex beat of an enlarged heart; often the measurement includes the thickness of the chest wall.

Discussion by EDELFSEN (Kiel), KARFUNKEL (Leipzig), CRIGERN (Leipzig), LEROY DORN (Berlin), PÄSSLER (Leipzig), brought out no new points on the subject.

After a short address by the president of the Congress, Professor SENATOR (Berlin), in which he thanked the committee for its very efficient aid, and the reply by Professor NAUNYN (Strassburg) on the part of the committee, the Congress adjourned.

IOWA STATE MEDICAL ASSOCIATION.

[Specially reported for AMERICAN MEDICINE.]

The semicentennial meeting was held at Davenport, May, 15, 16, and 17, 1901, under the Presidency of Dr. R. E. CONNIFF, of Sioux City.

The sessions were well attended; the papers were short, practical, and instructive, and the discussions spirited.

In his address, the president gave a retrospective view of the advances that have been made in medicine and surgery within the last few years. Among other things, he urged the establishment of a State sanatorium for the treatment of the indigent consumptive poor, and suggested that action be taken to influence the State Legislature to appropriate sufficient money for the construction and maintenance of said sanatorium. He also recommended the enactment of a law to regulate marriage among the defective classes.

Dr. IRA K. GARDNER, Chairman of the Committee on Constitution and By-Laws, read the report of the Committee, and asked that action on it be deferred until the next annual meeting, for the reason that at the St. Paul meeting of the American Medical Association a report is to be made looking toward the reorganization of that Association, and in case the report was adopted, such changes would be made in the Constitution and By-Laws of the Iowa State Medical Society as to conform with those of the American Medical Association. He outlined the salient features of the report of the Committee on Reorganization of the American Medical Association, and urged the Iowa delegates to go to St. Paul and do everything in their power towards its adoption.

Dr. R. L. CLEAVES, of Cherokee, in a paper on **puerperal infection, discussed the varieties and causes.** He narrated the report of a case of pyemia and septicemia, and then gave his conclusions drawn from a long experience, and made a plea for asepsis in the lying-in room.

Dr. G. C. COTTAM, of Rock Rapids, discussed **puerperal infection from a surgical standpoint.** He detailed a series of cases illustrating the various forms of puerperal sepsis, with deductions as to sources and prevention of infection. The utility of temporizing measures was dwelt upon, and the manifest advantages of radical treatment at the onset of symptoms pointed out.

Dr. D. C. BROCKMAN, of Ottumwa, spoke on the **early diagnosis of mammary and uterine cancer.** Statistics show that $\frac{2}{3}$ of cancers begin in the uterus or breast. Primarily they are local, and curable, if operated upon early. The diagnosis is not always feasible; if it were, many patients might be saved who now die. The cardinal symptoms were pointed out. Doubtful cases should be considered malignant until they are proved to be benign. He urged the importance of examining thoroughly a specimen of the growth. The symptoms of uterine cancer, either of the os cervix or body, were defined.

Dr. C. E. RUTH, of Keokuk, in a paper on the **treatment of uterine and mammary cancer,** stated that the growth is primarily local. There is a tendency to speedy death from exhaustion. Recurrence of the disease is certain if a portion of it be left. Metastasis took place through the lymph channels, and not by the fascia. Serumtherapy and other medication were unpromising. Surgical treatment, while uncertain, gives the only hope in such cases. It was exceedingly difficult, if not impossible, to tell where normal tissue begins and where carcinoma ends. He referred to drainage, dressing and hysterectomy when and when not indicated. He also discussed the vaginal and suprapubic routes. Sloughing is a contraindication against hysterectomy.

Dr. H. A. LEIPSIGER, of Burlington, dwelt on **ovarian cysts and malignant sequelae.** He referred to the best available means of differentiating benign from malignant growths in the early stages. Do apparently benign ovarian cysts contain foci of malignancy? He reported 2 cases in support of an answer in the affirmative.

Dr. WILLIAM L. ALLEN, of Davenport, reported a case of **ovarian tumor in a child 12 years of age.** The tumor was first noticed when the child was 12 years and 6 months old. The growth appeared at that time to be the size of a coconut. Operation was done 10 months later, a simple unadherent cyst of the right ovary being removed, weighing about 12 pounds. Rapid and complete recovery followed.

Dr. DONALD MACREA, JR., of Council Bluffs, gave a brief review of the work done in cases of **kidney stone, the diagnosis and treatment.** He alluded to the importance of the x-ray as a positive means of diagnosis, and showed numerous skiagraphs. He emphasized the importance of thoroughly clearing the ureter.

Dr. D. S. FAIRCHILD, of Clinton, considered **ulcer of the duodenum from a surgical standpoint.** Conditions were compared with those of ulcer of the stomach. The importance of making a diagnosis before perforation was dwelt upon, as well as the difficulty attending diagnosis. He discussed the methods which may be employed before and after perforation, reported a case, and briefly reviewed other cases.

Dr. A. L. WRIGHT, of Carroll, gave a brief history of the **surgery of the gall-bladder.** He pointed out the indications demanding such surgery, and the methods used in determining such indications. He dwelt on the most suitable time for the performance of such operation. Should it always be done whenever gallbladder pathology exists? He considered the technic of the operation, as well as the immediate and remote results.

The following officers were elected for the ensuing year: President, Dr. J. R. Guthrie, Dubuque; first vice-president, Dr. S. Bailey, Mount Ayr; second vice-president, Dr. J. H. Kulp, Davenport; secretary, Dr. V. L. Treynor, Council Bluffs; treasurer, Dr. George L. Skinner, Cedar Rapids. Des Moines was selected as the place for holding the next annual meeting.

CONGRESS OF CHARITIES AND CORRECTION AND THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY.

ANNUAL MEETING HELD AT WASHINGTON, D. C., MAY 7, 8 AND 9, 1901.

[From Our Special Correspondent.]

The extent to which the community should endeavor to modify and regulate the laws of nature, and particularly those which provide for the propagation of the species and the survival of the fittest, has been discussed from many points of view at the meetings held here within the past week under the auspices of the Congress of Charities and Corrections. Sociologists, philanthropists, ministers of religion, persons having charge of asylums and reformatories and medical experts of one kind and another have all taken part with equal zest in the various symposiums; and if the net result does not go far towards supporting the theory that in the multitude of counselors there is wisdom, it is none the less true that it showed the existence throughout the country of a large amount of benevolent intention, which has only to be properly directed to be fruitful of very excellent results. With a great deal of wild theory, moreover, it was gratifying to observe that there was a considerable admixture of practical suggestion, based on actual experience and kept within bounds by eminently sane judgment. The tendency on the part of some of the enthusiasts was of course to run to extremes, and those accustomed to such gatherings will not be surprised to learn that among those who aired their views most earnestly were men and women who would have society conducted after the pattern of a model stud farm. Such a driving home of the issue to its apparently logical conclusion is perhaps unavoidable at meetings of the kind, but it is none the less to be regretted, as the inevitable effect is to bring the proceedings of the body generally into disrepute, if not to make them the subject of ridicule.

For example, one of the questions most keenly debated was the old one whether **individuals suffering from physical or mental defects should be allowed to marry.** Undoubtedly there is much to be said in favor of the imposition of further restrictions in this respect than now exist. The difficulty is to know where to draw the line. Most people will agree that it would hardly do to act upon the suggestion put forward by several speakers that every epileptic subject should be prohibited from contracting a matrimonial alliance. For, on the one hand, it might be asked why stop epileptics? Why not place similar restrictions giving evidences of degenerative tendencies—upon the alcoholic, the tuberculous, the immoral, the criminal, the weak-minded of every shade and description? And, on the other hand, there would arise the question, Who are to be considered epileptics? Medical authorities are far from agreed as to what constitutes the difference between true epilepsy and other nervous attacks which simulate that disease. Julius Cæsar and Napoleon, as was remarked, might both be included in the category of epileptics, even without a very strict method of classification, and it is well known, as was also pointed out, that many men who have occasional epileptic seizures, say once or twice a year, are unusually capable and even brilliant members of the community—men having charge of large business concerns, authors, scientific investigators, lawyers, and what not. Are all these to be debarred from matrimony because of the epileptic taint? And if so, does it not follow that they should be debarred likewise from illicit connections, the fruits of which are much more likely to become a charge upon the State or municipality than children of such parentage who might be born in regular wedlock. Then would follow another needful step, that of placing all such persons under strict and constant surveillance—altogether too ridiculous a measure to be seriously

considered. Several of the speakers did admit that this would be an unpardonable interference with the liberty of the individual; but even they were ready for the most part to concur in the proposition that unfortunates who become wards of the public have no rights which call for recognition, at least in so far as regards the exercise of sexual function. As will be seen the whole subject bristles with problems as delicate as they are difficult, and they are only hinted at here to emphasize the importance of paying heed to the warning uttered by Dr. Bullard, of the Massachusetts State Hospital for Epileptics, and proceed with extreme caution in everything having the form of legislative enactment, or tending to impose restraints against which the common sense of the public will revolt. It is evidently a matter in regard to which we should act upon the principle of the old English seer who said "Let us take our time in order that we may get to an end the sooner."

The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics, which held its first annual meeting in connection with the congress, is a body that will commend itself to medical men no less than to sociologists and philanthropists. Its work, while not free from the troublesome problems above alluded to, will in the main be decidedly practical in character, its objects, as set forth in the circular calling the meeting, being: (1) To promote the general welfare of sufferers from epilepsy. (2) To stimulate the study of the causes and methods of cure of this disease. (3) To assist the various States in America in establishing a uniform system of care for epileptics, and (4) to advocate the care of epileptics in institutions designed for their special needs, where they may (a) receive a common school education, (b) acquire trades, and (c) be treated by the best medical skill for their malady. The president of the association is the Hon. William Pryor Letchworth, LL.D., of New York State; the vice-presidents, Dr. Frederick Peterson, New York, and Professor Osler, Baltimore, and the secretary, Dr. William P. Spratling, of the Craig Colony for Epileptics, Sonyea, N. Y. To the last-mentioned gentleman, who is widely known because of the active part he has long taken in the study of this particular branch of medical science, it is largely due that the association has been started on a solid basis, and that the proceedings of its first annual meeting presented such an interestingly varied program. The Secretary of State, Mr. Hay, willingly gave his aid to secure the cooperation of the consular staff in foreign countries to gather information as to what is being done abroad in the way of providing homes for sufferers from epilepsy and checking the development of the disease, the consequence being the receipt of a number of more or less valuable contributions to the current literature on the subject. It may be considered gratifying from a purely patriotic point of view, though otherwise unsatisfactory, to be able to reflect that those communications did not show any superiority on the part of foreign methods of dealing with the difficult problem. In fact, it seems that the United States is in the lead in this class of medico-charitable work.

Even here only a beginning has admittedly been made; but the success which has attended various State enterprises, and particularly the Craig Colony in New York, is sufficient to warrant much further effort in the same direction. Dr. Spratling has frequently told in print, as well as verbally at medical meetings, the story of the inception and growth of that institution and of the excellent work it is doing. But it is a story that cannot be told too often, so remarkable are the results which have there been achieved. The general plan of the method pursued is to give the patients change of occupation, putting them as far as possible to congenial tasks, and getting their minds interested at the same time that their physical faculties are exercised. The surroundings are agreeable, the colony being situated in a picturesque part of the State, and the grounds and cottages being made as attractive as art can make them. Strict attention is paid to the diet of the patients, and every effort is put forth to render the life of the little community as cheerful as it is wholesome. Moreover, there is an entire absence of restraint, which is found to work well, the instances being altogether exceptional in which the colonists have strayed from their homes, and there being hardly a case on record in which they have not found their way back. Altogether the system known as the cottage colony has come to be recognized as an ideal solution of the problem of how to deal with a class of unfortunates whose woes were described by Lucretius (in some powerful lines which were quoted in one of the papers read at the gathering), but in regard to whose physical or mental ailment but little progress has been made until now since the days of Hippocrates.

From a purely medical point of view, it was perhaps to be regretted that too little time was available for the discussion of the causes of epilepsy, and also as to the part that medicines play in the treatment of the disease. The tendency on the part of Dr. Spratling and others is to resort to bromids and other sedatives as little as possible, though their efficacy in mitigating the severity of attacks and possibly postponing if not averting them was acknowledged. One medical man from Chicago asserted his ability to cure the disease, but he did not fully explain the method by which he did so, the fact that he is to read a paper on the subject before the American Medical Association at its forthcoming meeting at St. Paul, evidently making him think that his views would more properly fall within the scope of a purely medical gathering.

CORRESPONDENCE

SENILE MENSTRUATION?

BY

R. G. BARCKLEY, M.D.,
of Milford, Pa.

I wish to report a rare case coming under my observation recently:

Mrs. W. was aged 90 last March. Without appearance of disease, a discharge resembling that of menstruation appeared last month (April), and continued for 8 days, without any pain or discomfort. It ceased for 2 weeks, and returned. Her general health is good. She has never worked very hard, and has had pleasant surroundings.

PROPER MEDICAL LEGISLATION.

BY

H. D. YOUNG, M.D.,
of Burlington, Iowa.

The report of the autopsy upon the Minnesota Medical Bill, which you have reprinted from the *St. Paul Medical Journal*, should prove interesting to everyone who has the good of the profession at heart, and particularly those who see so much good to be done by proper medical legislation.

We have in Iowa a supposedly good medical law: A diploma showing 4 years of study, and an examination by the State Board, are the essential requirements. The practice of medicine is defined, and severe penalties are inflicted for practising without a license. Yet there are good men in the profession who ask "Cui bono?" They point to the fact that in order to get such a law enacted, we have to admit in public, after long denial in private, the claims of the homeopaths and eclectics to scientific standing. They point to the fact that osteopathy (whatever it is) has been able to secure practically as good a standing. They declare that when an attempt is made to enforce the penalties for infraction, the law is openly condemned by the press and public, and frequently lacks the sympathy of the court.

Against criticisms such as these it is difficult to make headway. I have wondered if more might not be accomplished by a change of base.

For instance, why not bend our energies to secure legislation along the following lines:

- (1) A broad and scrupulously exact definition of what constitutes the practice of medicine.
- (2) The title of doctor, and the right to collect fees for medical services, to belong only to those who have fulfilled the following requirements:
 - (a) Four years of study in a medical college (diploma not essential).
 - (b) An examination by the State Board on anatomy, physiology, chemistry, materia medica, pathology, the principles of surgery and the principles of obstetrics.
 - (c) Evidence of good character and the age of 21 years.
- (3) Registration, the register to be posted in a conspicuous place in the court house of the county of residence.
- (4) Adequate penalties for illegal practitioners on the basis of cheating by false pretense.

Legislation of this character may not cover so many points as that which has heretofore been desired, but it seems to me would largely disarm the critics. It makes no mention of the practice of medicine as a subject for examination for two reasons, namely: It is reasonable to infer that a person who has sufficient knowledge to pass the examination in the other subjects would be able to make proper application of this knowledge (no two doctors practise alike anyway); and reference to the regular, the homeopathic, the eclectic and all the *isms* in medicine would thereby be avoided. It is worthy of note that legislation, naming the different schools to be recognized, is not wholly free from the charge of unconstitutionality on the ground of class legislation. It is also possible that avoidance of these names might serve to relieve the public mind of any suspicion that there could be a combination of the schools for the sake of revenue. Let us strive for something that everybody can respect, or abandon the question entirely.

POSTINFLUENZAL MELANCHOLIA.

BY

B. C. LOVELAND, M.D.,
of Syracuse, N. Y.

Your editorial of April 20 on "Postinfluenzal Melancholia" suggests to me that my views on the subject, briefly expressed, may not be amiss.

I believe that melancholia as a rule depends to a great extent on toxemia or autointoxication of a type identical with or similar to the lithemic state. It has been my lot to care for influenza in a large number of neurotics and lithemics, and I have almost constantly noted a marked increase in the uric acid symptoms following such attacks.

As a result of this observation some years ago I began from the first days of the disease to use what may be called an alkaline treatment for influenza, *i. e.*, meet indications in regard to cough, pain or heart and use 5 grains each of soda salicylate and soda benzoate in a full glass of hot water 3 or 4 times in a day. From this time I had more rapid recoveries, less depression and fewer sequels generally.

DISINFECTION OF TYPHOID URINE.

BY

MARK W. RICHARDSON, M.D.,
of Boston, Mass.

In AMERICAN MEDICINE for May 11, there appeared an editorial upon "urotropin and its use in typhoid fever." To one of the statements made in that editorial I must take exception: That typhoid bacilli are found in the urine in less than $\frac{1}{4}$ of the cases; that when present they are not always provocative of harm to the patient. That urotropin is not always effective in removing the bacilli is perfectly true. It is, moreover, very important to disinfect the urine after it is voided, whether urotropin is given or not. The writer of the editorial, however, misses completely the most important point of all, namely, that the bacilli frequently persist for weeks, months, or even years in the urines of persons who have passed through an attack of typhoid fever. No amount of disinfection outside of the body will remove the bacilli from the bladder, and there is no doubt in my mind that patients are being turned loose constantly who, through their urines, spread typhoid fever broadcast. Now, urotropin has been found to sterilize these urines, in the great majority of cases, permanently. Therefore, let me express again my opinion that, inasmuch as bacteriologic examination alone can determine whether or not a urine contains typhoid bacilli, all typhoid patients should be given urotropin, 30 grains daily, for 10 days as convalescence approaches. A few cases will escape even then, but the great majority at least will be rendered innocuous.

CASE OF FIBROMYOMAS.

BY

LEO. H. BERND, M.D.,
of Philadelphia.

Through courtesy of Dr. Munroe I recently saw a case of considerable interest as follows:

Mrs. L. C., age 22, Russian, was admitted to Jewish Maternity March 4, 1901. Her pelvic measurements, were, Cr. I., 28 $\frac{1}{2}$; Sp. 28; bandloques 20 $\frac{1}{2}$; bilitrochanteric 31; vertex L. O. A. Fetal heart sounds 120. On the 5th she began to have contractions, but they were slow and there was not much dilation. This kept up until the 9th, when dilation was complete. About 3 p. m. forceps were applied and although there was no difficulty in the application it was impossible to draw the head down.

I saw the patient at 7 p. m. and found the head in a perfectly normal position and forceps were again applied. The result was the same. As the head felt proportionately small enough to pass through the pelvis, podalic version was done. No difficulty was experienced in finding the feet and the child was delivered up to the head. So far as we could judge something seemed to retard the head.

Forceps were applied to the after-coming head and although we got it through the pelvis the soft parts seemed to hold it. There was a marked vaginismus but a slight tear obviated that.

By inserting two fingers in the rectum I was able to hook them over what felt to be a most peculiar shaped head and by traction on the body we delivered the child. The placenta followed almost immediately with slight bleeding.

There was a slight tear of perineum. The cervix had a bilateral tear and was somewhat dense. In the posterior wall of the uterus, flattened out about the size of an orange was a hard mass. It seemed to be in the muscular portion. The tears in the cervix extended into the edges of this mass. Had it been a hematoma of course it would have vanished at once. We therefore made a diagnosis of fibromyoma.

The woman made a good recovery and on examination when discharged the tumor had entirely vanished. She gave no history of any trouble during pregnancy nor before. The time it took to dilate the cervix is readily understood. The child lived 11 hours.

AN INTERESTING ANOMALY.

BY

W. M. WEAVER, M.D.,
of Hartford, Conn.

Permit me to report through the columns of AMERICAN MEDICINE an anomaly, revealed by a postmortem examination held on April 7, last:

The subject, a female infant, weighing 6 pounds, died on that date after living 13 days. During this time it presented symptoms of irregularities in the circulatory and respiratory systems. The child cried vigorously enough at its birth and, to all outward appearances, seemed normal, but was unable to nurse well. It slept a great deal. Its body was cold and its cry weak and moaning. On the tenth day the child ceased nursing. On the afternoon of that day the following conditions were noted: There was a slight discharge from the nose. The body was cold and there was a slight tendency to cyanosis. The rectal temperature was 96.8°, the respirations were 50, and the pulse was very feeble. There were no abnormal breathing sounds, but the heart was heard beating most distinctly to the right of the sternum. A more thorough examination on the next day seemed to verify the supposition that the heart was on the right side. Respirations at this time were 80, temperature 101°, and the pulse probably between 170 and 180. Rales were heard over both lungs, for the most part loud and musical. There was a slight cough, and at each attack of coughing the child became very cyanotic and struggled for breath. It died while the mother was asleep, death, it is fair to presume, occurring in an attack of coughing.

The postmortem examination was conducted in the presence of Drs. J. W. Felty and J. H. Standish, neighboring practitioners. The heart was found enlarged and was placed obliquely in the chest, with its base directed upward, backward and to the left, corresponding to the fifth dorsal vertebra. The apex was directed downward, forward and to the right, corresponding to the lower border of the sixth rib on the right side, just outside the nipple line. The chamber, which assumed the functions of the right ventricle, was in front, lying from left to right, and completely covered the left ventricle which was on the right side. The right auricle was to the front and on the left side beneath the second intercostal space. It was enlarged and covered the left auricle. The chamber of the right ventricle was twice the size of the left ventricle and was filled with blood. The right auricle was also filled with blood. The valves of the heart were normal as to number and formation, but the foramen ovale and the ductus arteriosus were not completely closed. The foramen ovale gradually closes about the tenth day, we are told, but a slit-like opening sometimes persists during life without any inconvenience. In this case, however, there was considerable opening remaining where the valvular fold, which closes in the foramen, had failed to join its upper margin. The arch of the aorta was directed to the right instead of the left and the descending aorta was on the right side of the spinal column. Correspondingly the inferior vena cava was on the left side. The large bloodvessels given off from the aortic arch did not share in the transposition, for the left common carotid and the left subclavian arteries were given off separately, as in the normal body.

The lungs were peculiar in that the right lung had 2 lobes and the left 3. There were some reddish and blue-brown spots in the base of the right lung which were airless and the bronchioles contained considerable mucus, but there was no marked inflammatory involvement of the substance of either lung. The stomach was normal in size, but was placed on the right side, the pylorus being directed from the right to the left where it joined the duodenum. The large lobe of the liver, which is usually on the right side, was on the left and the other lobes were correspondingly reversed. The spleen was on the right side occupying the same relative position as it does when normally placed on the left side. The pancreas extended from the spleen to the concavity of the duodenum, which was to the left of the median line. The intestines were placed in reverse order. The cecum, with appendix, was on the left side and the sigmoid flexure on the right.

ORIGINAL ARTICLES

APOPLEXY AND HEMIPLEGIA.*

BY

HAROLD N. MOYER, M.D.,

of Chicago, Ill.

I invite attention to a brief consideration of apoplexy and hemiplegia, not with the hope of presenting anything new, but rather with the idea of directing attention to some common misconceptions in the diagnosis and treatment of these conditions. Notwithstanding all that has been written regarding the term apoplexy, it retains its place in the nomenclature of medicine and is very loosely used even by the best writers. During the last two decades this faulty use of the term has been pointed out repeatedly. If used in the original Greek sense, meaning literally, to strike down, one can take no exception to the use of the term. By many it has come to be the equivalent of cerebral hemorrhage, and if I may judge from a considerable consultation practice, I should say that the conception in the minds of the profession is almost invariably that apoplexy means a cerebral hemorrhage. It is not difficult to see how this error has grown. For hundreds of years apoplexy was a nosologic entity until postmortem examinations began to be performed with some frequency, when it was found that a large proportion of those who died very soon after an apoplectic stroke had a rupture of the bloodvessels of the brain. As a matter of fact, those who had a stroke resulting from embolism or thrombosis to a large extent recovered; hence, they did not figure in the postmortem tables, but were nevertheless classed as cases of cerebral hemorrhage which recovered. At the outset of my remarks, I would say that apoplexy from thrombosis, in my judgment, is very much more frequent than that from cerebral hemorrhage, but very much less fatal.

So strongly has the idea of arterial rupture and hemorrhage been associated with the word apoplexy that it has been applied to these conditions when they occur in other organs than the brain. Thus, we have the term pulmonary apoplexy, a condition which is described in most of our standard textbooks; not infrequently, apoplexy of the liver and of other internal organs is spoken of. Strictly speaking, but one condition of the lungs merits the term apoplexy—that of pulmonary thrombosis in which the patient is stricken suddenly; a hemorrhage should be spoken of as such or as an extravasation.

There is a prevalent misconception as to the relation of cerebral arterial disease to sudden death. In a recent investigation, I asked a number of physicians as to the causes of sudden death. Out of 20, 19 stated among the causes apoplexy and heart-disease, about one-half of them placing apoplexy first, and the other half, heart-disease in the order of frequency. The twentieth physician, who happened to be a pathologist, said that cerebral hemorrhage was very rarely a cause of sudden death; that is, of death taking place within a few

hours—it was only when hemorrhage took place into the medulla involving directly the cardiac and respiratory centers, that we had the phenomena of sudden death. This latter view is correct, though I believe that it is directly contrary to the prevalent opinion.

To distinguish hemorrhage from thrombosis and embolism is of some importance, especially from the standpoint of treatment. Practically there is little distinction between thrombosis and embolism, as an embolus becomes a thrombus as soon as it is arrested in the artery. The secondary or remote consequence of hemorrhage, thrombosis, and embolism is practically the same.

The problem to be determined when summoned to a patient who has had a stroke, is to determine whether it is due to a thrombosis or hemorrhage of the brain. In the absence of a history, this may not be easy, as acute alcoholism, uremia, epilepsy, the initial stage of general paralysis as well as diabetic coma simulate very closely the stroke accompanying cerebral vascular involvement. As a rule, we can determine later by the presence of hemiplegia, and this fact can be ascertained even in states of profound coma, if the paralysis is very marked. As a rule, the slighter degrees of paralysis are not accompanied by coma; hence, a profound and prolonged loss of consciousness due to hemorrhage or to thrombosis is almost certain to be accompanied by a very marked hemiplegia. This can commonly be ascertained by a careful examination of the patient's arms. The side which is not paralyzed, if raised from the bed and held in different positions, will be noted to have a certain amount of resistance, and occasionally slight involuntary movements will be noted in the muscles. Upon the paralyzed side, the arm will slip through the fingers something like a piece of wet rope or other inanimate object. If held for a considerable time, it will not present the involuntary movements noted on the side which has escaped. Another symptom almost always present early in severe cases is the turning of the eyes toward the side of the lesion. In right hemiplegia the patient looks toward the left, the side of the lesion in the brain; in left hemiplegia the direction of the eyes is reversed.

Once you have determined the fact of hemiplegia associated with coma, there is no question but that you have to deal either with hemorrhage or thrombosis of the brain. Which of these may be present may be a difficult decision, but it is of considerable importance from the standpoint of treatment. In cerebral hemorrhage you are dealing with a ruptured bloodvessel and your effort is to secure as quickly as possible coagulation and an occlusion of the ruptured artery preventing a pouring out of blood and further damage. In thrombosis you are dealing with a very different condition of affairs. There has been set up a sudden anemia in the region supplied by the occluded vessel, which will result in softening. In this last you have a process which calls for stimulation and the maintaining of vascular pressure and of nutrition. In the former you desire to reduce the circulation to the lowest possible limits. In the treatment of cerebral hemorrhage you would have the head raised, while in thrombosis it should be lowered.

* Read before the Tri-State Medical Society, Keokuk, Iowa, April 2, 1901.

In hemorrhage, bleeding is indicated; while in thrombosis it is not. As a matter of fact, a diagnosis between these two conditions is in many cases impossible, so that the treatment should not be too vigorous upon any one line, unless clear indications are present. It is a fact that in most cases of thrombosis there is a very marked reaction, and that while bleeding and reducing measures may be contraindicated, there are still a certain number of cases which may receive benefit from those measures which are useful in cerebral hemorrhage. When in doubt, treat the case carefully, avoiding those active measures which often do more harm than good. In any event, the patient should be kept quiet, preferably placed upon the side rather than upon the back, the bowels should be opened, and, if you are sure you are dealing with a case of hemorrhage, by all means give nitroglycerin. We do not know that this will do harm in cases of embolism, but it will certainly be of great benefit in case you are dealing with a ruptured bloodvessel. Very much the same effect may be secured by bleeding the patient—namely, a lowering of vascular pressure which favors coagulation in the ruptured vessel. In one of my cases of hemorrhage, marked benefit was obtained by a thorough bleeding and a subsequent injection of a normal salt solution. Should another similar opportunity offer, I would certainly add to the salt solution .5% of gelatin in the hope of favoring coagulation in the ruptured vessel. I cannot condemn too strongly the administration of strychnin and ergot. Useful as strychnin is in heart-failure, it should have no place in the therapeutics of thrombosis or hemorrhage into the brain. Cases of this kind prove fatal from respiratory failure due to direct pressure in the cranial cavity, and the strychnin is of no sort of value, except to increase the vascular tension and so precipitate the very condition which it is destined to relieve. The same is true of ergot. It is of no value in controlling hemorrhage into the brain, but, on the contrary, directly favors it, because it increases vascular tension. Ergot is only of value in postpartum hemorrhages, and there it is of use because it contracts a hollow muscular organ and so mechanically occludes the vessel. It has no influence in hemorrhages into cysts or any organs in which no such muscular structure exists.

The diagnosis between hemorrhage, thrombosis and embolism depends largely upon the previous history. In embolism the stroke is always sudden without premonitory symptoms, but usually the patient has been in more or less ill health and frequently a cardiac lesion or advanced disease of the kidneys are present. The prognosis in hemiplegia, due to embolism, is graver than in other forms because the underlying conditions, predisposing toward embolism, are in themselves of great gravity. In thrombosis we have the constitutional states of syphilis, gout, and rheumatism to guide us, and there are usually some premonitory symptoms. A patient will complain for weeks or months of a tingling or numbness in the fingers, which will gradually increase until some morning the patient wakes to find one side paralyzed. Such a warning should be given its full significance in a patient who has syphilis and antisiphilitic treatment instituted. In patients past middle life such subjective

symptoms upon one side of the body are strongly suggestive premonitory signs of an apoplectic seizure, probably thrombotic in origin. The early recognition of these and prompt treatment of the underlying constitutional states will serve to postpone, if not altogether prevent, the development of a hemiplegia.

The treatment of the secondary consequences is exactly the same, whether it is due to hemorrhage or thrombosis. As soon as the patient regains consciousness a careful estimate should be made as to the amount of damage which has been done. As a rule, it will be found that the arm is more paralyzed than the leg, and the face least of all. While the face upon the paralyzed side is somewhat smoother than upon the opposite, it is the lower part of the face that is principally affected, the patient not having lost the power to close the eyes, as they do in peripheral facial palsy. Very soon after the effects of the stroke have passed the patient begins to regain some power in the paralyzed side and this should be encouraged. Several times a day the patient should make a conscious effort to move the paralyzed side, first commanding him to move the well arm and then both arms. These early efforts at movements undoubtedly bring into action certain damaged nerve-cells and tracts which, if allowed to remain out of use for a considerable time, might undergo degeneration. In most cases it will be found that there is more or less loss of sensation, even in cases in which the paralysis is not very marked. Careful testing will show a certain amount of impairment, and the peculiarity is that it is most impaired in the hand and foot, less in the arm and thigh, while the trunk is comparatively little involved. Sometimes the paralysis is slight and the loss of sensation considerable, and again it is reversed; but as a rule the loss of sensation follows the same distribution as the motor impairment, and this is exceedingly valuable from the standpoint of diagnosis as it is characteristic of the organic hemiplegic lesions.

In the treatment of secondary consequences of hemiplegia, we must ever bear in mind the possibility of the development of late rigidity, which is a thing most to be avoided. This is accomplished by massage and the passive movements. A fixing of the extremities by contractures is always accompanied by more or less general involvement; hence the articulations should receive very careful attention. Even with the best of treatment, in many cases rigidity and uselessness, particularly of the upper extremity, is marked, but even when the result is so unfavorable, it is certain that careful attention to this detail will result, in the majority of cases, in a more useful extremity than will be obtained without it.

Another point in reference to hemiplegia is the much more severe character of the lesions when the hemiplegia affects the right side and the lesion is upon the left side of the brain. It is in these cases that we have aphasia and they are always accompanied by more intellectual disturbance than those in which the accident occurs with the right brain.

During the Examination.—*Professor:* "How would you treat postpartum hemorrhage?"

Candidate: "If it were a severe case I would ligate the postpartum artery."

A CASE OF INTERMITTENT CLAUDICATION.*

BY

DAVID RIESMAN, M.D.,

of Philadelphia.

Professor of Clinical Medicine, Philadelphia Polyclinic; Instructor in Clinical Medicine, University of Pennsylvania; Visiting Physician to the Philadelphia Hospital.

In 1858, Charcot¹ read a paper before the Société de Biologie, in which he reported the following interesting case: A man, aged 54, who had early in life received a bullet wound in the right flank, complained of a peculiar difficulty in walking. After walking for more than a quarter of an hour he would experience throughout the entire right leg a feeling of weakness and numbness; and if he continued on his way, pain and tingling began in the penis and extended to the right thigh and down the left leg to the foot. Finally, cramps and stiffness supervened and rendered the limb useless. After a few moments' rest he could continue his walk, but for only a short time; in 20 minutes the symptoms described returned, and again arrested his progress. Death ensued from gastrointestinal hemorrhage. At the autopsy the right common iliac artery was found to be the seat of an aneurysm in its upper two-thirds. The lower portion was obliterated and converted into a fibrous cord.

Charcot attributed the functional disturbances in the right leg to an ischemia or anemia of that member, produced by the arterial obstruction, and termed the condition intermittent claudication or intermittent limping. The expression was borrowed from veterinary medicine, in which it was employed to designate an intermittent painful limping or paralysis occurring in horses. Bouley², in 1831, was the first to point out the equine form of the affection, and attributed it, as did Charcot afterward, to arterial obstruction.

Charcot's paper, although classic in the clearness of its diction and reasoning, remained almost unnoticed both in France and elsewhere, and it was not until he had on several occasions recurred to his original observation and had recorded others, that cognizance was taken of the disease. The most elaborate studies have since been made by Erb³ and by Goldflam⁴. As the former has but recently reviewed the literature, I would refer to his masterly paper for an historic account of the affection.

The cardinal symptoms of intermittent claudication are as follows: The patient starts out to walk, and does so for a short distance with perfect or almost perfect ease. Then he begins to experience pain and numbness, often a distinct cramp, in one or both legs, usually in the calves or in the feet. Further walking becomes difficult or impossible, and he is compelled to rest. After a few minutes, however, locomotion can be resumed, only to be again interrupted by a return of the pain and cramp in the legs. The patient thus becomes intermittently limping, or rather lame. In horses the objective symptoms are similar. The animal starts out well, but after a short trot of a quarter of an hour or less it begins to limp, and if spurred on, the hind legs become stiff and rigid, and it falls to the ground in evident pain. After a short rest it can go on, but the

same symptoms recur within a few minutes, and the animal becomes useless for service.

Examination of human beings suffering from intermittent claudication has shown as a very characteristic objective feature an absence of pulsation in the arteries of the feet—chiefly the dorsalis pedis, often also the posterior tibial, in rare instances the popliteal and the femoral. Pulsation of the dorsalis pedis is practically never absent in health; nor in disease, except in conditions such as edema, elephantiasis, and analogous affections which interfere with the satisfactory palpation of the artery, and in arteriosclerosis of marked degree. Erb examined a large number of hospital patients, and found pulsation present in 99%. In 1% it was absent, by reason of the causes just mentioned. Goldflam found pulsation of the artery absent in 9 out of 200 heterogeneous cases examined by him. None of these 9 showed symptoms of intermittent claudication. This indicates that obliteration of the pulse may occur without intermittent claudication; but Goldflam's and Erb's cases of the disease show that intermittent claudication very seldom exists in the absence of obliteration of the pulse in the dorsalis pedis artery. Thus, in 24 cases observed by Goldflam, the pulse in either one or both dorsalis pedis arteries was absent in all but 1 case; the posterior tibial did not pulsate in either leg in 7, and in 4 each the right and the left were pulseless. In Erb's 12 cases the arteries of the feet were examined in 11; and of these 8 showed absence of pulsation in 1 or more of the arteries in question—the dorsalis pedis and the posterior tibial behind the inner malleolus. In 1 case no pulsation could be detected in the popliteal; this artery is, however, so deeply placed that, as Goldflam remarks, a negative result is of but little value.

Aside from the intermittent hindrance to walking, there are, as a rule, no other motor symptoms in intermittent claudication. Sensation is also normal—objectively, at least; subjectively, the patient often experiences various paresthesias—formication and numbness, as well as pain and coldness. Vasomotor symptoms are common, and consist of pallor, coldness, and dryness of the skin; at times there is a peculiar bluish mottling, and rarely signs of local syncope, in the shape of pallid, anemic areas, like the "dead fingers" of Raynaud's disease, are manifested.

That it is important to recognize the disease, is shown by the fact that gangrene occurred 7 times in Goldflam's 24 cases. It is very probable, moreover, that a number of instances of spontaneous gangrene reported by surgeons were really cases of intermittent claudication.

The majority of the patients are men; 11 of Erb's 12, and all of Goldflam's 24. The interesting case reported by Gordon⁵, in which the disease was associated with paresthetic meralgia, occurred also in a man.

Regarding the age, Erb's patients varied from 32 to 60 years; of Goldflam's 24, 14 were under 40; my own patient is a man of 39 years.

From the point of view of pathologic anatomy, the most important lesion is an obliterative endarteritis of the peripheral arteries. This endarteritis is associated with hypertrophy of the muscular coat, and often with corresponding alterations in the veins. The changes are

* Read at a meeting of the Philadelphia Neurological Society, April 22, 1901.

similar to those found by Mitchell and Spiller^d in the arteries of the toe from a case of erythromelalgia, which is likewise a very painful affection of the distal parts of the limbs, and may in some respects be considered as belonging in the same category as intermittent claudication. The digital nerves in Mitchell and Spiller's case were decidedly diseased, but in the cases of intermittent claudication hitherto studied, either at autopsy or after amputation of a gangrenous limb, no changes were found in the nerves. In 1 case Marinesco noted peculiar alterations in the muscles, the interpretation of which is not entirely clear.

The etiology of the disease coincides in a large measure with that of arteriosclerosis, which, as I have stated, is the principal anatomic lesion found in the disease. Syphilis, alcohol, exposure, tobacco, and perhaps diabetes, play a role. Regarding syphilis, it is interesting to note the contrast between the cases of Erb and those of Goldflam. The former found 4 out of 9 (44.4%) patients to be syphilitic, while only 1 of Goldflam's 24 had had the disease.

As arteriosclerosis is common and intermittent claudication rare, it is necessary to assume that other factors contribute to bring about the latter affection. These factors presumably are vasomotor disturbances, which may in turn be connected with endarteritic changes in the vasa nervorum.

When we come to explain the symptoms, it is very natural to attribute the various functional disturbances to the anemia and stasis produced by the arterial obstruction. This latter is in part organic—due to the endarteritic process; in part it is dependent upon vasomotor spasm. "The cry of the nerves for blood" expresses itself in pain; the muscles, on the other hand, seem to respond to the same privation with a painful contraction or a cramp. Charcot inclined to the belief that the muscles lost their irritability, and possibly suffered a change analogous to cadaveric rigidity—such as, for instance, is produced by occlusion of the abdominal aorta in the well-known Stannius' experiment. Whether the arterial spasm is in itself painful—by stimulation either of sensory nerves or of touch corpuscles in the vessel-walls—is a mooted point. There is abundant evidence that acute arterial obstruction is excessively painful, and some have attributed the pain to such a form of irritation.

The intermittent character of the symptoms is not surprising; during repose the amount of blood supplied is sufficient for the functional demands, but during the use of the limbs in walking the supply becomes inadequate; as soon as the patient rests the waste products are removed, and the parts again receive their needed share of blood.

It is an interesting fact that the majority of patients with intermittent claudication have been excessive users of tobacco and have been of the Hebrew race. Both of these statements apply to my patient, whose case I now proceed to relate:

Mr. D. A. G., a native of Iowa, 39 years old and married, is the head of a large manufacturing establishment. He denies having had syphilis. He worked hard for many years as a traveling salesman, and while thus engaged was much exposed

to cold and wet. His mother was a diabetic, but died of an accident; his father died of apoplexy; a sister died of diabetes. Three brothers and several sisters are living and well. His wife has had 1 miscarriage, and has borne 1 child, now 11 years of age, who has had St. Vitus' dance. All his life, the patient has used tobacco to excess, both in chewing and in smoking.

Fourteen months ago he had an attack which was by one surgeon diagnosed as appendicitis, and by another as muscular rheumatism. He was in bed 10 days, and, for reasons that the history fails to reveal, lost in the next 3 weeks 35 pounds in weight. A blood-examination was made by a microscopist for the physician in attendance, and the patient was told that he had malaria.

One day about this time, while walking on Chestnut street, he suddenly had a sensation as if water were running down the left leg, and experienced a sharp pain in the sole of the left foot. So severe was this that he had to take a cab to go to his office. Ever since then he finds that although his legs feel natural when he starts, as soon as he walks a few squares he has pain in the calves, especially the left, and the legs feel, to use his own words, as if they weighed 100 pounds. After resting a few minutes he is able to resume his walk, but the pain and heaviness quickly return. These annoying occurrences have caused him to form the habit of riding in the street-cars for even the shortest distances; he will thus take a car to cover 2 blocks.

One afternoon about 2 weeks ago I visited him at his factory, which is on Arch street, between Third and Fourth streets. He told me that he had gone for luncheon to the Bullitt Building—only about 2½ squares away. When he got as far as Fourth and Market streets he could scarcely lift his feet on account of pain and a sense of weight; and he was compelled to rest for a few moments before proceeding to his destination.

A very curious feature is that while in his factory he walks about a great deal with scarcely any trouble. I attribute this largely to the fact that his mind is intensely centered upon his business, and this gives him no time to think of his ailment. Possibly, also, the greater resilience of a wooden floor, as compared with asphalt or stone pavement, may be a factor.

The patient's feet often feel cold, and perspire profusely when he is walking. There is, however, no numbness and no formication, but occasionally he has a feeling as of pins and needles in his fingertips. The pain is not influenced by atmospheric changes or by excitement. Last summer he was much benefited by a sojourn in the Pocono Mountains. Before going there he had a good deal of pain, but after a short stay he was much relieved, and was able to walk 4 or 5 miles without suffering.

There is also a distressing shortness of breath on slight exertion, and he has to be very careful of his diet on account of a sensitive stomach. It was the dyspnea and the trouble with his legs that first caused him to consult me last November. I should also state that in June, 1900, he had a peculiar attack, during which he lost speech, and power in the right arm; the leg and face were unaffected, and consciousness was not impaired. After 2 weeks' treatment, apparently with the iodids, he recovered.

On examination I found the patient to look at least 10 years older than his actual age. He had a sallow complexion and dark rings under the eyes. The heart-sounds at the apex were weak; the second pulmonic sound was accentuated, but the second aortic was not increased in loudness. After walking up and down the office a few times, the first sound at the apex became reduplicated. The radial arteries were thickened. The pulse was 100 to the minute; this rapidity of beat was noted in a number of examinations. The pulse was small, and the tension increased. The temperature was normal. The knee-jerks were present, but feeble. Tactile sensation was good over the lower limbs, and there was no disturbance of the heat-and-cold sense. He did not have Romberg's symptom nor the Argyll Robertson pupil. Examination of the arteries of the feet showed that *pulsation was entirely absent in both dorsalis pedis vessels*. The posterior tibials pulsated, the left less strongly than the right. This is interesting, as the left leg was the worse. The popliteal vessels could not be felt; but as I have already stated, this is no criterion, since they may be deeply situated.

There was no swelling and no discoloration of the limbs. The urine, of which the patient passes about 35 ounces a day, contained a trace of albumin, but no tube casts, and was free from sugar; it had a specific gravity of 1,008, and a strongly acid reaction. Fehling's solution was turned green and a precipitate of phosphates formed.

Treatment directed to the relief of the trouble in the patient's legs proved for a long time unavailing. Nitroglycerin and the iodids (the latter in the form of iodalbacid) wrought no change; neither did massage produce any material improvement. Lately, however, benefit was secured by a combination of iodids and mercury—the so-called mixed treatment. The relief, however, has been but temporary. He is now taking bromids and nitroglycerin, which have seemed to help him more than anything previously given. When I last saw him, April 16, he was better than he had been for months, and could walk 4 or 5 squares without a return of the pain. Following a suggestion of Erb's, I shall add strophanthus to the treatment. This strengthens the heart, without contracting the vessels, as does digitalis, and thus sends more blood to the lower limbs. It goes without saying that the patient has been instructed to lessen his indulgence in tobacco; but he is so addicted to its use that he has been unable to carry out my wish for an entire discontinuance.

To complete the discussion of the treatment of intermittent claudication, I shall add a few words regarding diet, exercise, etc. The diet should be that suited to arteriosclerosis in general; namely, one largely vegetable. Red meats, alcohol, tea and coffee, and rich foods, should be excluded. The alkaline mineral waters are helpful. With regard to exercise, the advice of Erb that great moderation be used is certainly judicious. If the nature of the affection is not appreciated, the temptation to urge the patient to practise walking at all hazards might easily arise. This would be a serious mistake, in the light of the pathology of the affection. Fatigue should always be carefully avoided. The patient should—to quote Erb—walk with the watch in hand. He should also protect himself carefully from cold and dampness. Massage may prove beneficial; my own patient was not, however, helped much by it. Galvanism is useful, the feet being placed in separate buckets of salt water, in which the electrodes are also immersed. The current is passed first in the one and then in the other direction, for a period of from 3 to 6 minutes.

The iodids and nitroglycerin are indicated; so are cardiac stimulants of the strophanthus order. As has already been mentioned, my patient was benefited by the bromids and nitroglycerin.

The case I have reported is, I think, a typical one of intermittent claudication on an arteriosclerotic basis. The shortness of breath on exertion, the transient aphasia, and the gastric symptoms are probably likewise connected with arterial changes. The only ascertainable factors are tobacco and exposure, together with much mental strain. Whether the man is in danger of that most deplorable complication, gangrene, I cannot say; it is to be hoped that he will be spared this terrible calamity.

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DISEASE AND DEFORMITY OF THE KNEE; ETIOLOGY, DIAGNOSIS AND TREATMENT.

BY

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[Concluded from page 295.]

It should in all these cases be our first duty to save the life of the patient, by whatever means necessary; and second, to preserve the limb with as little deformity and as near normal function as possible.

Constitutional treatment should consist of careful attention to the diet, and the use of general tonics, as codliver-oil and creasote, such as each case seems to



Fig. 10.—First incision.

need. Nourishing food in unlimited allowance is in my opinion of as much importance as treatment with drugs. Good steaks, eggs, plenty of cream, and sufficient farinaceous food, will, when combined with good air, out-of-door life and cheerful environment, work wonderful results in even advanced cases. I have noticed in the cases operated upon in the Postgraduate Hospital, coming from the old and densely populated sections of the city, that if these children are returned to their homes, they are soon seen again in the out-patient department, candidates for further operative measures. If on the other hand these little folks are sent to our country hospital for such cases, their improvement is rapid, and their cures made more permanent. Together with hygienic and dietetic precaution, mechanical protection

is, as a rule, indicated in the very inception of the disease and not infrequently supersedes the necessity for operation. The inviolable law in all cases of joint-disease is extension for the relief of intraarticular pressure, and immobilization to prevent the trauma of motion.

The knee is no exception to this rule. Upon detection of disease the joint should at once be put completely at rest. If there is deformity due to spasm of muscle it should be overcome by proper extension-apparatus. The ordinary Buck's extension (Fig. 9) applied as far as the joint is as good as any. It is best put in with moleskin

sure. To prevent this it is necessary to employ traction in the line of the deformity. Place a wide bandage behind the calf of the leg near the knee, and attach this to a hook in the ceiling over the bed. By so doing the head of the tibia is lifted upward and forward and the intraarticular pressure is relieved instead of augmented. Place pillows around the knee to avoid any slight jar to the joint. When the limb is straight a protective apparatus should be applied, one that will continue extension is best. Plaster-of-paris is excellent as an immobilizing agent, but does not furnish adequate extension. It is furthermore cumbersome and heavy. No brace is better adapted to the many requirements of such a case than that devised by Thomas, of Liverpool. (Fig. 10) This is practically an ischiatic crutch, allowing the patient to take the weight-bearing point upon the tuberosity of the ischium, which also affords the counter-extension. Thomas of

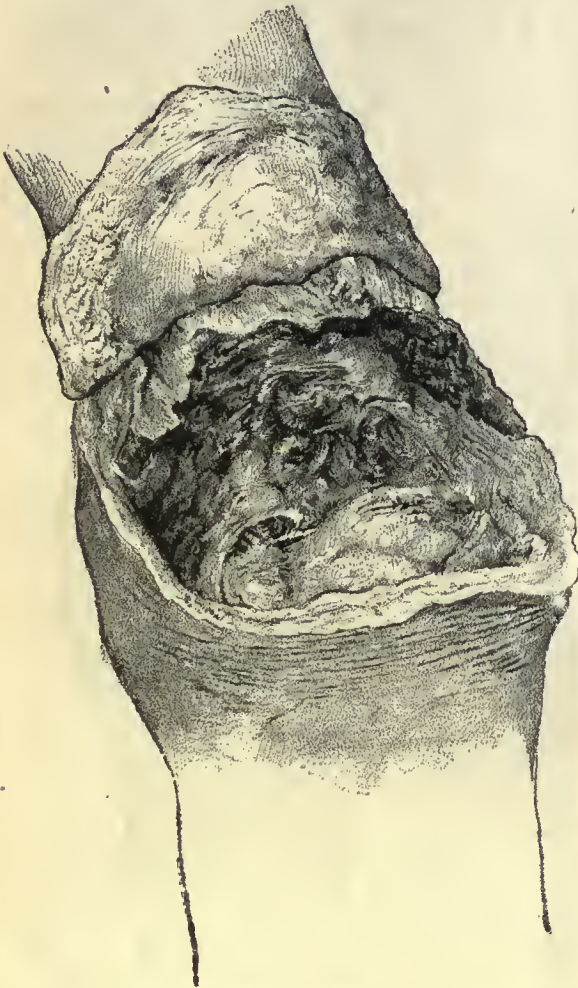


Fig. 11.—Flap turned.



Fig. 12.—The patella and capsule of joint removed.

straps and a muslin roller bandage. The buckles at the end of the straps should be 1 inch above the malleoli and should be on a level with each other, in order that even traction may be exerted on both sides. The usual weight-and-pulley accompaniment is used. The weight may be supplied by a bottle of shot, a sandbag, or anything which permits the regulation of weight.

Traction must always be exerted in the line of deformity. If when the leg is flexed upon the thigh at an angle of say 20° extension is applied and the weight put over the foot of the bed as in the treatment of fracture of the femur, the patient will seldom gain relief. On the contrary, the pain is usually increased. This is because with the hamstring tendons as a fulcrum and the tibia for a lever, you are producing intraarticular pres-

Liverpool did not teach the theory of intraarticular pressure and the extension modification of his knee-brace was not original with him. The shoe of the opposite side should have a cork elevation of 2 inches. If the best possible results may be obtained in the use of this brace, it is essential that careful attention should be given to the adjustment of the circumferential bands just above and below the knee. The one above the knee holds well back the lower end of the femur. The band below the joint keeps well forward the head of the tibia, thus preventing any tendency that may exist toward subluxation of that bone. It is a bad result when these cases recover with genu-recurvatum.

In convalescent cases, or when the ligaments of the knee have been strained, it is not always necessary to

resort to extension, although a stout support is needed for the joint, while in use. For such cases there is nothing more simple and yet effective than the lock-joint knee-brace, used in our Postgraduate Clinic. (Fig. 17) It allows the patient to walk with a stiff knee. By a lever-joint the knee can be unlocked to enable the patient to bend the leg while sitting, and when standing it will lock again automatically. The apparatus is adjustable to any shoe by a sliding socket fastened to the sole of the shoe.

In advanced cases, when suppuration has taken place and there are present destructive changes either in the bone, or in the soft parts, operative measures should be adopted.

Every abscess, purulent or tuberculous, should be opened as soon as the condition is diagnosed, or even suspected. The presence, or the size, of an abscess, is no criterion by which to judge the destruction that may have taken place. The largest abscesses are sometimes

necrotic tissue when the abscess present is not large enough to excite unusual suspicion.

Incise all suspected abscesses at once. If no abscess is



Fig. 14.—Bone resected.

present no harm will have been done, and the intelligent exploration of the joint with his finger will give the surgeon knowledge otherwise unobtainable.

Excision of the kneejoint in children must not be performed if any other treatment can be substituted, because of the interference with the normal growth of the limb. In adults excision is not only advisable, but is the rule usually followed. In children under 15, it is better surgical practice to perform a scraping operation. The Volkman scoop well used can usually remove all necrotic tissue. The joint should then be irrigated with pure carbolic acid, allowed to remain for 1 minute in contact with the tissues. The corroding effect of the acid is neutralized by the thorough use of absolute alcohol, and then the whole is flushed with a mercuric chlorid solution. The wound is best drained with the glass speculum drainage-tube, which should be kept in place until the granulating surface fills in from the bottom. It is well to protect these joints for at least a year after the operation with some suitable brace.

In adults and adolescents in whom the growth of the limb is, or is nearly, complete, and the bones have acquired so firm a texture that after the operation they readily undergo an unyielding synostosis, the procedure that has afforded us the best results is the Phelps' rapid excision. As Plimpton aptly says in an article on this subject in the April (1897) issue of the *Postgraduate Journal*:

"In determining what operation for excision of the knee best subserves the requirements, it may be said that the method which allows of the most complete removal of all diseased tissue,



Fig. 13.—Articular surfaces exposed.

and gives perfect drainage, retains the part in best apposition, and fixes the bones without the use of pins or wire, and last, but not least, the one that can be

accompanied with but little destruction of the adjacent bony tissues, while too, the entire articulating surfaces may be denuded of cartilage and the joint filled with

done with the greatest ease and rapidity, is to be preferred." Without entering into a discussion of the merits and demerits of the operations devised and performed by different surgeons, I believe that Fenwick's section of the bone (see Fig. 14), with Phelps' method of removing diseased soft parts together with bone, as described below, fulfills all the requirements mentioned above, with a few exceptions. When the head of the femur is destroyed, precluding the section according to Fenwick, Dr. Phelps has devised a

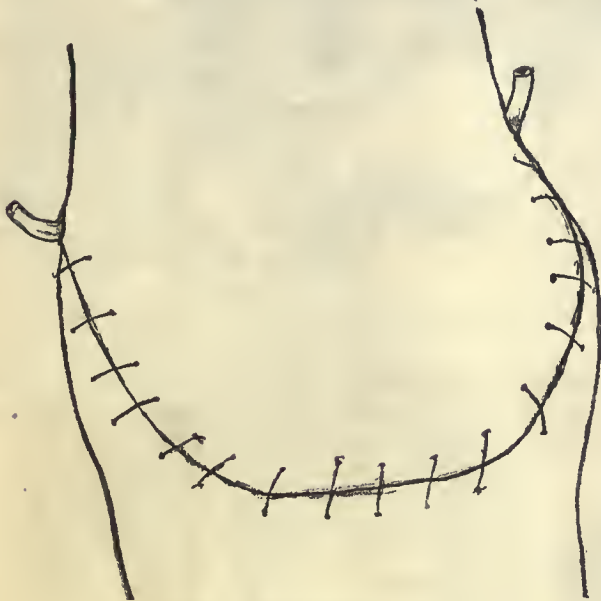


Fig. 15.—Wound closed.

method to meet this condition by sawing a wedge-shape at the end of the femur and a V in the tibia for its reception. The essential feature in Fenwick's operation is the sawing of the bone in a line parallel to the articular surfaces, so that when placed in apposition the convex surface of the femur fits the concavity in the head of the tibia. The bones are so locked that there is little or no chance of their slipping and no tendency to rotate outward in the dressing. No pins or wires are needed to keep the bones in contact. This is greatly in the patient's favor, since the necessary period of anesthesia

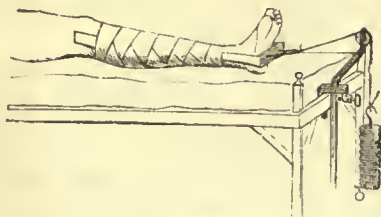


Fig. 16.

is shortened by 10 or 15 minutes. When wire and pins are used, they occasionally give trouble later.

The length of time taken for excision of the knee has an important lesson for us in the statistics respecting the mortality of the operation. Mr. A. G. Miller, of Edinburgh, in a report on incision, advised against it in certain feeble patients (otherwise suitable cases), recommending the amputation because it could be done in a

much shorter time, remarking that while in either operation the shock was about the same, the effect of the longer period of anesthesia was to lessen greatly the patient's chance of life. There is a vast difference in the ether-shock, whether the patient is under its influence 20 minutes or 2 hours. This point is clearly set forth and proved in a series of clinical lectures by Dr. William H. Porter on anesthesia, delivered before the class of the New York Postgraduate Medical School and Hospital.

The shock of the operation in excision of the knee must of necessity be profound. Add to this the shock produced by ether in an operation lasting from 1 to 2 hours instead of 20 minutes, and the chance of saving the patient's life is greatly reduced. Except in extreme cases, no surgeon ought, after he is familiar with the operation here recommended, to take more than 15 to 20 minutes to operate and apply the dressing. If the steps of the operation, which I will recount, are followed, I think you will be convinced that it can be performed within the time specified.

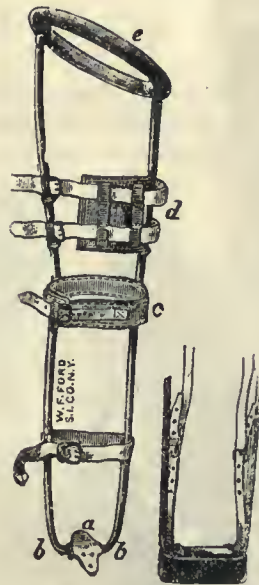


Fig. 17.

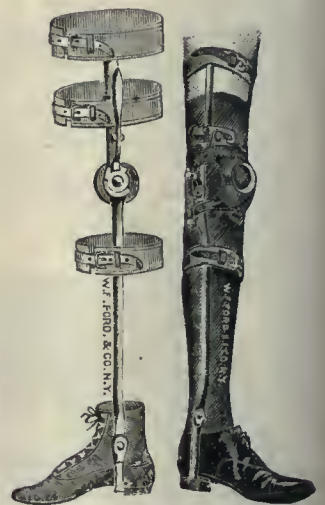


Fig. 18.

Entering the knife a little posterior to and above one of the condyles of the femur, a curved incision is made, extending sufficiently below the patella to expose the margin of the head of the tibia, terminating at a corresponding point on the opposite condyle (see Fig. 10). This incision opens the joint more extensively than any other. Dissect the flap well up, as in Fig. 11. A curved incision above the patella removes nearly the entire synovial sac, together with the patella (see Fig. 12). Instead of picking at the diseased parts with forceps and scissors before going further, thus consuming valuable time, with consequent danger to the patient, the lateral and crucial ligaments are divided and the knee is flexed as in Fig. 13. With a saw proceed at once to resect the bones, at the same time sawing out a large portion of the diseased soft parts as well as bone (see Fig. 14). This done, the entire joint is removed with nearly all of the disease. With seissors and a Volkmann spoon the remaining disease is quickly cleared away. This concludes the cutting part of the operation. Ligate the 3 or 4

arteries if necessary. A continuous suture closes the incision, drainage at the same time being introduced (see Fig. 15). The dressing is the usual gauze and cotton, with plaster-of-paris extending from the toes to the groin. Still, quoting Plimpton, it is due more to the method than the skill of the surgeon that the operation is so quickly performed.

The statistics as compiled by Prof. Plimpton, of 102 excisions of the knee performed by the visiting staff of the orthopedic department of the Postgraduate Hospital in that institution, the New York City Hospital and the Mary Fletcher Hospital, and in private practice, are summarized herewith:

- Average shortening, 0.88 inch.
- Least shortening, 0.5 inch.
- Greatest shortening, 3 inches.
- Average time in hospital, 7.7 weeks.

No wiring was done except in the first cases. No amputations occurred. Bony ankylosis resulted in 4 months to a year in all cases.

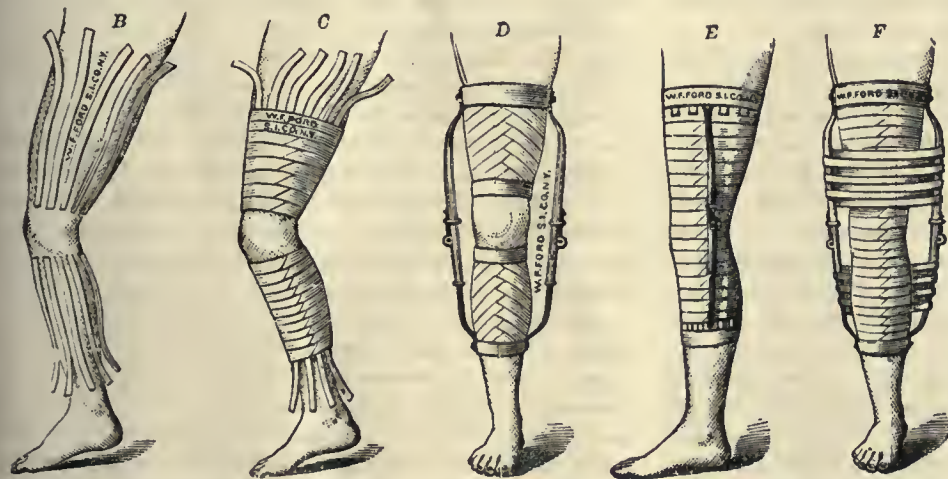


Fig. 19.—Showing method of applying knee-brace with moleskin straps.

OTHER AFFECTIONS OF THE KNEE.

Rheumatic knee is always due to a constitutional condition and is usually associated with a similar condition in one, or more, other joints. Rheumatic joints are, as a rule, multiple. A single joint, as the knee, is never involved, excepting it is preceded by an injury. The treatment of such cases is therefore, in addition to the mechanical and operative, constitutional. The mechanical treatment is of as much importance as in tuberculous and purulent joints, but will avail more if combined with the time-honored salicylates and other classic antirheumatic remedies.

Bursitis, or housemaid's knee, is a simple serous effusion into the prepatellar bursas. The treatment is the evacuation of the fluid, thorough scarification of the inner walls of the sac with a short tenotome, and the careful strapping of the joint with a basketwork of adhesive plaster straps, which neatly maintain compressions of the walls of the cavity.

Synovitis, acute or chronic, may depend upon traumatism uncomplicated, or may be associated with gonorrheal infection. The former condition is a simple inflammatory condition of the synovia and will usually yield

to rest and fomentations. The gonorrheal joint is due to specific infection at a time when the process of repair, the normal inflammatory process, is going on in some part of the synovia, following some traumatism, slight or otherwise. These joints should be treated as purulent and thoroughly irrigated. Immobilization is there combined with extension. Later on, hot air, massage baths, compression and electricity are all included in the routine treatment. The chronic form naturally follows the acute and is treated in much the same manner. The strapping, as recommended in bursitis, is excellent treatment here, and has, in my hands, often given most gratifying results. Here also incision and drainage should be kept in mind.

The etiology and pathology, as well as subsequent treatment of arthritis deformans are largely matters of neurologic interest.

The absence of objective symptoms, the history of the case, and the extraordinary prominence of subjective symptoms will place the doctor upon his guard in cases of



Fig. 20.—Typical bending following joint excision, which was not properly protected after operation.

hysterical knee, also called functional disease, neuromimetic knee. Porter reports a case of hysterical hipjoint-disease perfectly cured by the careful administration of a bitter tonic. Similar cures may doubtless be made by treatment along the same lines in hysterical knee.

Complete inability to extend the leg upon the thigh is caused by rupture of the quadriceps extensor. It is most satisfactorily treated by suture of the torn ends of the muscle and the application of a posterior knee-splint, to be worn for some weeks. The wounded limb is hardly ever as strong as before the injury.

Nine-tenths of the cases in which either dislocated semilunar cartilages or loose bodies in the joints are present occur in the knee. Potent factors in the etiology may be traumatism or the previous existence of fluid in the joint. The presence of "so-called" rice bodies is due

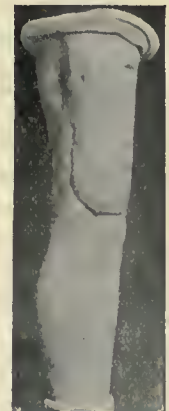


Fig. 21.—Result following excision.

to tuberculous infection. Incision and removal of the offending particles, large or small, is the only treatment that offers any reasonable hope of permanent cure.

I am indebted for many of the electrotypes used in illustrating the text, to Prof. A. M. Phelps, through the courtesy of whom and of Prof. W. O. Plimpton it has alone been possible to present much that may be found interesting in the above.

CHRONIC HEART DISEASE IN CHILDREN RELIEVED BY SYSTEMATIC MOVEMENTS.

BY

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of Philadelphia.

This paper is a presentation of views reached by experience and observation in dealing with the disordered conditions in the hearts of children.

Although some attention has been given to the relief of long-standing disorders of the heart and circulation by systematic exercises, as much of the literature on the subject as could be reviewed by the writer seems unsystematic and mainly suggestive. Nowhere are the principles outlined with sufficient clearness which should govern us in the selection of the measures to fit the different conditions met. Among the standard textbooks the subject is usually disposed of briefly, if alluded to at all, and in a vague and general way. The excellent papers on the subject of mechanical measures for disorders of the heart from such sources as the physicians of Nauheim and Aix les Bains, deal chiefly with certain aspects or routine procedures. Advocates of physical culture have occasionally entered claims which met with little or timid encouragement, or with opposition, the reason being probably that physicians fail to study the subject in a practical manner. In recent journal-articles the matter is referred to more encouragingly.

It is well known that a fair proportion of the sufferers from serious cardiac diseases pass through a long and active life, and at the end perish from diverse maladies not necessarily dependent upon, though perhaps modified by, the cardiac disability. One instance to which I may refer is that of a relative of my own, a most active and industrious member of the profession of medicine, who now, at the age of 72 years, still enjoys excellent health. Another is a clergyman, whose work lay for 40 years or more, on the frontier of one of our wildest sections, who did all that a sound man could do, and is still active at 70. Both these gentlemen had serious valvular disease in their early manhood, and both had advice at that age, from foremost European authorities, and were told unreservedly that they must speedily die, and yet they lived more than an ordinary lifetime since, of the severest activity, mental and physical.

These typical instances will serve to illustrate the fact, well established, that great and prolonged activity and usefulness is entirely compatible with what is often regarded as irretrievably damaged hearts. Similar

instances are cited by Samson, Balfour, Lauder Brunton, etc.

In the past 20 years it has been my privilege to release or modify the embargo laid on many people who, because of pronounced cardiac defects, had resigned themselves to a life of enforced quiet, or gravely modified usefulness and happiness, imposed on them by eminent authorities, thus far with no mishaps. Nor was this done recklessly, as can now be safely stated, but on principles carefully computed. It is an instructive study to search in these histories and formulate the grounds on which success and sustained activity were reached, whether accidental or scientifically earned. Some day it shall be my privilege to present them, but the present proposition is to outline the reasons for and the forms of exercise which, in my experience, have proven suited to children disabled in their circulatory machinery. Again, it may be said that a fair proportion of the untoward results of strains are due to indiscretions on the part of the patient, who may or may not have been adequately informed of the possibilities of his case. In the repair of damaged conditions of the heart, freedom from nervous and mental strains are of equal importance with physical quietude. In estimating the injuries due to enfeebled hearts by undue activities, we must not lose sight of the fact that oftentimes the real injury resulted rather from fictitious and emotional stimulation applied and continued; this, moreover, upon an organism which had at no time the benefits of a most necessary training under skilled direction which should fit the heart for as much work as its normal condition would warrant. All physicians familiar with athletics appreciate how much can be done to reinforce cardiac capacity, be it inherently much or little, if wisely directed; and again how serious is the resulting disturbance upon perfectly sound hearts in those who compete when inadequately trained. The heart is capable of and certainly deserves most important training. When physicians realize this, and when they are encouraged to exercise supervision not only over all athletic competitors, but of growing children in their homes, our young men will become not only more formidable competitors, but we will hear less of those (really rare) instances of break down under strains which serve as lurid texts for the diatribes of the sedentary. When the organs of circulation have had, by accident or by design and judicious direction, acquired normal development anatomically and functionally, that individual is better fitted to endure the strains and exigencies of a busy life, and he is enabled to tide over in safety many hard places, and this contributes largely to bring him to a green and happy old age. If this is true of boys it is even more important for girls who have need of the fullest cardiac competency, since theirs is a complex circulatory apparatus, which during the period of gestation is gravely taxed to do a double duty.

One word here as to hypertrophy of the heart-muscle. A heart hypertrophies in proportion to the amount of work it is called upon to do, regardless of what that work may be. This is a perfectly physiologic condition, and is to be desired and not feared if it comes from normal healthy stimulation, with no pathologic obstacle or

incompetence in or out of the heart, to be overcome. If this obstacle exists it is liable to be perpetual, and the compensatory muscle increase proceeds till such time as it is no longer capable of balancing the defect, when dilation results. If the organs of nutrition and elimination are maintained in a normal state (and for this, activities of many kinds are essential) the period of degeneration will be far distant, and only at the end of a long and useful life. If not, and ptomaines and other toxins accumulate, all the tissues suffer, of which the ceaselessly busy heart, already defective, is the first to feel the strain. Again, the strain may be due to defects in the vasomotor mechanism and then the condition of the peripheral bloodvessels needs faithful attention. This comes about through vasocontrol medicines or agencies. Measures which help to regulate the caliber of, hence resistance in, the peripheral arteries are of vital importance. Of these, baths and surface applications come first, but mild exercises are of even greater importance because more far-reaching and permanent. To obtain the undoubted advantages which follow upon muscular exercises, with the resulting blood purification, the increased breathing capacity and greater oxygenation, it is not necessary that we should have in mind, nor employ the ordinary concepts of exercise which prevail among the laity and profession alike. Physicians should make themselves familiar with the physiology as well as the practical principles of exercise. They are curiously ignorant or indifferent, usually giving far worse advice to patients than can be had from experienced trainers and professors of physical culture, even when they have themselves taken some part in athletics. Their conception of exercise too often is the crude belief that this means a series of active movements which involve muscular contractions and flexions more or less violent, ignoring the far greater value of extensions, tensions and counter-extensions, posturings and relaxations. They usually cherish the belief that active voluntary motion producing quickened cardiac action and more or less breathlessness is harmful for such patients, as indeed is quite true in some cases. Very salutary effects are obtained by passive movements, manipulations, stretchings, rotations and the like, gradually supplemented by voluntary acts, deep breathing, and finally, graduated active movements of the limbs, neck and trunk. In the cardiac cases it is seldom necessary to proceed to resisted movements for a long time, certainly not until it is shown by careful observation that the individual is capable of enduring them.

Exercise, in the sense employed in this paper, is both the passive and intentional, yet systematic use of the machinery of motion for the purpose of maintaining and improving health. When the mechanism of circulation is itself damaged, along with the organs of vitality, it is customary for medical advisers to content themselves with merely counseling restriction of activities, and modifications of the environment in as advantageous a fashion as is consistent with the possibilities enjoyed by the individual. As a consequence the patient falls into a complex condition of passive organic disturbances because the circulatory movement is stagnated, and this produces many far-reaching effects some of which are most serious. It is true some children suffer amazingly

little from this, spontaneous and conservative adjustments coming to the rescue, but in the majority there are sooner or later evidences of passive congestions, particularly in the liver, kidneys, lungs, and indeed in the nervous system, which assuredly demand relief. When this is omitted, life is shortened, and more conspicuously, living is rendered much less enjoyable. A cleaner blood supplied to the brain enables the bedridden one to enter into much more of the passing events of his environment, to be far more cheerful, to read and acquire many intellectual as well as physical pleasures.

Congestion of the liver has a wide influence upon the conservation of energy. If the blood sluggishly circulates repeatedly through this great laboratory, unsupplied by those elements which favor its healthy metabolism, unrelieved of those powerful poisons which are here secreted, then both mind and body must suffer marked depression. The liver should produce an adequate amount of bile, the natural primitive laxative. Its retention produces jaundice, and many depressing states. Laxatives can accomplish only a part of what is required. The kidneys when long congested, are liable to become functionally inert, and to suffer structural change, retaining toxins and permitting the escape of albumin.

The lungs, if never encouraged to full activity, lose their elasticity, especially at their apices; the pulmonary circulation, deficient as it is in vasomotor nerves, stands in peril from slight infections or congestions, and pneumonias, infective or passive, easily arise and are then most difficult to resolve.

The skin, the great defender of the body, becomes inelastic, the surface nerves and bloodvessels lose their tone, the peripheral vasomotor mechanism ceases to guard the organs from surface chill, leaving them vulnerable to slight variations in temperature, and atmospheric or other changes.

And lastly, to complete the sketch, the nervous structures suffer, and above all, the brain, though longest to resist, at last succumbs to this abuse of the vital organs. Not only the intellectual forces wane, but the disposition is impaired, and that inestimable boon, the joy of living, fails little by little. Death is far more often dependent upon emotional depression, discouragement, and the apathy which comes of increasing disappointments, of which one of the most recognizable factors is the gradual realization, conscious or unconscious, that a life like that of others is impossible for them, not only preventing them from sharing the activities of those about, which could be endured, but a realization of the inability to share their reasonable animal pleasures is denied because the organs of sense are obtunded by the retained products of tissue waste.

All this can be modified, and most of these discomforts are capable of amelioration, by supplying in some form and to some degree, the normal activities or their equivalents. And this again can be done by keeping the importance of the matter constantly in mind, and adapting our measures to the capabilities of the individual.

I am fully in sympathy with those who would treat cases of marked cardiac disorder by rest in bed for long periods. My contention is that during this time a great deal can also be done to mitigate the evils of

enforced rest by passive movements and graduated activities. As the condition improves, as acute states pass away, as compensation becomes established, there will usually be found a time when it is not only permissible, but wise to direct greater activities, always watching the effects with practised eye, and permitting of no indiscretions—for therein the danger lies, not in the regulated movements. Finally there comes a third stage, when the patient is prepared either to take the matter into his own hands if he be of a resolute nature, and recklessly throw off the irksome restrictions imposed upon him for months or years, or on the other hand, to accept the embargo as laid upon his normal impulses and fall into hypochondriasis or invalidism. Here, more than ever, is the wisdom of the medical adviser tested.

It will be conceded that organic functioning is dependent in a great measure upon the maintenance of the normal anatomic interrelationships of the viscera. This is eminently true of the lungs, when rachitis or other cause has produced deformities of the thorax. Long protracted illness of any sort tends to induce faulty attitudes, and the growing bones and ligaments lose their normal adjustments. Disuse and inactivities emphasize this further. The heart and great vessels must share equally in the disability. Jacobi reports a case in which the aorta, by dislocation of the lungs, was bent upon itself, and the circulation thus seriously embarrassed. The narrowing of the thorax in rachitic children causes a crowding downward of all the abdominal organs, the liver and spleen are engorged, the kidneys frequently dislocated, and in consequence, readily diseased. Even in the absence of structural deformities, prolonged and enforced rest induces similar results.

So much for the picture, readily enlarged by each, of the need of symmetrical adjustment to secure full organic interrelations. This brings me to the first point to be striven for. By regaining the normal attitudes of the body the figure becomes well set up, the skeletal muscles and ligaments, when in good tone, hold and maintain the organs in such positions as will enable them to do their best work. Damaging contractures sometimes arise, not only in the ligaments, but also in the muscular coverings and intermuscular septa, in the connective tissues generally, and even in the skin and subcutaneous structures; these must be released and a greater flexibility secured. My experience, gained as a lecturer on massage and regulated exercises, for years past, has brought me in contact with a large number of highly intelligent operators and exponents of physical culture methods, and I am increasingly impressed by the remarkable results obtained by no other means through passive flexions, rotations and extensions and counterextensions, in not only improving tissue, but in repairing changes in the whole nervous system. In many conditions the lesser forms of central change seem thus distinctly benefited. Much larger improvement is to be expected from this than from the lighter forms of massage. General massage done in a massive and hurried fashion is capable of producing harm in conditions of acute or graver forms of heart disease. The form of massage to be recommended is a slow, gentle kneading, constantly supplemented by a picking up of

the tissues and separating them from contiguous structures increasingly. In dealing with the abdominal viscera this is a rule for constant observance.

In beginning with a case of heart disease of subsiding acuteness, while absolute rest lying down is still required, no harm can result and much good come, by employing the systematic procedures to be outlined. For a few minutes twice a day let the physician himself or a thoroughly trustworthy assistant direct the child to lie flat on the back without a pillow and hold itself very straight or horizontally erect, if the term be permissible, and with the arms extended like a cross, submit to gentle passive movements by the operator, one hand for counterextension on the trunk, the operator to pull outward the limb, gently rotating and revolving and vibrating; later, manipulating the tissues about the shoulders, hips and larger joints, and finally making some strokings inward, etc. By this means I have had repeatedly not only good immediate effects on digestive and other organs and on sleep, but tendencies to minor deformities are thus overcome. The circulation is thereby made more active in the muscles, the blood is invited to change in the viscera and move in a more complete cycle throughout the body.

As the condition of the heart improves gentle massage may be given to the limbs, and later to the trunk also, always slowly and gently and for a short period, preferably twice or thrice a day, with an increasing degree of force employed in the passive exercises. Then comes the time when forced breathing is of value, teaching the child to take long, slow breaths filling the lungs and giving exercise to the diaphragm. The diaphragm is a most important muscle, and can be taught to be used voluntarily. By its contraction the thoracic viscera are raised and lowered, and the abdominal ones moved as well. The effort at costal breathing produces many useful effects. The diaphragm along with the muscles of the abdominal walls can be trained to act as flexors as well as extensors, and compression as well as passive support can be exerted upon the organs. The act of forced costal breathing is of value in many directions, by expediting the oxygenation of the blood and the maintenance of the elasticity of the visceral structures, and is itself an exercise refreshing and of much efficacy. This is proved by those, such as singers and others, who practise it in lieu of greater muscle movements. I am told a sect in India allow themselves little other activity than deep costal breathing, and by this acquire not only much vigor, but a very handsome and symmetrical thoracic development. Certain it is, as clinical results show, that these and other voluntary movements of the abdomen result in improved cellular conditions.

To secure the best form of breathing it is important to teach the child to lift the shoulders and make them flexible by placing the clasped hands on top of the head and making repeated efforts at raising and lowering the scapular muscles. This draws up the ribs and the serratus muscles as well as bringing the long abdominal and dorsal muscles into play, and it is surprising how rigid these tissues will often be found even in such young subjects; in older persons it requires a long time to acquire freedom of action.

While still lying on the back active extensions of the limbs may be made in different directions, best with the hands extended firmly on the arm, as far out as possible, shoulders level, up and in front; the feet are next similarly extended until the heel reaches as nearly as possible in front. This produces a strain on the tendons which makes for flexibility not only all along the limb, but far into the tissues of the shoulders and the hips which if disused so rapidly grow inelastic. As the condition of the circulation improves the operator may meet these extensions by a certain amount of resistance and increasingly, always watching the effect on pulse and respiration, neither of which should be made to hurry. It is gratifying to note how much of this form of exercise may be employed without inducing hurried breathing or pulse rate, only both are amplified in volume most comfortably, and a sense of immediate wellbeing follows.

After a few weeks of these measures, and when the child is fit to be allowed up and to walk about a little, the exercises may be continued and varied in the sitting posture, which must be maintained a long time. The important movements are still the extensions and rotations, always slowly and firmly. The movements should involve little or no thrusting upward of the arms nor drawing of them back beyond the vertical line of the body, nor lowering or raising of the trunk. All movements should be natural postures in natural and usual directions but always accurately performed.

Many movements can be made with the neck to great advantage. Neck exercises seem simple and profitless to an active child, but much can be accomplished for healthful circulation of the head, brain and thorax by this means alone. Especially is this true where there is disturbed sleep. A hanging down of the head, with slow rotations first one way from 5 to 10 times, and then the other way the same number; a forward and backward thrust likewise repeated, and finally the rather difficult accomplishment of a side to side movement maintaining the vertical line of the face. All these tend to amuse a bedridden child of suppressed activities, and redistributes the stagnant blood in areas anatomically of the largest importance. Later a mild resistance can be offered with advantage to the head during the neck movements. Soon the eye will become brighter, the face cheerier, and living will become more tolerable and sleep deeper and sweeter.

In all conditions of weak heart and lungs, attention should be given to the muscles of the upper thigh and hips, where large muscular power resides, hence large oxygenation takes place, and these can be exercised cautiously, yet fully, without disturbing the respiratory or circulatory balance. These, in form, are first passive, then active, widening and contracting of the thighs either while lying or sitting, the feet resting on the ground and later resistance can be offered to a pronounced degree in perfect safety.

Finally it is feasible to proceed to more complex coordinating movements suitable for vigorous children, which it is needless to describe here.

In conclusion let me call attention to the fact that a close study of the suitability of such simple yet carefully estimated procedures will repay the physician, and the

patient may thereby escape a disabling degree of invalidism which too often results from degenerative changes in vital tissues during the progress of a life of enforced passivity.

PERIPHERAL VENOUS THROMBOSIS IN CARDIAC DISEASE, WITH REPORT OF A CASE.

BY

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In his article on "Thrombosis and Embolism," in "Allbutt's System of Medicine," published in 1899, Dr. William H. Welch called attention to the association of thrombosis of the peripheral veins with disease of the heart, and in a paper entitled "Venous Thrombosis in Cardiac Disease," published in May, 1900, in the Transactions of the Association of American Physicians, he has considered the subject more fully. Of the 28 cases, including 5 previously unpublished, reported in the latter paper, all but 4 were instances of thrombosis of the veins of the neck, arm and chest, the affection being in the vast majority of cases on the left side. It is this peculiar localization, in such marked contrast to the usual seats of venous thrombosis, as well as certain clinical and etiologic features, which lend especial interest to this subject.

Inasmuch as before the appearance of Dr. Welch's papers, this subject had received but little attention, and as the number of cases hitherto recorded is small, it is believed that the report of the following typical case will be of interest:

C. H. M., male, aged 46, has been for the past 10 years a saloonkeeper, and previously was a miner. There is no history of rheumatism or of venereal disease. Twelve years ago he had an attack of rightsided hemiplegia without aphasia, the onset of the paralysis being gradual during 24 to 36 hours. He was treated for this in a hospital in San Francisco, where he completely recovered in 4 months.

Before the attack of hemiplegia and since his recovery therefrom, he has enjoyed excellent health up to October, 1900, when he began to suffer from shortness of breath and slight puffiness of the ankles. He was treated, according to his statement, for "liver and kidney trouble," but with no improvement.

On February 3, 1901, he came under my professional care, complaining of symptoms referable to heart disease. His general nutrition was fair. The shortness of breath had increased to orthopnea and there was well-marked lividity. The dropsical swelling of the lower extremities extended above the knees and later there was edema of the genitals, the buttock and the abdominal walls. The abdominal cavity became so distended with serum as to embarrass the circulation and the respiration, and to necessitate relief by tapping. The appetite was capricious, the bowels irregular and the urine scanty, high-colored and slightly albuminous, without casts. No abnormality was detected in the liver or spleen.

There was no precordial bulging and the area of cardiac dulness was not markedly increased. There was a well-marked thrill perceptible on palpation at the apex, and a rough, presystolic murmur was audible, most distinct over the third left interspace, close to the sternum. Obstructive disease of the mitral valve was diagnosed.

The pulse varied between 96 and 112, being at times intermittent and at times irregular. The arteries were fairly well filled and elastic, without increased tension. The superficial veins of the upper abdomen, chest and neck were dilated.

There was a harassing cough, but physical examination of the lungs gave only negative results. There were frequent attacks of epistaxis, which at times was profuse. The temperature ranged between 98° and 98.6° F. Sleep was much broken, and at times there was mild delirium.

Six weeks before death there appeared the evidences of thrombosis of the left axillary, subclavian and internal jugular veins, with a possible extension of the thrombus into the left innominate veins. The onset of this complication was manifested by severe pain in the left arm, shoulder and supraclavicular region, accompanied by much edematous swelling in these situations. The swelling extended from the fingers to the shoulder and to the side of the neck on the left side. The skin here became livid, tense and shining, the superficial veins were dilated and areas of capillary stasis were present. The sense of touch was impaired. Motion, either active or passive, gave rise to excruciating pain. There was marked tenderness on pressure over the course of the axillary, the subclavian and the internal jugular veins.

The condition of the patient remained about as described for one week, when the symptoms referable to the thrombosis began to abate, and in the course of a month the improvement progressed to nearly entire disappearance of the edema of the arm and of the pain, only a slight tenderness remaining over the course of the plugged veins. The capillary circulation became good, although the superficial veins remained prominent.

During the whole course of the thrombotic attack the pulse-rate was not altered from its previous condition, and the temperature was not increased.

Notwithstanding this local improvement, the heart became increasingly incompetent, and on April 3 there was unusual weakness of the pulse, which was also intermittent and irregular. Edema of the lungs supervened, and the patient died 24 hours after the onset of these more severe symptoms. During the last 4 to 6 hours there was marked twitching of the left arm and leg. No other cerebral symptoms were noted. An autopsy could not be secured.

In its main features the case above described corresponds to the prevailing type of peripheral venous thrombosis in heart disease as described by Welch. The valvular lesion was mitral stenosis; the thrombosis appeared during broken compensation, and the location was the usual one—on the left side in the veins conveying blood from the arm and the neck. There was not only no association with rheumatism at or near the attack, but no history of rheumatism at any period. It is probable that the cardiac lesion was of long standing, as the attack of hemiplegia, 12 years before the final illness, seems to have been of an embolic character, although, of course, this is not certain. If the lesion dated so far back, it had evidently been well compensated for many years. The age and the sex of the patient are perhaps worth noting, as the majority of the cases analyzed by Welch were at a later period of life and of young women in whom mitral stenosis is more common than in men.

As there appears to be some diversity in the symptoms referable to this form of thrombosis in different cases, attention may be drawn to the severity of the pain and tenderness at the beginning and to the extent of the edematous swelling.

Undoubtedly the most interesting feature of the present case is the recovery from the symptoms referable to the thrombosis. This must have been attributable to the establishment of a sufficient collateral circulation, in spite of the great disturbance of the general circulation caused by the disease of the heart. Only 4 of the 24 cases reported and collected by Welch recovered, but he doubtless correctly attributes the gravity of the prognosis not

so much to the disturbance created by the thrombus as to the condition of the heart usually present when the thrombus makes its appearance. It is certainly of interest that a collateral circulation could be established under such unfavorable circulatory conditions as existed in my patient.

The twitching of the arm and leg which was noted during several hours just before death is perhaps attributable to the jugular thrombosis. In one of Poynton's cases, cited by Welch, there were cerebral symptoms and at autopsy cerebral edema, which were referred to the jugular thrombus. It may be that in the present case there was an extension of the thrombus at the last, or that with the rather sudden, extreme failure of the heart the cerebral circulation became so feeble that the preexisting plug without any further extension sufficed to set up cerebral edema or some local disturbance of the venous flow in the brain.

The questions concerned in the causation of this form of thrombosis have been discussed by Welch, and there appears to be nothing revealed by the present case which sheds additional light upon this aspect of the subject.

A HITHERTO UNDESCRIBED REACTION FOLLOWING THE INOCULATION OF VACCINE VIRUS. A PRELIMINARY REPORT.*

BY

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CASE I.—Mr. O. W., aged 50, German, was a sufferer from uricacidemia for a number of years. The paroxysmal attacks caused him great suffering and he underwent treatment by almost a score of physicians. He was referred to me by his last medical adviser on August 16, 1900. Learning that patient held a position in a brewery, I at once interdicted the use of beer and of other alcoholici, and prescribed for him, after repeated analyses of his blood and urine, an antilithemic diet and medicinal agents as potassium iodid and colchicum. One week's treatment ameliorated the patient's condition to a great extent, demonstrated not only by the absence of pain and the disappearance of the bloatedness so common in habitual beer drinkers but also by the increased blood alkalinity and the occurrence of uric acid in the normal ratio in the urine. He remained free from pain as long as he took the medicines. Discontinuance of the latter, even for but 2 or 3 days, although patient had meanwhile strictly adhered to the prescribed diet, inevitably brought back the gouty pains. In course of time it proved that colchicum alone would abate the attacks; finally colchicin in small doses was ordered and continued almost without interruption.

In December, 1900, on the occasion of the outbreak of variola in Manhattan, every employé of the brewery who had not been vaccinated for 5 years had to submit to vaccination by the brewery's own physician. Mr. O. was vaccinated (tertiary vaccination) with effect. On the seventh day, when he had moderate fever and felt himself quite indisposed, he dispensed with the administration of colchicin. The fever continued somewhat longer than normally, for about 4 days. For some reason or other the patient did not again start with the colchicin. In January, 1901, about 5 weeks after the vaccine inoculation, Mr. O. called on me and stated that he had not taken any medicine for a month past, and that he had since felt entirely free from pain. He also expressed the opinion that there seemed to be a relationship between his vaccination and the cessation of the lithemic phenomenon.

*Read at the meeting of the Manhattan Clinical Society, April 5, 1901.

This incident induced me to observe whether similar effects had taken place as a result of vaccination in other cases of lithemia and in kindred affections.

CASE II.—Mr. J. D. M., aged 50, American, who is under treatment for chronic interstitial nephritis, was for a time affected with severe paroxysmal pains of a neuralgic character in the region of the psoas and glutei muscles. Since his revaccination which was accompanied with considerable swelling of the axillary glands, in December last, he experienced no pain on any occasion.

CASE III.—Mrs. A. R., aged 48, American, is afflicted with diabetes mellitus. Various disorders of the peripheral nerves, especially spasmodic contractions of the muscles of the calves accompanied the underlying affection. She was vaccinated (secondary vaccination) in the beginning of December 1900; the vaccination took, but moderately; the patient, however, has not been troubled with cramps in the calves since that time.

CASE IV.—Mr. I. R., aged 43, American, has diabetes mellitus for the past year. The exclusive meat-fat diet to which he was subjected for almost 3 months caused uricacidemia or a kindred condition which was most marked in the ankles and toes. The subsequent diminution of the daily quantity of albumin- ingesta and the substitution therefor of carbohydrates was not followed by a cessation of the pains. These only subsided after patient had been successfully vaccinated (tertiary vaccination) in December, 1900. He experiences now occasional, but very slight contractions in the calves. These contractions are not troubling him at all; they are a concomitant symptom of the diabetic state and bear no relation to the pains prior to vaccination, which were of a decided gouty character.

CASE V.—Mrs. S. M., aged 45, German, diabetic, is subjected to chronic lithemia. In December, 1900, she was vaccinated with effect. Soon after the inoculation she felt herself free from pain and in spite of her obese condition could walk 3 or 4 miles without feeling tired. The gouty exacerbations have not recurred.

CASE VI.—Mrs. S. S., aged 26, American, obese, complained of distressing sensations in the muscles of the back, and of an intense tired feeling in the lower extremities. She was vaccinated (tertiary vaccination) in December, 1900. The vaccine process ran a somewhat anomalous course. On the ninth day after inoculation her body-temperature rose to 40.5° C. During the febrile period, lasting for almost a week, in which time she became much prostrated and suffered intense pain, radiating from the point of inoculation, the urine possessed characteristic pyrexia features with very high degrees of density. Before the complete abatement of the acute phenomena, the original muscular pains and the languor had already vanished. Mrs. S. had no distressing sensations since, and without exerting herself, is able to walk 4 or 6 miles daily, which she finds necessary to keep down her embonpoint.

CASE VII.—Mr. H. W., aged 32, German, obese, was affected with an unusually pronounced languor during the months of October and November, 1900. The condition seemed to be due to the hyperingestion of fruit, principally of apples and grapes. The large amounts of malic and tartaric acids thus introduced into the system did not appear to oxidize as readily as smaller quantities usually do. A lithemic or pseudo lithemic state was the result, of which the aforementioned lassitude was but a manifestation. He was vaccinated with effect in December, whereupon the lithemic symptoms were promptly dispersed.

CASE VIII.—Mr. A. M., aged 40, colored, suffered from muscular rheumatism upward of 4 months, when he was vaccinated late in December, 1900. The inoculation was successful. When a week later he remarked without being questioned that he was now cured of rheumatism. After another week the patient had gained in body-weight, and followed his usual occupation.

CASE IX.—Miss B. P., aged 38, Irish, was affected with arthritis for about 5 months. She was treated with salicylates and acids, and was ordered antilithemic diet; but, however, on account of the dampness of her place of employment, these means were of little avail. In January, 1901, she submitted to vaccination; the reaction ensued; at the same time the arthritic

pains had ceased almost abruptly. Two weeks later the pains had not returned.

CASE X.—Mrs. A. O. C., aged 54, colored, very obese, is subject to gouty diathesis. The exacerbations became so violent on different occasions that she had to resort to morphin. During her last paroxysm she was visited by a board of health vaccinator who compelled her to be vaccinated. The pains left her almost instantly and she feels very comfortable at the present day.

Prompted by the foregoing and some other similar observations, I tried to investigate whether the disappearance of gouty and kindred phenomena after vaccination in my cases was but an accidental occurrence, or whether vaccinia exerts a certain definite influence upon uricacidemia or other blood anomalies. For this purpose I vaccinated 2 male sufferers from lithemia. It is true, neither individual had undergone previous treatment for his affection, and it is quite probable that a rational therapy would have brought about cessation of the gouty manifestations. As so many were vaccinated during last winter's smallpox scare, the 2 young men had no objection to submit to the inoculation.

FIRST EXPERIMENTAL INOCULATION.

Mr. R. A., aged 32, German, complained of "jumping" pains in back and arms, of headaches, pain in thighs and on urinating. The experimental vaccination (revaccination) was effective; fever moderate; pains disappeared during the first week. He feels quite well at the present time. Occasionally he is troubled with slight cephalalgia, but this seems to be due to overwork and little sleep.

SECOND EXPERIMENTAL INOCULATION.

Mr. L. F. L., aged 24, suffered from pains in lower extremities, particularly in the ankles, and from occasional attacks of coccygodynia. Experimental vaccination (revaccination) was effected; elevation of temperature was not observed. The distressing sensations vanished completely. Patient feels comfortable now, but is affected with acne.

My experience as to the nature of the vaccinia reaction upon metabolic disorders, as uricacidemia, so-called, is as yet too limited to warrant any positive statements in this respect. That there occurs a reaction there seems to be no doubt; however, the literature on vaccination which I consulted does not dwell upon this or a similar action of the virus. It abounds, on the other hand, in the influences of intercurring acute and chronic maladies upon the process of vaccination and in anomalies which may be subsequent to the inoculation.

I have reported the foregoing cases in the order in which they came under my observation. No attempt was made to classify them according to their apparent underlying cause. Clinically speaking, the cases were such of uricacidemia, rheumatism and neuralgia. However, they all had one symptom in common—*pain*.

Inasmuch as the pain was relieved in every instance, we may assume that this amelioration was due to one and the same reaction, and we may further assume, that one and the same cause stands at the foundation of many affections, which are clinically differentiated between as gout, rheumatism and neuralgia. Thus the vaccine virus, or a modification of it, may become a factor in positive diagnosis.

The normal constituents of vaccine lymph hardly possess solvent or specific eliminating properties, and it seems that the reaction is a secondary or an indirect one.

The system in its endeavor to rid itself of the virus, develops increased oxidizing qualities. The diminished formation of incompletely oxidized meta- and catabolic products may be the consequence of the augmented internal combustion.

However, the direct causes of the painful conditions in my cases might not have been of metabolic origin after all. The same factors which had called forth the condition of uricacidemia may have prepared a proper soil for the development and propagation of *ectogenous* pain producers. If such is the case, that is, if the more acute manifestations are due to bacterial activity, then the reaction may be due to the influence of cytorhyctes variolae, the variola-vaccina sporozoa.

It does not seem probable that vaccination will afford relief of all pains simulating the gouty or rheumatic type. Besides, I cannot state whether the inoculation of the attenuated virus immunizes the organism but temporarily against the exacerbations of lithemia and kindred affections. As far as I could learn, pain and languor have not returned in a single instance. The patients are now free from aches and discomfort for from 3 weeks to almost 4 months.

The virus used in every instance, as far as I could ascertain, was manufactured by the Department of Health, of New York City. The reaction, which awaits confirmation by other observers, may afford us an insight into the genesis of at least *one* pathologic state.

In closing these remarks I wish to emphasize that there is certainly no intention on my part to introduce vaccination as a "specific" for all kinds of muscular and other pains, for it is not; neither is it my aim to recommend it as a prophylactic or a therapeutic measure against gout, rheumatism and affections of this category.

PREGNANCY COMPLICATED BY FIBROID TUMORS. CESAREAN HYSTERECTOMY AT EIGHTH MONTH.

BY
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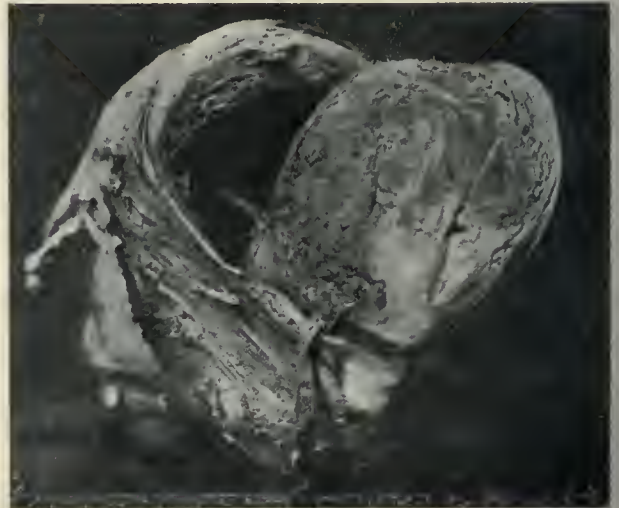
Operations upon the pregnant uterus (aside from Cesarean section) have only within the last few years been considered justifiable. Since the days of aseptic surgery these operations have become more common, and it seems wise, for the present, that all such cases should be published in order that the profession may arrive at just conclusions regarding this new branch of surgery. The following case might be called a Baer-Cesarean operation, since Baer's method of performing hysterectomy immediately followed removal of the child by Cesarean section.

L. H., age 33, born in North Carolina, colored. Her family history showed nothing of special note, except that one sister died of "quick consumption" at childbirth. She had been feeble as a child. Menses established at 18, and were regular and fair in amount, but she always had pain. Her last period occurred January 3 to 9, 1900. She had malarial fever at 18 years of age, and has had 2 attacks of grip since. In December, 1899, she first noticed a lump in left side of abdomen. This is the first pregnancy. She felt life in April, 1900. In May she

made an unsuccessful attempt to procure an abortion and was sick for a week with suppression of urine and cramps in lower abdomen. From the beginning of pregnancy she frequently had pain in right iliac fossa, increasing in severity of late. Digestion was fair, and bowels regular, but she says she feels very weak and has some palpitation. Limbs have never been swollen.

On physical examination these points were noted: Patient is tall and thin. Mucous membranes of good color. Cervical glands in posterior triangle enlarged. Respiratory murmur good. Heart: Apex beat in fifth interspace fairly regular, first sound booming and slightly roughened in quality; second sound accentuated. Breasts large and pendulous, nipples well developed, no colostrum. Abdomen irregularly distended by a tumor extending to a point midway between the umbilicus and the ensiform cartilage. The umbilical depression was effaced. Numerous hard masses could be felt, but it was impossible to distinguish the fetal parts with certainty. Fetal heartbeat heard on right side near umbilicus, strong, 150 per minute. No fluctuation could be found; percussion note dull over tumor. Uterus somewhat movable, especially in transverse direction.

Measurements.—Circumference at umbilicus, 84 cm.; circumference at iliac crests, 84 cm.; from symphysis pubis to umbilicus, 15 cm.; from umbilicus to ensiform cartilage, 18



cm.; between anterior superior spines, 22 cm.; between crests of ilia, 24 cm.; bi-trochanteric, 29 cm.; external conjugate, 20 cm. Vagina moist; no varicosities. Cervix uteri cannot be felt. A hard mass like a fibroid tumor in the posterior wall of the uterus filled the pelvic cavity.

Urinalysis.—September 11, 1900. Amount in 24 hours, 1,800 cc.; color, yellow; slight cloudiness; reaction neutral; specific gravity 1,008; no sugar; small quantity of albumin; urea, 22. Microscopically, epithelial cells, leukocytes and a few casts.

Diagnosis.—Pregnancy at about 8 months, complicated with multiple fibromyoma, so situated that a delivery of the child by the vagina was impossible.

Prognosis was of course grave, but there being no alternative, abdominal delivery was advised. The patient was kept under observation, and meantime, her general condition improved, as far as possible; but pain and increasing weakness soon rendered interference necessary.

Operation at N. E. Hospital, September 13, 1900. After the usual aseptic preparations, the patient was etherized, and an incision made in the abdominal wall from the symphysis upward about 20 cm. extending to the left of the umbilicus. The uterus was brought out through the incision, and gauze pads packed around it to protect the intestines. An incision was made in the anterior uterine wall from the fundus down, a little to the right of the median line in order to avoid a large fibroid on the left side. The child was grasped by the feet and lifted out; the cord was quickly clamped and cut, and the baby, cry-

ing lustily, was given to an assistant. The placenta and membranes were removed, and the uterus failing to contract properly on account of the numerous fibroids, an elastic ligature was applied around the cervix to control the hemorrhage. Further examination showed that there was no hope of saving any part of the uterus, and it was therefore at once removed, following Baer's method of supravaginal hysterectomy. There was no further hemorrhage, and after flushing the abdominal cavity with normal salt solution, the abdominal walls were united with layer sutures and the usual sterilized dressings applied.

The child was a male, well formed and developed, weight 5 pounds. In the beginning its temperature was low, but this soon improved after being wrapped in cotton and an electric pad placed in its bed. From the first it was fed artificially, but seemed to thrive well, and was later discharged in good condition.

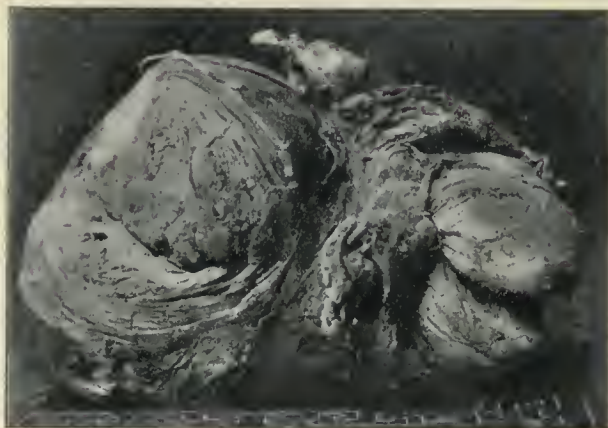
Examination of Specimen.—Placenta weighed 1 pound, and was attached to the right side of uterine cavity. Cord 37 cm. long. Uterus with both tubes and ovaries attached weighed 7 pounds. Largest circumference 65 cm. Diameter of cervix at point of separation from fundus 3 cm. In anterior wall of uterus an incision 20 cm. long just avoiding a large fibroid tumor which occupied the entire left side of the uterus, and was 15 cm. in diameter. Thickness of uterine wall in upper part 6 cm.; in lower part very thin, only 1 mm. Right side of the uterus contains several small tumors from size of English walnut to that of a large orange. One in the lower segment of this side specially prominent is 8 cm. in diameter. Attached to the left round ligament is a small tumor the size of an English walnut. All the tissues are very edematous. The cavity of the uterus was very small, hardly admitting a fist. The fallopian tubes and ovaries were apparently normal. Microscopically all the tumors are made up of fibrous and muscular tissue.

After-treatment.—The patient recovered from ether without nausea or any special signs of shock. Her first and only complaint was of severe pain in region of the heart. This was very persistent, and only yielded to repeated hypodermic injections of morphin. On September 14, the patient said she had slept very little last night owing to the pain in precordial region. The pulse is irregular, from 100 to 120 beats per minute. Digitalin and strychnia continued. Bowels moved freely after calomel and salts. Morning temperature 100°, evening 103°. On September 15 the patient was very restless and the cardiac pain still required the hypodermic use of morphin. Stimulants were used freely, but in spite of them the pulse is of bad quality, 140 to 160 per minute. Temperature is now normal. Considerable dyspnea. Normal salt solution was administered by hypodermoclysis. The next day the condition was about the same but the patient was very apprehensive. The temperature at 6 a. m. was 98.4°. On September 17 the patient was somewhat apathetic; the extremities were cold at intervals through the day. Pulse responds more slowly to stimulants. At 10.45 p. m. she became delirious and passed away on September 18.

Autopsy.—Body long and slim; rigor mortis marked. Medium layer of fat. Incision in median line of abdomen 20 cm. long, united by silk-wormgut sutures. Walls of wound well agglutinated; no signs of suppuration. Opening the abdomen the omentum was found covering small intestines, which were but slightly distended; a few drops only of serous fluid in abdominal and pelvic cavities. Peritoneum smooth, not injected; intestines free, and serous coat smooth. Stumps of broad ligaments and uterus covered by peritoneum, and sewed with fine silk sutures; no suppuration. Spleen small, surface smooth, cut surface normal. Liver not enlarged. Cut surface apparently normal. Left kidney small; capsule easily detected, cortex normal; right kidney same, except that capsule was adherent in one small spot. Stomach slightly enlarged; contained about 30 cc. of milky fluid. Intestinal m. m. smooth, not injected; contained small amount of same milky fluid as stomach. Lungs retracted, left apex attached by light adhesions, which were easily detached; 25 cc. bloody serous fluid in left pleural cavity. Surface of lungs smooth; upper lobes glued together. Pressure on cut surface gives exit to pinkish froth. No spots of induration in either lung. Bronchi empty. Mucous membrane smooth. In pericardial cavity small quan-

ties of bloody serum. Pericardial surface smooth. Heart not markedly enlarged. On removal of heart, blood emptied from the vessels. Mitral valves thickened, 1 of them shortened. Walls of left ventricle hypertrophied. One papillary muscle size of lead-pencil. Aortic valves soft. Right ventricle wall 2 mm. in thickness. Tricuspid valves thickened; 1 papillary muscle absent; cordae tendinae attached to wall of ventricle. Walls of right atrium not hypertrophied. Pulmonary valves smooth.

In reviewing the case one is naturally impressed by the important role played by the heart in the unfavorable result. The autopsy revealed the presence of an old endocarditis, and yet the compensation had been so good that I had laid no special stress upon the heart symptoms, even though there was a slight roughening of the first sound. The booming character of the pulse also was attributed more to the pregnancy being complicated by the fibroid tumors than to any special cardiac disease. We are so accustomed to meeting disturbed conditions of the heart in nearly all cases of fibroid tumors, sooner or later, that perhaps we do not give them the attention such symptoms deserve. Nevertheless, this patient was kept under observation for some time, and



special attention was given to improving her digestion and general condition. The bowels were regulated, the kidneys flushed and the diet carefully regulated. There was probably much less blood lost at the operation than during a normal confinement, as the rubber ligature applied to the cervix entirely prevented any bleeding, except during the very brief period of the extraction of the child. Neither was the ether narcosis unduly prolonged. However, the circulation was enough disturbed, together with the seemingly slight shock, to entirely derange the cardiac equilibrium, and it was this organ that gave us all the trouble afterwards. The bowels and kidneys were acting freely, there was no sepsis and the autopsy showed that all the other organs were healthy. The patient was not married and had no wish to live, and this fact may have helped on the general depression.

Imitation of Lemonade.—Judgment, with a penalty, was brought against William Park, of New York, for selling "Eiffel Tower Lemonade" under pretence that it was manufactured from concentrated lemon juice. Chemical investigation showed that the concoction was but a simulation of lemonade, containing 49% of tartaric acid, 44% of cane sugar, 2% of water, and 5% of coloring matter and oil of lemon, the latter being the only portion of the mixture that actually came from the fruit.

ON THE USE OF ALCOHOL IN TREATMENT OF CARBOLIC ACID BURNS AND POISONING.

BY

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of Union Hill, New Jersey.

Author's Abstract of a paper read before the North Hudson County Medical Society, February 21, 1901.

The first experiments by which it was shown that the local caustic action of carbolic acid was arrested or prevented by prompt application of alcohol were made by S. D. Powell and A. M. Phelps, of New York. Powell¹ in 1894 ascertained that in 95% alcohol he had an antidote to carbolic acid and he since used it in treatment of carbolic acid burns. Powell reports also a case (loc. cit.) where alcohol was used internally in carbolic acid poisoning. He demonstrated his discovery in front of his class, filling his mouth with pure carbolic acid and allowing it to remain 30 seconds; he then filled his mouth with pure alcohol, and suffered no bad results whatever. I have made a similar experiment with the same good result, taking 1 drachm of a 25% solution of carbolic acid into my mouth and waiting 30 seconds for the acid to burn. The pain was instantly relieved by 80% alcohol; no symptoms of any kind remained, but the carbolic acid taste. Even with a magnifying mirror I could not see any anatomical changes. Desirous to convince myself also of the practical virtue of alcohol in more intensive burns, I rubbed some *pure* carbolic acid with the glass-stopper of the bottle into the skin of the dorsal part of my right hand, being sure to cause at least a local dermatitis. *Two minutes* afterward I bathed the injured skin with 80% alcohol, which relieved the pain immediately, leaving, however, a hyperaemia of the hypodermic capillaries. I applied the alcohol again 5 minutes later, and once more 10 minutes after the second application, by which time the burning sensation had all gone and there was only a reddish color of the injured skin left to indicate a very slight inflammation. I may also mention the fact that I have always had a personal idiosyncrasy against carbolic acid.

A personal experience is also reported by George W. Sargent, of Seneca Castle, N. Y.² Mistaking the bottles, he poured carbolic acid instead of alcohol over his hands previously cleansed, but remedied the mishap at once with alcohol. Phelps states positively³ that we have in alcohol an absolutely safe and sure specific against the escharotic action of pure carbolic acid. A revision of the literature convinces me that this fact is better known than the power of alcohol as an antidote to carbolic acid poisoning, which is well worth recommending, as proved by the following few cases, the only ones reported in literature.

D. H. Galloway: "Strong carbolic acid, used by mistake as a throat spray," relieved and cured by alcohol and water.⁴ Herman Klein, of Chicago,⁵ besides two other cases of external application of carbolic acid, reports one case of poisoning (young woman swallowed 2 ounces of carbolic acid) treated and cured by large doses of alcohol. The *first report* of a case in which alcohol was tried as an antidote *internally*, and which proves beyond

any doubt the life-saving action of the latter, was made by H. Rodman.⁶ The case occurred in New York as long ago as December, 1899, to a woman 60 years old, who swallowed about 2 ounces of pure carbolic acid, and very shortly afterward was given by H. Rodman 4 ounces of strong alcohol, 3 minutes later the contents of the stomach being washed out with warm water. The washing was then repeated with diluted alcohol and the usual methods were employed for combating shock. Under this treatment the patient, although of extremely low vitality, had in an hour and a half been relieved of all urgent symptoms. Magnesium sulfate was then ordered, to be given every 4 hours, and mucilaginous drinks constantly. On the fifth day the patient was again in her normal condition. From his observation Rodman draws the conclusion that alcohol exerts a specific action in overcoming the physiologic effect of carbolic acid.

Aroused by Rodman's splendid results, I made use of the first accident case that came under my observation to try the "new treatment," having had many disappointing experiences with the old method.

December 31, 1900, at 8 o'clock a. m., I was called in a great hurry to see Anna K., 3½ years old, who had been given a table-spoonful of pure carbolic acid instead of medicine, swallowing at least 2 drams of the poison, the mistake not being noticed until the most alarming symptoms set in. When I arrived, about half an hour after the accident had happened, I found the child completely unconscious, no conjunctival reflex, etc. No vomiting had occurred. Breathing stertorous, pulse feeble, thready. Temperature apparently normal (no thermometer was used). Lips cyanotic, extremities cold. No burns in the internal mouth, only an eschar on the lower lip and chin. By means of a stomach tube I introduced 3½ ounces of absolute alcohol. While a hot bath (100°) was being prepared, I administered strychnin, 1-60 grain, twice hypodermically. The patient was then bathed for a quarter of an hour, the water being kept at 100°, and cold water compresses being placed on her heart at regular intervals.

This treatment was followed by a noticeable improvement immediately, the conjunctival reflex returning and feeble sounds being muttered each time when the cold compress touched the skin. Breathing grew clearer, the heart's action stronger. I then had the child brought to bed and hot water bottles put at her feet. At 12 o'clock, the time of my next visit, I found little change, the alcohol apparently having done its work and thrown the child into a regular stupor. Consciousness had not returned; the pulse, however, had become rapid, fuller and more frequent. The child had had 2 convulsions. Milk had been forced into her throat against my warning not to feed her. I made an infusion, hypodermically, of 1 pint of physiologic salt solution.

At 3 p. m. the child regained some consciousness, and called, "Mama," her eyes seeking for the mother. I prescribed milk of magnesia, directing the nurse to give very carefully 1 table-spoonful every half hour. At 5 o'clock, when I returned, the temperature had risen to 104°, the pulse to 136. The child talked in a delirium and was a little restless. Breathing stertorous. At 7 o'clock, temperature 106°; pulse, 150; respiration, 44. Prognosis letalis.* Child died at 11 o'clock p. m.

The case cited and all the cases known corroborate the fact that alcohol is a specific against the escharotic action of pure carbolic acid. Comparing my case of poisoning with the few cases reported in literature the question arises: Why did I fail to save the life of my patient? I arrived too late. Twenty-five to 30 minutes had been

* According to the best information, "letalis" is spelled without an h, being derived from the latin form "letum"—death, and not from "ἄλγηθῆ"—oblivion.

ample time for the carbolic acid to be almost all absorbed and introduced into the circulation. I have seen a 29-year-old patient die within 15 minutes after a rectal injection, by mistake, of 1 quart of a 2.5% solution of carbolic acid—equal to 25 cc., or about 1 ounce of pure carbolic acid—without having the slightest chance to prevent the fatal termination. Had I then known of the antidotal action of alcohol I might have saved my patient's life, although the mistake had not been noticed before alarming symptoms set in. Such an experience will explain the impulse that prompted me to embrace the only possible opportunity toward a successful treatment in the case I reported.

The conclusions from my case are: Although the amount of carbolic acid left in the stomach and intestine when the alcohol came in contact with it was rendered harmless, and the general action of the already absorbed poison was checked immediately, enough carbolic acid had already been allowed to exert a disastrous action. Further experience must show if in such cases, where the pathologic effect of the absorbed acid cannot be (*sit venia verbo*) "neutralized" any more, an excess of alcohol might not be a new danger for the patient. I would advise under similar conditions not to repeat the doses of alcohol if it has no chance to exert its specific action, by lack of a corresponding quantity of chemically unchanged carbolic acid in circulation.

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- ³ Discussion of Powell's paper, read before the Medical Society of the County of New York, February 27, 1899.
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Rabies in Berlin.—In Berlin no case of rabies has been known since 1873, when a law was passed requiring the compulsory muzzling of all dogs during the entire year. This was done because experience showed that the decrease of danger during the winter months was not sufficient to warrant a relaxation of the law, as January furnished as many cases of rabies among animals as August.

Smoking Rendered Harmless.—A surgeon General of the German Army is reported to have treated tobacco leaves with tannin and a decoction of *Origanum Vulgare* before they were made into cigars, and by this means so transformed the contained nicotine as to render it harmless to the human system. Experiments were made upon persons having aversion to tobacco in any form and these smoked 3 cigars in succession without experiencing any inconvenience, without alteration in pulse, breathing or temperature.

Method of Preparing Virus in the Berlin Pasteur Institute is described by Joseph B. Greene, of the United States Marine-Hospital Service. "The virus is prepared by inoculating rabbits subdurally with virus. At the end of the eighth day of the disease the rabbit is killed and the spinal cord secured under the strictest aseptic precautions. A small piece is always placed in bouillon to test its sterility in case the animal should be infected with tubercle bacilli or other dangerous organisms. Then the spinal marrow is suspended by strings in closed jars containing potassium hydroxid for the purpose of drying. The longer it is allowed to remain in the desiccating jar at a temperature (20° to 23° C.) the less virulent becomes the marrow. Pasteur considered that after 14 days' drying, the marrow became avirulent. Treatment as a rule begins with the attenuated virus and increasing its virulence till the termination of the treatment, which continues for 19 to 21 days, depending on the severity of the case. The head cases are always considered the most serious, and bites occurring under protected clothing are the least serious. A piece of the spinal cord 5 cm. in length is emulsified in a mortar, and from his 2 cm. is administered hypodermically. As a rule, 1 dose is given daily, though when it is urgent to get the patient immunized as soon as possible, it is administered twice daily."

SPECIAL ARTICLE

THE MISSION OF A MEDICAL COLLEGE.*

BY

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Twelve years ago I had the honor of delivering the introductory address at the opening of the session of the Jefferson Medical College. I took as my topic the "New Era in Medicine, and its Demands upon the Profession and the College." In it I pointed out the demands which this new era in medicine made on our medical colleges. Today I purpose supplementing that address by considering an allied topic, "The Mission of a Medical College."

A mission is defined as "that with which a messenger or agent is charged," and I find in Webster an apt illustrative quotation from Milton:

"How to begin, how to accomplish best,
His end of being on earth and mission high."

There are missions for individuals, as for Columbus, Washington and Lincoln, and in medicine for a Vesalius, a Jenner and a Lister. There are missions for nations, as for the Hebrews in religion, the Greeks in art, the Romans in law, England and America in civil and religious liberty. But there are also missions for institutions, especially for institutions of learning, such as the Universities of Bologna, of Oxford, Edinburgh, Harvard, etc. Has not the Medical College a mission? If so, what is its nature and how is it being accomplished?

The mission of institutions of learning, among which may be classed the medical school, is threefold: First and foremost the development of the character of its students; secondly, the education of its students, and, thirdly, the encouragement of original research.

First, the development of character; that is "the sum of the moral and mental qualities which distinguish an individual viewed as a homogeneous whole." The school which instructs the intellect, but does not develop the moral character of its students, fails in its most important duty. "Intellect alone is cold, heartless and selfish; it must be lighted up by moral and spiritual principles to reveal its beauty or fulfil its high mission."

Character is partly the result of heredity and of environment. Those who are so fortunate as to possess parents to whom they can look up with reverence, even after they have passed away, are most happy. They have had a training which nothing else can supplement. The environment which they have had at home and the subtle influences of the family life will influence their whole subsequent career. The preliminary education which they have had, the physical health with which they have been endowed, the mental stimulus that they have received from their parents, all these count for much. Then there are undoubtedly individual differences; for example, the slothful, the vicious, the brave, intelligent, hard-working and virtuous. It would be a trite saying to assert that the last are those who will win the prizes in the struggle of life.

But when a young man has left his home and enters the medical school, he comes under a different set of influences, partly from his fellow-students, but chiefly from his teachers. He is moved by their example, observes their industry, acknowledges their ability and recognizes their success in life as due to a sturdy character which in turn develops the character of the student. The College is a center for those projectile moral forces, which once set in action, prolong their effects for many years afterward in well-nigh every student. We can

*Address delivered at the Seventy-sixth Commencement of the Jefferson Medical College of Philadelphia, May 15, 1901.

point for example in this school to the splendid and forceful lives of a McClellan, a Duglison, a Gross, a Pancoast and a Da Costa, whose influence on the character of hundreds and even thousands of men all over the world tells for the best and the highest ideals in medicine.

Not that which one learns in a medical school or in any other educational institution is of the most value. The *methods* he learns rather than the *facts* which he acquires; the high ideals which are instilled into him rather than the low cravings for a mere sordid success—these are the things which are of value and develop most the character. To do one's level best every day with every patient and in many cases without hope of fee or reward save the sense of duty done, the inspiring influence of success in the constant and irrepressible conflict between good and evil, life and death, this is what is of more value to the student of this and every other college than the mere information which he has acquired. It is not given to everyone to occupy a conspicuous place, but every one of you in your sphere, humble though it may be, can do your daily duty faithfully and truly, and if you do this, if you develop a high and noble character, even though your sphere be humble, when you lay down life's burdens the Great Master may well say to you, "Well done, good and faithful servant." Character depends not on the sphere, but on the person, not on the greatness of the opportunity, but on how the opportunity is met. Let me quote a portion of the justly-celebrated oath of Hippocrates to show you away back in the fifth century before the Christian era how well the Father of Medicine met his opportunity and set us an example we will may follow:

I will "reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring on the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked, nor suggest any such counsel. . . . With purity and with holiness I will pass my life and practise my Art. . . . Into whatever house I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption. . . . Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the Art, respected by all men in all times! But should I trespass and violate this oath, may the reverse be my lot!"

The second mission of a medical school is education. In the address already alluded to, I pointed out in considerable detail the enormous and rapid strides which had been made in medical education in the last 30 years. It is especially gratifying that the progress made has not been only in medicine proper, but largely in the preliminary education which is required of medical students of to-day. The better educated men you are at starting, the better educated men you will be at the finish, and, as a rule, the greater your success. But along with this better preliminary education in order to meet the enormously increased demands of a modern medical education, a college must furnish facilities which were not in existence 30 years ago, but are absolutely indis-

pensable now. Let us see how the demand has been met:

The former methods were limited to lectures and textbooks. The spoken word, in my opinion, is of the greatest importance. Fresh from his everyday contact with disease and death, an impressive, ardent lecturer exerts a powerful influence which nothing else equals. His flaming words awaken enthusiasm and stamp his ideas on his students. But this alone is quite insufficient for our purpose. It must be supplemented by your textbooks. In them is garnered the knowledge of the past and the present. This is indispensable as a starting point. As there were brave men before Agamemnon, so there were great surgeons before Gross. They were men with few of our artificial helps, but they had eyes and ears and fingers to observe with and common sense and sharp intellects to utilize their stores of accumulated facts.

But the knowledge of other men which one reads about is with difficulty made part and parcel of our intellectual bone and muscle. We must do more than this. We must develop individual observation and individual, personal knowledge. This is done in the modern medical school in 2 ways relatively new.

The most striking change in modern medical education is the introduction of the laboratory. There the medical student has his powers of observation developed by his teachers in approved directions and trained and filed to a fineness by careful personal investigations. There he learns not what others have done, but what he himself has done and sees the results that he himself has accomplished. Yet, when I began the study of medicine in 1860, there was absolutely no laboratory connected with the Jefferson, or any other medical college, with the exception of the dissecting room, that is the laboratory of anatomy. Now we have eleven laboratories, through each of which every student passes, and there learns to observe for himself and think for himself. That was a very brief, but pregnant reply of Huxley to a querulous correspondent, a reply which epitomizes the value of knowledge acquired for one's self by actual personal investigation. "Take a cockroach and dissect it."

The other relatively new method is the clinical; that is to say, each individual student is not taught as formerly only didactically the symptoms of disease which he must memorize, and the treatment which, very likely, he will forget, but in small ward classes he is made to examine as many patients as possible for himself, elicit the family and the personal history, institute a physical examination, percuss, auscult, palpate, and by the most approved clinical methods discover the nature of the existing ailment, understand its pathology, comprehend its symptoms, and suggest the proper treatment, all by the exercise of his own brains. Contrasting the exclusively didactic methods when I was a student with those of today, which are so personal and individual, the difference is almost that of darkness and of light. Surely, the Jefferson Medical College, which has tripled the length of its course of instruction and quadrupled the means and the thoroughness of instruction, is fulfilling its mission.

Yet, any medical school which is content with its present methods of fulfilling its mission, has at once fallen from its high estate. If it does not advance to newer methods, to better methods, to more exact methods, it is left behind in the march of progress. The whole history of the wellnigh fourscore years that the Jefferson Medical College has existed shows that it has constantly made progress to these better and better methods. That the next half century will witness a still greater progress, who can doubt?

The third mission of a medical college is to encourage original research. Teaching existing knowledge is very well and for the student is the chief end or final cause for which a medical college exists. But the medical

school owes a duty to the profession, to the public and to the cause of science. This duty is constantly to add to our present knowledge, to solve the riddles of disease, to answer the questions which are ever arising in the human mind as to our animal existence, with all its disorders and accidents and our mental capacity and its disturbances, and persistently and intelligently to improve our means and methods of treating these deviations from the normal. We must restlessly and continually enlarge the boundaries of knowledge if we desire to make progress—and where in the quest for additional knowledge, should investigation and original research be so likely to find a congenial home as in the very institutions where the present state of knowledge is exhibited from day to day, where teacher and pupil, conscious alike of the limitations of our knowledge, long for a better and a wider view?

The characteristic of the past century, which Wallace has so well described as the "Wonderful Century," is that of original research and the consequent growth of every department of human knowledge. Witness the enormous progress in our means of transportation on land and water for social and commercial purposes; witness the wonderful development of our manufactures from the invention of the steam engine, the sewing machine, the cotton gin, the various electric devices, such as the telegraph, the telephone, the trolley car, and the dynamo; the fast printing press, the improved processes for making iron and steel, and a hundred other instances which occur to you in a moment.

All these, mark you well, are the result of the searching, persistent careful work of the scientific student in the laboratory. They are not accidents, they have followed in the wake of the discovery of the laws of dynamics, of electricity, of chemistry. First came that which was pure theory, then the practical application for the welfare of the world.

Nor has medicine lacked during this wonderful century. We have seen the introduction of vaccination, of anesthetics, of antiseptics, which three, as with a besom, have swept into oblivion a large part of the disfigurements, pain and death which ravaged the race in former centuries; of the serum treatment of disease, which has gone so far to put an end to the hecatombs of the victims of diphtheria and its congeners. Pharmacology has given us so many new drugs that our prescriptions differ as the antipodes from those of 100 years ago. Bacteriology has revealed the actual causes of many diseases and still better, has shown us how to protect mankind from their invasion. Chemistry has given us new and efficient methods of sanitation, which have wonderfully prolonged human life. The microscope has laid bare to us the processes of disease; the blood has yielded up at least some of its secrets; the examination of the secretions now warns of unsuspected dangers. We can see the spectral forms of the bones and even the beating of the heart and other viscera by the x-rays, and instruments of precision have enabled us accurately to weigh and to measure, where before we only vaguely guessed.

In view of this enormous progress, it may be asked whether there is anything left to be discovered. To this it may be replied, that, if, starting with their poor equipment, our sturdy fathers made such immense forward strides, shame upon us, their degenerate sons, if, with our rich inheritance, we cannot outdo them and solve many of the enticing problems by which disease beckons us onward into the realms of the unknown; if there are not among us other Jenners, and other Listers, and other Röntgens, to make the twentieth the most illustrious of the centuries.

What a boon will be conferred upon humanity who discovers the cause and the means of cure of those curses of the race—cancer, sarcoma and other tumors, of syphilis, typhus fever, rheumatism and gout, scarlet fever, mea-

sles and even who can tell?—a panacea for old age and all its present evils!

Other triumphs, too, in wholly unknown and unsuspected realms await the patient, persistent investigator. These triumphs will be won by close observation at the bedside and by indefatigable investigations in the laboratory. To me the most encouraging sign of the times in medicine is the enthusiasm with which the laboratory has been welcomed, not to replace, but to be the handmaid of the clinician.

In this country our medical schools have not been wanting in their duty. I need but to point to the many laboratories now in actual daily use, not only in facilitating the instruction of the student, but in training up skilled assistants who, within the next few years, will be in the van in making new discoveries of the utmost importance to the well-being of mankind.

But all this means more buildings, enlarged equipment, more men, more money. Whence are all these to come? The student cannot pay increased fees at all commensurate with the increased expense of his education. The older methods, where 1 man lectured to 200, 400, or 500 men at once have been replaced by a method of instruction which requires the training of small classes of 20, 15, 10, or even 1 or 2 men by a single teacher. In other words, our modern methods have wholly changed from general instruction given to large classes, to individual instruction of smaller classes and often even of single students. As Harvard, Yale, Princeton, Brown and all other universities are clamoring for increased endowments for just such enlarged work and are getting them, just so the medical school must have increased funds for providing facilities for instruction and research, and especially must have endowments by which these hitherto unknown expenses can be met.

I have indicated the mission of the medical school and have shown that it is being splendidly fulfilled. Is there no corresponding mission also for the community? Shall it be, can it be, that these ardent teachers and these faithful students shall valiantly struggle on in the endeavor to solve the problem how to transmute sickness into health, how to avert the dire effects of accident, how to say to death, "thus far and no farther," and the community stand aloof, apathetic and indifferent, absorbed in business, forgetful that sickness and sorrow will sometime inevitably come to them? Remember that sickness and sorrow can only be averted by the highest skill, the greatest learning, the wisest judgment, all founded upon knowledge gained in these expensive laboratories and in these great hospitals which train the men who are to minister to you in the time of peril.

Citizens of Philadelphia, to you we must appeal. Yonder College and Hospital, as I have told you, are fulfilling their "mission high," but are sorely hampered for want of larger means. Every week we have to refuse worthy sufferers for want of a larger number of beds in a constantly crowded hospital. You can give them to us. We need endowments for Professorships, for Fellowships and Scholarships. You can give them to us. By your gifts and your bequests you may make possible the fine ideals which we hope to realize. We have the men, men of brains, of education, of industry, who are longing only for the opportunity. If you but knew as I know how earnest, how intense, how consuming is the longing in these very young men before you to do their level best, if you only give them the chance! Must we Americans, we Philadelphians, say them nay for want of such encouragement and of such gifts? I do not believe it. As in your hours of sickness you trust implicitly to us, so in your hours of health and wealth we trust implicitly to you, and I know we shall not trust in vain.

The New York State Hospital for the care of crippled and deformed children was opened May 17.

PRACTICAL THERAPEUTICS

Under the charge of

A. A. STEVENS,

Assisted by

L. F. APPLEMAN.

Treatment of Dysentery.—Potilor (*Les Nouveaux Remèdes*, xvii, No. 2) recommends ichthyol enemas in the treatment of dysentery. A dose of castor oil should be taken at the start, and injections, consisting of 6 drams of ichthyol, dissolved in about 27 ounces of water, are then given every other day. The liquid must be made to reach as high up in the intestine as possible. The pains disappear very rapidly under this treatment, and all other symptoms disappear.

Alcohol as a Disinfectant.—Bertarelli (*Revue d'Hygiène*, January, 1901) has found that the best results are obtained with alcohol as a disinfectant. When it is used in 50% strength, its power diminishing with either weaker or stronger solutions. A 20% strength was more active than 25% strength, and both than 99%. The drug has practically no effect on spores. Alcoholic solutions of corrosive sublimate, carbolic acid and zinc sulphocarbolate were more effective the less the amount of alcohol in them.

Diabetes.—Van Noorden (*Deutsche Praxis*, No. 1, 1901) believes that jambul is of some value as a general remedy. In some cases when it is necessary to increase the amount of carbohydrates in the diet the glycosuria may be held in control or even diminished by the use of sodium salicylate or aspirin. Carlsbad water, especially warm, acts favorably, particularly on the dyspeptic symptoms. The salicylic compounds exert a favorable influence on the pruritus, bronchitis on the nervous phenomena—insomnia and palpitation. Opium should be given when severe neurotic symptoms develop from the enforced diet. Antipyrin is efficacious in diabetic neuralgia. Bismuth is useful when there are intestinal disturbances. Salicylates, particularly thioform, have given the best results.

Iodin in Tuberculosis.—Flick (proceedings of the Philadelphia County Medical Society, March, 1901) states that foremost among the drugs which empirically have been found to be useful in tuberculosis are the iodine compounds. He believes that inunction with a solution of some of the rich iodine compounds has increased his power to deal successfully with tuberculosis fully 50%. The iodine compounds which may be used by inunctions are iodoform, europhen, iodol, and aristol. All of them are soluble in olive oil and cod-liver oil, and all break down readily, thus giving off their iodine. The richest of them is iodol, which contains 89% of iodine, but unfortunately it breaks down very readily, and is apt to decompose before it can be used by the patient. After considerable trial he has discarded it for europhen, which in solution will hold together for some weeks. He uses these iodine compounds by inunction because they give in this way an even, continuous effect, without deranging digestion.

Treatment of Tuberculosis by Sodium Cinnamate.—Mann (*Philadelphia Medical Journal*, December 1, 1900) uses intravenous injections of solutions of sodium cinnamate in tuberculosis with encouraging results. The healing processes are quickened when they are sluggish or totally inactive in some, though not all, of the cases. The beginning dose is $\frac{1}{16}$ to $\frac{1}{8}$ of a grain, which may be gradually increased to $\frac{1}{4}$ or $\frac{1}{2}$ of a grain, but this should rarely be exceeded. Under careful aseptic precautions the author has not had the slightest infection in over 800 injections. Marked drowsiness has been noticed after its use in a number of patients. This does not appear until 10 or 12 hours after the injection and usually disappears in 24 to 30 hours when moderate doses have been given. After generous doses, in severe and febrile cases, a slight rise in temperature has occurred within 24 hours. In the author's experience it has usually not exceeded a degree or a degree and a half.

Treatment of Acute Dysentery.—Cruikshank (*Journal of the American Medical Association*, January 5, 1901) believes that magnesium sulfate is as nearly a specific for dysentery as quinin is in malaria, or mercury and potassium iodide are in syphilis. It should be given in dram doses every 2 hours, dissolved in a very little water and mixed with a little aromatic sulphuric acid. This should be continued from the beginning of the attack until there is a subsidence of the symptoms. When the stools have become nearly normal the medication may be gradually withdrawn. The average duration of the disease under this treatment is from 3 to 7 days. The writer's conclusions are: (1) Dysentery is a disease of great gravity; (2) it is both contagious and infectious; (3) it is caused by the introduction into the system through food and drink, and also through the air, of a specific microorganism the identity of which seems still in doubt; (4) dysentery is one disease in whatever latitude it is found, and the only varieties are those based on the intensity of the morbid process; (5) the therapeutic agents suggested for the treatment of acute dysentery are useless and harmful. Magnesium sulfate acts as a specific.

Local Use of Guaiacol in the Treatment of Frequent Painful Urination.—Hawes (*Journal of the American Medical Association*, December 29, 1900), recommends guaiacol for the treatment of painful urination in those cases in which the cause of the symptom is located in the extreme inner portion of the urethra, usually in a space $\frac{3}{4}$ to $1\frac{1}{2}$ inches external to the urethrovesical orifice. The author believes that disease of the deep urethra is usually mistaken for cystitis or "irritable bladder" and a careful diagnosis should be made. An ordinary urethral speculum should be passed through the deep urethra; any mucous or blood should be mopped away with absorbent cotton on the end of an applicator, until the mucous membrane is dry, after which guaiacol is applied to the area by means of another applicator tipped with cotton. Guaiacol acts as an anesthetic and mild stimulant. It gives rise to much less pain than the usual local application. No strangury results, and the urine will often be retained for hours after the application. The perineal and suprapubic discomfort is lessened after a few hours, in many cases, and when this application has been made at intervals of from 5 to 10 days, it has given more satisfaction than any remedy previously used. Twenty per cent. of the author's patients have been cured. About 70% are markedly improved. Some cases which would seem to fall within our field have not improved. If applied every day or 2 it will produce local tumefaction which causes a diminution in the size of the urinary stream; this tumefaction passes away in a few days.

The Antiseptic and Serum Treatment of Pernicious Anemia.—W. Hunter (*Medical Press and Circular*, April 3, 1901) reports the following case. The patient was a man, aged 37, suffering from anemia of 2 years' standing. On admission he was very anemic, fairly well nourished, the skin being of a lemon color. The teeth were markedly carious. The urine contained urobilin. The red blood-cells were altered in size and shape, numerous nucleated corpuscles were present. The hemoglobin was reduced to 35% and the corpuscles were reduced to 1,500,000 per cmm. The treatment consisted of an antiseptic mouth wash, 30 minims of the solution of mercury perchlorid as an intestinal antiseptic, with ammonium carbonate (gr. 3) and tincture of digitalis (mx 5) as a stimulant, and 4 injections (within 3 weeks) of 10 cc. of antistreptococcal serum. After 5 weeks' treatment there was an increase of 40% of red cells and 37% of hemoglobin. Six months subsequently he looked in robust health, and the red corpuscles numbered 4,550,000. The author believes that pernicious anemia is a chronic infective disease of septic origin, and that it is the result of a special infection of the mucosa of the digestive tract, especially of the stomach, frequently also of the mouth and of the intestine.

In their order of importance the following are the lines of treatment to be followed out: (1) Oral antiseptics. Complete in its character, both with regard to diseased teeth, irrespective of any absence of pain or discomfort such teeth may be causing,

and to the special lesions of the tongue; (2) gastric and intestinal antiseptics, in effecting which removal of the oral sepsis is one of the most important measures to be carried out; (3) arsenical treatment, of whose great value there cannot be a doubt. For the improved prognosis with regard to the disease—the average duration being now in my experience some 3 years—the use of arsenic deserves, in my judgment, the credit. It is no less certain, however, in my experience, that arsenic alone cannot permanently arrest the disease; (4) antitoxic treatment, with the hope of thereby antagonizing the poisons within the blood responsible for the hemolysis.

Treatment of Infantile Eczema.—Kistler (*La Médecine Moderne*, January 30, 1901) employs the following ointment to relieve the itching of infantile eczema:

R	
Salicylic acid	15 grains
Bismuth subnitrat	4 drams
Powdered starch	1½ drams
Cold cream	2 ounces

Calomel, in the dose of 1 or 2 grains, is indicated from 1 to 3 times a week, to aid in the elimination of pathologic products.

Vaginal Douching in Obstetrics.—Wadsworth (*American Journal of Obstetrics*, April, 1901) advises the avoidance of douching in obstetrics unless it is particularly indicated. Antepartum douches frequently fail to remove pathogenic bacteria when they are present; they destroy the natural protection of the vagina; they are liable to cause slight injuries to the vaginal wall through which infecting bacteria may gain entrance into the body; and finally, pathogenic bacteria may be introduced by these manipulations. The routine management of cases should be freed as far as possible from all procedures which interfere with the natural resources of the body; for these, in the vast majority of cases, are sufficient protection against the invasion of pathogenic bacteria. In the few exceptional cases requiring interference, this should be determined by the bacterial examination.

Lupus Vulgaris Successfully Treated with Ethyl Chlorid.—Dethlefsen (*Treatment*, April, 1901) reports the following case: The patient was a girl, aged 29, suffering from lupus of 12 years' duration. The ulceration involved a large part of the nose and left cheek. The treatment consisted in a thorough freezing of the affected parts, but without previous scraping. During the first week the freezing was done daily; later every second or third day; and toward the end of the treatment once or twice a week. Each freezing was followed by a great rush of blood toward the affected part. Serous transudation followed and formed a crust. This crust was removed before the next freezing, but only so far as it could be done without lacerating the parts. After 10 weeks' treatment there was complete restoration of the skin without the slightest loss of substance.

Guaiaicol Therapy of Gonorrhoeal Epididymitis.—Goldberg (*Centralblatt f. inner Medicin*, April 6, 1901) has used guaiaicol with satisfaction in 25 cases of gonorrhoeal epididymitis. An ointment consisting of guaiaicol, 5 grams (75 grains); lanolin and resorcin, 10 grams (150 grains) is applied every 12 hours until the whole quantity is used in the course of 3 or 4 days. Before the first use of the ointment the patient takes a cleansing sitz bath. The ointment is then applied to the painful part and covered with a linen rag, absorbent cotton, and waxed paper, the whole being held in place by a suspensory. In addition, from 3 to 4 grams (45 to 60 grains) of salol are given per day. The patient's general condition decides whether he is to go to bed or to be allowed to stay up and to follow his usual vocation. More than 3 or 4 days' rest in bed is not necessary. Of 22 patients treated by the guaiaicol method, 15 were sick less than 3 days; and all did not have to interrupt their daily work. The local effects were: A prompt removal of the pain, if the case was seen in the acute stages; prevention of the swelling, if the case was seen immediately after the onset of symptoms; or an arrest of the swelling, if it was already present. No bad effects upon the heart or lungs were noted.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

May 4, 1901. [No. 2105.]

1. A Clinical Lecture on Functional Nerve Diseases. GEORGE E. RENNIE.
2. On the Centralization of Medical Education by the University of London. A. D. WALLER.
3. Some Remarks on the Inheritance of Acquired Immunity. GEORGE OGILVIE.
4. Note on the Results Obtained by Antityphoid Inoculations in Egypt and Cyprus during the Year 1900. A. E. WRIGHT.
5. Case of Secondary Anemia Becoming Pernicious; with Detailed Examination of the Blood. WILFRID EDGEcombe.
6. The Treatment of 2 Cases of Nerve Leprosy in which Recovery took Place. GEORGE THIN.
7. On Operating on the Subjects of Exophthalmic Goiter. J. DELPRATT HAINES.
8. A Case of Descending Landry's Paralysis in a Child. LEONARD A. ROWDEN.
9. Two Cases of Severe Frontal Herpes. C. HIGGINS.
10. An Unusual Symptom in Secondary Syphilis. A. A. SCOT SKIRVING.
11. Whooping-Cough Cured by Irrigation of the Nares. ED. MARTEN PAYNE.

1.—Rennie, in a clinical lecture on functional nerve disease, recognizes 4 types of functional nerve disease, as follows: (1) Feigned disease; (2) hysteria in its varied manifestations; (3) neurasthenia; and (4) functional disease concomitant with and dependent upon organic disease. He refers briefly to some of the manifestations of each form of disease and to certain differential diagnostic signs. [A.O.J.K.]

2.—Waller, writing of the centralization of medical education by the University of London, discusses the 3 stages into which medical education naturally falls: (1) Preliminary scientific—chemistry, physics, biology; (2) early medical—anatomy, physiology; (3) medical proper—medicine, surgery. He then details the essential points in a scheme for the centralization of medical education by the University of London. [A.O.J.K.]

3.—Ogilvie, in some remarks on the inheritance of acquired immunity, discusses critically various facts and hypotheses regarding the transmissibility of acquired characters, especially Weismann's and Hertwig's opinions, and, diverting to the domain of pathology, refers to the hereditary transmission of acquired immunity, mentioning especially the work of Tizzoni, Ehrlich, Hübener, Vallard, Wernicke, Roux and Calmette. It is believed that there exists no proof to show that parental immunity is ever transmitted by the germinal cells to the next generation; the offspring, however, may derive immunity from its mother by either the blood or the milk—this is, by the placental circulation or by suckling. It is believed that the accumulation theory as an explanation of racial immunity is an unsubstantial hypothesis. [A.O.J.K.]

4.—Wright, in a note on the results obtained by antityphoid inoculations in Egypt and Cyprus during the year 1900, gives the following statistics: Average annual strength of the British troops—uninoculated, 2,669 inoculated, 720; number of cases of typhoid fever—uninoculated, 68, inoculated, 1; number of deaths from typhoid fever—uninoculated, 10, inoculated, 1; percentage of cases calculated on average annual strength—uninoculated, 2.50; inoculated, 0.14; percentage of deaths calculated on the same basis—uninoculated, 0.40, inoculated, 0.14. These figures testify to a nineteenfold reduction in the number of attacks of typhoid fever, and to a threefold reduction in the number of deaths from that disease among the inoculated. [A.O.J.K.]

5.—Edgecombe reports a case of secondary anemia becoming pernicious, occurring in a woman of 38. When first seen examination of the blood revealed: hemoglobin, 23%; erythrocytes 475,000 (color index, 2.40); leukocytes 1,4000. After the lapse of 4 months the blood condition was as follows: hemoglobin, 85%; erythrocytes, 3,250,000 (color index 1.30); leukocytes, 5,200. Three days prior to the death of the patient (8

months after first observation), the blood condition was as follows: hemaglobin, 8%; erythrocytes, 485,000 (color index 0.84); leukocytes, 9,100. Another interesting feature of the case was the preponderance of megaloblasts over normoblasts. The case is believed to be one of anemia secondary to repeated hemorrhages from the nose gradually passing into the condition designated pernicious anemia. [A.O.J.K.]

6.—Thin reports the treatment of 2 cases of nerve leprosy in which recovery took place. The treatment of the first case consisted of chaulmoogra oil internally and externally for more than 2 years; that of the second case, of pyrogallie acid externally, gurjun oil internally regularly, and arsenic internally intermittently. [A.O.J.K.]

7.—Harris refers to the question of operating on patients suffering from exophthalmic goiter and mentions a case in which a lady patient who had a large exophthalmic goiter was operated upon for the removal of a cystic tumor of the breast. Ether was taken badly and the patient died 68 hours after. In such conditions it is best to avoid operation and when it is imperative to precede it with a course of cardiac stimulants. [J.W.M.]

8.—Rowden reports a case of descending Landry's paralysis in a child of 10, terminating fatally in 4 days. The clinical features of the case were progressive, symmetrical motor paralysis affecting first the muscles of the neck, then the arms, forearms, chest, legs, etc.; absence of disturbances of sensation until a few hours prior to death, when slight impairment was noted; absence of rigidity, twitching, pain, or spasm; preservation of mental functions and of control over the emunctories. [A.O.J.K.]

9.—Higgins reports 2 cases of severe frontal herpes, occurring in women of 45 and 49 respectively. [A.O.J.K.]

11.—Payne reports a case of whooping-cough cured by irrigation of the nares with 10 to 20 ounces of carbolic lotion (1 to 40) 3 times daily. The injection was performed by means of a syringe, the lotion being allowed to go up one nostril and down the other. At first the irrigation caused a good deal of sneezing and coughing, and a considerable amount of gelatinous mucus, some of which was of a greenish color, was ejected. Soon, however, the irrigations caused less discomfort and the patient, at first refractory, began to look forward to them for relief from his sufferings. It is believed that other antiseptics will answer as well as carbolic acid. [A.O.J.K.]

The Lancet.

May 4, 1901. [No. 4053.]

1. A Clinical Lecture on Eczema in Relation to Age. MALCOLM MORRIS.
2. The Action of Arsenic as Observed during the Recent Epidemic of Arsenic Poisoning. SIR T. LAUDER BRUNTON.
3. Some Further Investigations upon Rheumatic Fever. F. J. POYNTON; ALEXANDER PAINE.
4. A Case of Perforating Gastric Ulcer with Rigors. Operation for Suture followed 3 weeks later by Volvulus and Acute Intestinal Obstruction requiring a Second Laparotomy. ANTHONY A. BOWLBY.
5. On Serous Vaccinia in Connection with Cretinism and Rickets. ROBERT KIRK.
6. Three Cases of Sarcoma of the Uterus. E. OCTAVIUS CROFT.
7. A Case of Recovery after Operation for Diffuse Peritonitis from Perforation of the Appendix. RUSSELL COOMBE.
8. On the Uses of Diphtheria Antitoxin. T. B. BROADWAY.
9. The Respiratory Movements of the Precordial Area in Health and in Disease. J. AIKMAN.

1.—Morris, in a clinical lecture on eczema in relation to age, discusses eczema of the infant, eczema of the young child, eczema of the age of puberty, eczema in the adult, eczema in the adult woman at the change of life, and eczema in the aged. He describes in appropriate detail the etiology, clinical features, and treatment of each form of eczema. [A.O.J.K.]

2.—Brunton, discussing the action of arsenic as observed during the recent epidemic of arsenic poisoning, mentions the manifestations of arsenic when introduced into the body in

physiologic and toxic doses. The amount of beer consumed by some of the sufferers during the epidemic was so small as to raise the question whether the neuritis could be due to the arsenic alone, even though its action may have been directed to the nerves by the alcohol or hops, or whether some other poison besides arsenic was present in the beer, or whether the arsenic was present in such a combination as to have a much more deleterious action than that of pure arsenic itself. The evidence nevertheless points to the conclusion that the symptoms were due chiefly, if not entirely, to the arsenic. The contamination of the beer was brought about through the use of glucose and invert sugar made by one particular firm that had been supplied by sulphuric acid, containing a very large quantity of arsenic. It is suggested that some of the cases of alcoholic neuritis may in reality be due to arsenic in contaminated beer. [A.O.J.K.]

3.—Poynton and Paine, detailing the results of some further investigations upon rheumatic fever, describe the researches they have undertaken to establish a certain diplococcus as a cause of this disease. They have succeeded in demonstrating the organisms in 2 more nodules; and they have grown them in pure culture in the nodular tissue outside the body; they have produced by intravenous inoculation into lower animals a condition they believe to be acute rheumatism—polyarthrititis, pericarditis, and multiple valvulitis; and from the joints of the animal after death they have isolated the organisms. As the nodule is looked upon as a highly characteristic manifestation of rheumatic fever they conclude that their investigations lend strong support to the contention that this diplococcus is the cause of rheumatic fever. In addition they believe that the actual commencement of chorea in rheumatism is usually associated with the presence of the diplococcus in the brain. By centrifugalizing the pericardial exudate from a case of acute rheumatic pericarditis they have succeeded in demonstrating the presence of these organisms in the polymorphonuclear leucocytes. Finally they bring forward some facts that suggest that fever may be a primary phenomenon of rheumatism, and then discuss the experimental production of disease of the heart. [A.O.J.K.]

4.—Bowlby and Steedman report a case of gastric ulcer in which perforation was followed by rigors. The patient was a female of 27, who for 2 years previous had suffered from gastric disturbance, and had since suffered from anemia. She was suddenly seized with severe pain in the left side, and vomiting. The next day she was comparatively comfortable. The second day she had 2 rigors, and the abdomen was tender and tympanitic. On operation a gastric perforation was found and sutured. The abdomen contained but little infected material, which was removed by sponging. The gastrohepatic pouch was drained for 3 days, and the patient did fairly well for 4 weeks, when there occurred severe abdominal pain with vomiting and collapse. The abdomen became distended, tender, and tympanitic. Liver dulness was almost obliterated. Temperature was 100°; the pulse ranged from 88 to 100, and was growing irregular and feeble. A second operation was performed and a volvulus of the small intestine found with about a quart of dark fluid in the abdomen. The bowel was untwisted and punctured to evacuate the gas so that its restoration to the abdomen might be accomplished. The subsequent progress of the case was uninterrupted, and the recovery complete. The second condition illustrates the unreliability of the pulse in abdominal conditions. [J.W.M.]

5.—Kirk, writing of serous vaccinia in connection with cretinism and rickets, reports several cases of serous vaccinia and the subsequent occurrence of cretinism, and expresses his belief that the thyroid is concerned in the production of serous vaccinia and serous types of other affection. It is thought that the condition of the gland is such that it is prone to atrophy from exciting causes that would otherwise prove inefficient. It is believed that we ought to recognize the existence of a serous diathesis as emphatically as we do that of a hemorrhagic diathesis, and that it is probable that the two are intimately related to each other, while it is evident that both are associated with great vulnerability of tissue by various morbid agents. Referring to the fact that the thyroid has an antitoxic action on certain toxic substances resulting from the

digestion of albuminous bodies, he asks: "Is it possibly concerned also in defending the organism against the germs of some zymotic diseases?" He suggests that vaccination and perhaps experiments on vesication should be performed on calves and a few other animals after expiration of the thyroid. It is thought probable that the greater viscosity of calf lymph, as compared with human lymph, may be due to the greater energy of the thyroïdal function. [A.O.J.K.]

6.—**Sarcoma of the uterus** is a comparatively rare disease. Williams in an analysis of 2,649 cases of primary uterine neoplasms found only 2 cases of sarcoma to 1,571 of cancer. Croft reports 3 cases of sarcoma of the uterus. In the first the malignancy of the disease only asserted itself a few months after confinement and was not discovered until secondary growths rendered operation impossible. The second was a diffuse sarcoma of the connective tissue of the mucosa and the patient died of peritonitis. In the third, the uterus was removed and the patient, a woman of 30, continued in good health 2 years after operation. [W.K.]

7.—**Combo** reports a case in which recovery followed operation for diffuse peritonitis from perforative appendicitis. The symptoms at the onset were pain referred to the region of the appendix, followed by vomiting and abdominal distention, and edema in the neighborhood of McBurney's point. Temperature ranged from 102°-104°, pulse 132, respiration 36. Four days after the onset of the symptoms operation was performed and an abscess extending up toward the liver and down to the pelvis was found and evacuated. A large quantity of brown-tinted blood was sponged from the pelvis. Drainage was established by carrying one tube into the subhepatic pouch and another down into the pelvis. Complete recovery followed. [J.W.M.]

8.—**Broadway** reports his results with the use of diphtheria antitoxin. Of 24 patients treated with the antitoxin but 1 died, whereas of 6 treated along ordinary lines, 2 died and 2 developed postdiphtheritic paralysis. [A.O.J.K.]

9.—**Aikman**, writing of the respiratory movements of the precordial area in health and in disease, directs attention to certain modifications of the chest movements that, he believes, indicate acute and chronic disease, and also forecast the advent of it. He points out that in health the left third intercostal space rises and falls at its sternal end during the respiratory act to an appreciably less extent than the right. This he speaks of as "the comparatively still area." He has found during the course of acute rheumatism that a marked diminution of the movement in the third left intercostal space precedes the stethoscopic signs of pericarditis by a period varying from 1 to 4 days. In a much shorter period the limitation of movement extends to the second, and even to the first, intercostal space, and increases, less markedly, to the left. The variations of chest movement that prognosticate and evidence endocarditis are less in degree; in many cases of old-standing cardiac diseases, however, the precordial stillness is wider than normal [A.O.J.K.]

Journal of the American Medical Association.

May 18, 1901. [Vol. XXXVI, No. 20.]

1. Amputation Through the Hipjoint, with a Synopsis of 267 Cases, in which the Author's Method was Employed. JOHN A. WYETH.
2. The Ocular Expression of Intra-nasal Lesions. ROBERT SATTLER.
3. A Brief Note on the Pathology, Diagnosis and Treatment of Nasal Accessory Sinus Affections. E. LARUE VANSANT.
4. The Reduction of Temperature in Fevers by Evaporation Baths; warm water being used for baths. FRANCIS H. WILLIAMS.
5. Streptococcus Pyogenes in Gynecologic Diseases. G. BROWN MILLER.
6. Ménière's Disease, with Report of a Case. R. A. BACHMANN.
7. The Financial Relations of the Medical Profession to the People and Public. J. J. CONNER.
8. A Study of the Etiology and Pathology of Rheumatism, with Special Reference to "Rheumatic Diathesis." A. P. STÖNER.
9. A Case of Acute Dermatitis Caused by the use of Hair-dye Having for Its Base the Hydrochlorate of Paraphenylene Diamin. A. D. MEWBORN.

10. Difficulties and Dangers of Anesthetics. DANIEL N. EISENDRATH.
11. The Vesicular Murmur and its Relation to Pulmonary Health and Disease. THOMAS NEIL MCLEAN.
12. On the Relation Between the Variety of Microorganisms and the Composition of Stone in Calculus Pylonephritis. THOMAS R. BROWN.
13. Complete Inguinal Extraperitoneal Hernia of the Bladder; Recovery. J. F. BALDWIN.

1.—A history of the **Wyeth method of operation** and of the various methods used to control hemorrhage is given. Digital compression of the aorta and common iliae and gradual dissection is described and objections stated. The included tables of operations for malignant neoplasms, septic infections and injuries show a mortality of 19.8%. This takes in deaths from intercurrent disease. The statistics of other methods follow, and it is acknowledged that asepsis must share with improved hemostasis the credit of the diminished mortality. [H.M.]

2.—Two classes of **intra-nasal lesions** are considered. The first includes chronic lesions of the anterior region of the middle meatus. Often most careful search must be made before focal suppuration of mucosa or air-cells is discovered. The **ocular reflex** may be either injection of the vessels of the ocular conjunctiva and those of the museles, with passive edema of the retrotarsal folds, or neuralgic pains along the inner upper aspect orbital wall. The latter is excited by any mechanical or nervous irritation of the nasal mucosa, and is not relieved by any treatment directed to the eyes. The second group includes lesions of the inferior meatus and adjacent cells causing suppuration, fistula and granular degeneration of the tear sac. An operation for radical extirpation of the sac with free drainage into the nose is described. [H.M.]

3.—**Purulent and secondary atrophic rhinitis** may often be traced to a **sinusitis**. The latter is also associated with **nasal polyps** and deviated septum. Obstruction is caused by these, and also by thickening of the mucosa or small granulations, or even inspissated mucus at the openings of the sinuses. The obstruction may be permanent or intermittent and the result may be either congestion or inflammation. There may be retention of gases in some cases and rarefaction of the air in others. Pain is more or less continuous, frequently worse upon arising and wearing off later, is increased by stooping, dull and boring, increased by colds and exposure, and accompanied by heat in the face, and is localized according to the sinus involved. Discharge may be present or absent. Transillumination is valuable, but not always reliable. Drainage and treatment of the lining membrane are necessary. Artificial openings tend to close more quickly than the natural ones. All obstructions must be removed. The hot air treatment in many cases gives quick and permanent relief. The technic is described. [H.M.]

4.—The **bath** is indicated whenever the **temperature** is 102° or 102.5° F. The patient is placed on a blanket, covered with one layer of surgical gauze which should fit the skin perfectly when moistened and this is sprinkled with water at 115° F. and the patient is constantly fanned. As rapidity of **evaporation** depends on the condition of the atmosphere, the guide for each bath is the amount of water evaporated and not the time consumed. In the cases reported 1 quart was used, the time being 15 to 20 minutes. The average fall of temperature was 1.9° F. The principles of the method were tested on bottles of hot water and the results of the experiment are given at length. [H.M.]

5.—The much higher mortality from invasion of the peritoneal cavity by **Streptococcus pyogenes** than from the gonococcus makes it important to distinguish between these infections. In making a diagnosis the history is very important, the great majority of cases being due to infection in labor or miscarriage. The lesion is generally a parametritis and most investigators have failed to find the gonococcus in the latter. The situation of the mass is also characteristic. It lies in the connective tissue surrounding the uterus and vagina and beneath the peritoneum. The tendency of the infection is to follow the layers of connective tissue and fascia and not invade adjacent layers. When the peritoneal cavity is approached it is protected by adhesions of omentum, tubes, ovaries and intes-

tines. The mass is nearly always asymmetrical. This is in marked contrast to gonorrhoeal infection, which is also more superficial. The consistency is of bone-like hardness as a rule, and there is an intimate connection between the uterus and pelvic wall. The streptococcus is very long-lived and the same precautions must be taken in old as in recent infections to protect the peritoneal cavity. Early operation, before suppuration, is advised. The incision should be extraperitoneal and the mass thoroughly broken up by blunt dissection, so as to evacuate any abscess cavities, and drainage established. [H.M.]

6.—Bachmann criticizes Burnett's position in regard to **Ménière's disease**, believing he has confused the deafness, tinnitus and vertigo of middle ear affections with it. Certain physiologic experiments are described, which explain how immobilization of the stapes in the sound window in middle ear disease may cause the above symptoms. The etiology and symptomatology are reviewed. To differentiate it from middle ear disease with vertigo it should be remembered that the latter has visible lesions, in its purulent form a discharge, and a different history. Ménière's disease yields to nonsurgical treatment directed to the original cause. [H.M.]

7.—On account of faulty business methods there are more financial failures among medical men than any other class. There should be a more fraternal spirit, a uniform fee-bill; companies and corporations should guarantee payment for services to injured employees, and public authorities should give just compensation for services. Physicians of every community should organize for mutual protection from dead-beats, etc., and to enforce the same recognition given to other classes and prevent unfavorable discrimination by public authorities, as in the settlement of estates and services to paupers. [H.M.]

8.—Stoner briefly reviews the uric acid and suboxidation theories of **rheumatism** and considers atavistic possibilities in connection with the uric acid diathesis. From his study of rheumatism he draws the conclusions that it is due to an infectious germ, the symptoms varying with their position and attenuation, that these germs may complicate other diseases; that their nidus may be the joints, heart or muscles; that uric and lactic acid are the product not the cause of the disease and are not pathognomonic; that hereditary tendency exists in the large majority of cases, and that grip and rheumatism belong to the same family of diatheses. [H.M.]

9.—The physical characteristics, reactions, method of preparation, physiologic effects and method of using **paraphenylene diamine** are described, together with the character of the eruption caused by it. The suddenness of the onset, enormous swelling of the lids and metamorphosis of the physiognomy help to differentiate it from acute eczema. The usual calmative agents for the latter disease are indicated and in grave forms the hair must be sacrificed. [H.M.]

10.—With both ether and chloroform cessation of respiration may either precede or succeed cessation of the heart's action. Blood-pressure is lowered by both. Respiratory difficulties may be spasmodic, asphyxial or paralytic. The 2 former occur more frequently with ether. The points to be noted before and during the administration of the anesthetic are given in detail. Treatment is given for the milder and graver forms of heart or respiratory failure. Mechanical means are used first, as cardiac stimulants are useless till there is a circulation to carry them. Massage of the heart has given startling results. This is accompanied by rhythmic tractions of the tongue and followed by artificial respiration. Then come cardiac stimulants. Acupuncture of the heart has been tried as a last resort with encouraging result. The after-effects on kidneys and lungs are considered. Silk's table giving indications for the choice of an anesthetic concludes the article. [H.M.]

11.—There are many cases in which the **vesicular murmur** is entirely absent, except in forced inspiration. This may be the result of light clothing or lazy breathing, sedentary occupation, underfeeding, overwork, or worry. An incomplete pulmonary function produces bloodstasis and exudation into bronchi, intercellular spaces and upon the surface of the pleura. These are noninflammatory and when stirred by respiration produce rales which are diagnosed as from bronchitis but more properly from bronchial catarrh—a passive rather than an active

condition. The apices are most frequently affected, the "mucous click" being diagnosed as tubercular. It is simply the prepared soil and all these sounds will disappear with systematic expansion. In examining the chest our attention should be directed not so much to abnormal as to the lack of normal sounds. After pleurisy and pneumonia the closest attention should be given to anatomic recovery by exercises aided by cold friction baths, general hygiene and tonics. [H.M.]

12.—The various theories as to the origin of stone are briefly reviewed and 7 cases of infection of the **renal pelvis or substance** associated with stone are analyzed. The symptoms pointed in all but 1 to unilateral involvement and this was subsequently verified by bacteriologic, chemie and microscopic examination of the urine obtained from the 2 ureters separately. In the alkaline urine were found *Bacillus proteus vulgaris* and a white *Staphylococcus* associated with stones made up of phosphates and carbonates of calcium and magnesium. A consideration of the findings warrants the belief that the nucleus of the stone was a zooglear mass made up of the **microorganisms** causing the infection, while the constant alkalinity caused by the urea-decomposing power of the microorganism furnished the salts necessary for the formation of the stone. In the one case with acid urine examined, the infection was due to *Bacillus coli communis*. The stone was a mixture of uric acid and urates. The cases show a definite relationship between the variety of germ and the chemical composition of the calculus. [H.M.]

13.—This is the eleventh recorded case of **strangulated hernia** in which the bladder alone was involved. [H.M.]

Boston Medical and Surgical Journal.

May 10, 1901. [Vol. CXLIV, No. 20.]

1. The Treatment of Psoas Abscess by Incision. ROBERT W. LOVETT.
2. Infantile Scorbutus. JOHN LOVETT MORSE.
3. Neuritis Recurring after Atrophy of both Optic Nerves in a Case of Brain Tumor. EDWARD R. WILLIAMS.
4. A Case of Accidental Inoculation of Cancer in a Fresh Wound. A. T. CABOT.

1.—Lovett reports the result in the treatment of **psaos abscess** at the Children's Hospital, covering a period of 10 years, from 1890 to 1900. During this time 49 cases of psaos abscess were operated upon, and the present condition of 43 of these is known. Of the 49 cases operated upon, 17 died, 26 were known to be still living and the result in 6 cases was unknown. The author makes a general conclusion from the facts set forth as follows: That fever is not necessarily an accompaniment of psaos abscess formation; that where it does occur, the prognosis is not so good as where it is absent; that the best method of operation is by a lumbar or iliac incision, one or the other, and preferably the latter. It seems desirable, on general principles, to avoid recumbency for long periods, which makes drainage by an iliac incision almost impossible. It seems best to put on a plaster jacket almost immediately after operation to enable the patient to sit erect and to enable the abscess to drain almost from the first. In this way the writer has obtained better results than by any other method. [A.B.C.]

2.—**Infantile scorbutus** was first described in 1883. It is uncommon under 6 months and after 2 years. Six cases are reported typical and atypical. The symptoms are anemia; malnutrition; pain on handling; an expression of terror when approached; pyriform swellings at the ends of the diaphyses which are tender, sometimes red, but never hot, and are due to subperiosteal hemorrhage; swelling, sponginess and ulceration of the gums, which are purple and often hemorrhagic; cutaneous, nasal, gastric, intestinal, orbital or other hemorrhages. The diagnosis is given between it and rheumatism, purpura, rickets, syphilis, Pott's disease, infantile paralysis and injury. It is caused by some error in diet, the majority of cases occurring in those fed on proprietary foods, though it has accompanied the uses of breast or raw cow's milk, etc. Treatment consists in regulation of the diet and the administration of lemon or orange juice. During convalescence iron may be indicated. In severe cases, recumbency on a Bradford frame or light splints on the

limbs may afford relief. Recovery occurs in 2 or 3 weeks. [H.M.]

3.—But 2 similar cases of **recurring neuritis after atrophy** have been reported, and these are reviewed. Williams' case when first seen presented a typical picture of retinitis albuminuria. A number of other cases of brain tumor, showing the same oenlar picture, are cited, and reference is made to cases of chronic nephritis causing simple neuritis attributed to brain tumor. [H.M.]

4.—Cabot relates a case of **autoinoculation of cancer** in a male patient of 55. There was a cancer high up on the anterior rectal wall. This was removed by the Kraske operation. During the manipulation the juicy cancerous growth was rubbed about in contact with the wound made by the Kraske operation. The operation was done in March, 1897, and the tumor was examined microscopically and found to be adenocarcinoma. There has been no recurrence at the original site of disease. Two months after the first operation another was done to close the posterior opening in the rectum. During the summer of 1899 there was observed a hardening of the tissue behind the rectum. This was removed—a mass the size of a hen's egg. It extended from the mucosa of the rectum backward along the sacrum to which it was firmly attached. The scar in which the recurrence took place was separated by an interval of 5 to 6 inches from the original site of the disease. A microscopic examination showed it to be adenocarcinoma with colloid degeneration. The author is of opinion that this was clearly a case of autoinoculation. [A.B.C.]

Medical Record.

May 18, 1901. [Vol. 59, No. 20.]

1. The Recent Buffalo Investigations Regarding the Nature of Cancer. ROSWELL PARK.
2. Contracture of the Neck of the Bladder. CHARLES H. CHETWOOD.

1.—Continued study of **cancer** leads to the conviction that on its inception it is purely local and that the process of generalization is relatively slow save in rare instances. Park firmly believes in its infectious nature, the parasite being extremely polymorphic. The same forms are described and figured by Italians as blastomycetes, by French as protozoa, and Germans as products of cell degeneration. The length of time over which the apparent infection extends is no argument against the theory since the time in which syphilis and leprosy kill is measured in years. All other metastatic diseases are considered parasitic. Cancer-like pus may possibly be produced by various organisms. Statistics show that it probably is not transmissible, but several instances of its autoinoculability are given, including those through operation wounds, indicating great care in removal of the tumor. The work of Dr. Gaylord at the State laboratory connected with the University of Buffalo is epitomized. Death seems to come by terminal hematogenous infection. Cachexia is produced by varied causes. The Italian view has not been sustained or disproved by **Buffalo investigations**. The characteristic bodies are hyaline, resembling fat droplets, which in suspension oscillate. These develop into larger forms with pseudopodia and later into sacs containing spores which are highly refractive. The best culture medium is bouillon made with *Fucus crispus*. Nearly all fixatives cause the disappearance of spore sacs and most of the developed organisms. The more resistant are 2 small forms described by Russell. The organisms are found in the blood and all organs of patients dying of epithelioma and sarcoma; they are not found where cancer does not exist and may, as in one instance cited, produce other than characteristic lesions. The work of investigators upon the role of unicellular animal life as a disease-producing agent is briefly reviewed with especial reference to that of Pfeiffer who also made a study of endemic cancer. That the organisms are found in lymphnodes ahead of epithelial deposits is an argument against the infectivity of the latter. The success of splenectomy in Banti's disease and its failure in other morbid conditions of the spleen is explained by the fact that the protozoan infection is still local in the former. Analogously if the cancerous growth is removed before general

infection has occurred cure is promising. Later operations simply palliate by removing the largest supply-depot. Just as there are 3 types of malarial parasites so may there be more than 1 cancer organism, causing in one case carcinoma, in another sarcoma. There is nothing in the protozoan theory of cancer to make belief in the spontaneous disappearance of malignant growths less plausible. [H.M.]

2.—Chetwood insists that many of the so-called cases of hypertrophy of the prostate are in reality **contraction of the neck of the bladder**. The author discusses the cause, saying it is due to some prolonged pathologic condition causing chronic inflammation in the region of the trigone or in the prostatic sinus. This condition and prostatic hypertrophy may coexist. Treatment is considered at length. The author has devised an instrument which is inserted into the bladder through a perineal incision. The instrument has a cutting or cauterizing blade after the manner of the Bottini instrument. The electric current is turned on and the cauterizing or cutting is done by sight and touch. The author has operated on 16 cases by his method, with 1 death from a pyelonephritis 5 weeks after operation. Seven patients were entirely cured and most of the others improved. He considers this method of procedure superior to the Bottini in several particulars, especially in the far fewer after-complications. Several illustrations accompany the article. [A.B.C.]

New York Medical Journal.

May 11, 1901. [Vol. LXXIII, No. 19.]

1. Atonia Gastrica and a New Method of Treatment. A. ROSE.
2. What Constitutes Sexual Intemperance. W. J. S. STEWART.
3. The Pathology, Diagnosis, Special Prophylaxis and Treatment of Tuberculosis of the Skin. JOHN A. FORDYCE.
4. Primary Chanere of the Septum of the Nose. W. FREUDENTHAL.
5. Syphilis of the Nervous System. B. ONUF (ONUFROWICZ).
6. Acute Strangulated Femoral Hernia on a Puerto Rican Hillside. P. R. EGAN.

1.—Rose discusses **Gastroptosis** and mentions a new method of treatment. The essential factor in the production of the condition which may exist alone or may be a part of a general prolapse of abdominal organs is most often manifest in persons of tuberculous tendencies or those suffering from anemia, chlorosis or acquired rachitic changes. Other contributory conditions may be gastric motor insufficiency, pyloric tumor, relaxation of the abdominal muscles following childbearing or obesity, the use of the corset, and skirt strings. The condition may exist for a time without giving rise to symptoms due to a compensatory propulsive force; later this fails and symptoms of gastric dilation become evident. As regards treatment general tonics are indicated. The following means of strengthening the abdominal muscles are mentioned, viz: bandaging, massage, electricity, gymnastics and hydrotherapy. The treatment most satisfactory to the writer has been strapping the abdomen by means of wide strips of zinc rubber plaster applied one horizontally over the upper portion of the abdomen and one obliquely on each side over the iliac crests overlapping in the median line. [J.W.M.]

3.—Fordyce discusses **tuberculous dermatitis as regards pathology, diagnosis, prophylaxis and treatment**. The different varieties are given and the importance of the recognition of each emphasized. The typical lesion of lupus is a brownish-red nodule deeply seated in the skin. It destroys the invaded parts by ulceration or atrophy. General tuberculosis and secondary infection occasionally occur. The process may be attended with excessive development of fibrous tissue by means of which the process is arrested, by the formation of a pseudo-**elephantiasis** due to extensive lymphatic infection or by the development of epithelioma. Lupus must be distinguished from syphilis, epithelioma, glanders, actinomycosis, streptococcus and staphylococcus infections. As regards prophylaxis the usual hygienic precautions should be observed and early manifestations treated radically. As to treatment, anatomic tubercles should be removed. Other methods are palliative treatment in which iodoform is valuable, the use of caustics, the curet, concentrated light and the x-rays. [J.W.M.]

4.—Freudenthal discusses extragenital syphilis, and reports a case of chancre of the nasal septum, in which the diagnosis was obscure until the appearance of unmistakable manifestations. It was rendered so by its occurrence during the prevalence of influenza, in which there occurred glandular enlargement and other symptoms resembling those of syphilis. The patient was a physician, and the infection arose from picking his nose after having made a vaginal examination of a woman who afterwards proved to be syphilitic. [J.W.M.]

5.—Onut, in his paper on syphilis of the central nervous system, distinguishes the following forms: (1) Meningitis, which is usually basal; (2) cerebral tumor; (3) multiple focal affection of the cerebrospinal axis; (4) hemiplegia; (5) diffuse brain lesions simulating progressive paresis; (6) pseudotabes or syphilitic tabes; (7) spastic paraplegia; (8) anterior poliomyelitis; (9) syringomyelia; (10) diseases of the peripheral nerves. [H.H.C.]

6.—Egan reports a case of acute strangulated femoral hernia which occurred under circumstances unfavorable for operation, and which was reduced under anesthesia by persistent taxis. [J.W.M.]

Medical News.

May 18, 1901. [Vol. LXXVIII, No. 20.]

1. On the Modern Treatment of Acute Gonorrhoea. GEORGE KNOWLES SWINBURNE.
2. Chronic Gonorrhoea. JOHN VAN DER POEL.
3. On Gonorrhoeal Conjunctivitis. WARD A. HOLDEN.
4. Treatment of Gonorrhoeal Stricture of the Urethra. JAMES R. HAYDEN.
5. The Treatment of the Complications of Acute Gonorrhoeal Posterior Urethritis. JAMES PEDERSEN.

1.—Swinburne prefers to begin active treatment for acute gonorrhoea early. He begins with hot irrigations of a weak solution of potassium permanganate. Irrigations must be copious and frequent, and applied by the physician himself, beginning at a temperature of 105° F. and gradually ascending to 120° F. The germicide used is protargol. A urethral syringe is half filled with a 2% solution of cocain, then the remainder with a 2% solution of protargol. At each successive visit the cocain is diminished until finally the protargol only is given. The anterior urethra is treated only while it is affected. If the case is seen early the treatment is given twice daily for 3 or 4 days; this may be longer or shorter, depending on the progress of the patient. The rest of the first week the treatment is once daily. During the second week the treatment is every other day; during the third week twice, and the fourth week but once. At the end of the fifth week if there be no gonococci in the discharge, the patient is given the beet test and the germs again sought. He insists that the patient return in 4 to 6 weeks for a final examination. The author advocates this form of treatment at any time in the acute stage at which the patient presents himself. He has long ceased to use copaiba and eubebs. He advocates irrigating into the bladder without a catheter if it can be done without causing discomfort. He condemns the hydrostatic method of overcoming the compressor muscle. All that is usually necessary is to have the cooperation of the patient, and when an injection is made have him attempt the act of micturition, thus relaxing the compressor muscle and permitting the fluid to enter the bladder. This, of course, after the anterior urethra is irrigated thoroughly. Protargol is of great use in the posterior urethra. This is instilled by means of a No. 12 French catheter and a syringe, $\frac{1}{2}$ to 1 ounce of a protargol solution (gradually increasing to 2 $\frac{1}{2}$) is slowly instilled, being shortly after urinated out. A final examination at the end of say 6 weeks, is very important. [A.B.C.]

2.—Van Der Poel says in the diagnosis of chronic gonorrhoea there are several important points to be cleared up before treatment is commenced: (1) As to the character of the discharge; (2) its origin; and (3) the pathologic conditions that cause it. No hard and fast rule can be laid down in the treatment of this condition. In general the hygienic treatment is the same as in acute gonorrhoea, except greater freedom may be permitted in diet and exercise. Internal treatment is simi-

lar to that in the acute stage; alkalies and diluents in case of scalding, if reinfection is present; oleoresins when this has subsided, and later the antiseptics such as salol and urotropin. In the local treatment the general rules to be observed are: (1) Care and conservatism in all procedures; (2) avoidance of over-instrumentation and injuries to the mucosa; (3) sufficient rest after passing through one system of treatment before beginning another, should another be necessary; (5) surgical cleanliness, and sterilization of all instruments. Protargol in the strength of $\frac{1}{2}$ to 1 $\frac{1}{2}$ %, used by irrigation, is the best treatment for the anterior urethra. The same in strength of $\frac{1}{2}$ to 1%, is used in posterior urethritis. To irrigate the posterior urethra spasm of the cut-off muscle is prevented by the use of cocain, 10 to 15 grams of a 1-150 solution held in the anterior urethra for 4 or 5 minutes. Injecticus in the anterior or posterior urethra are made daily, and are most effectual when combined with a hand injection by the patient himself, of a weak solution of bichlorid, 1-30,000 or 1-15,000. [A.B.C.]

3.—The usual course of untreated gonorrhoeal conjunctivitis is described, including swelling of the lids, discharge, sloughing or ulceration of the cornea, and papillary hypertrophy of the conjunctiva. A suspected discharge should be examined at once microscopically. A single application at the beginning of silver nitrate, 2%, or protargol, 40%, may modify favorably the subsequent course. The chief medication is cold from compresses that have lain on a lump of ice. The secretion should be washed away every few minutes with a warm solution of boric acid or potassium permanganate, 1 to 2,000. Infants can bear less cold than adults. The cornea in all cases must be inspected daily and cold decreased or heat substituted, if haziness appears. The other eye must be protected by an impenetrable covering. Recent statistics show that protargol in varying solutions cures the disease more quickly and with less discomfort than silver nitrate. Ulcers should be touched with iodin, carbolic or the cautery. The patient requires nursing day and night. If hospital facilities are adequate the enormous expense of supporting the neglected in blind asylums would be much curtailed. Economically, proper treatment of the eyes of the newborn is even more desirable. [H.M.]

4.—Hayden gives a general review of the treatment of gonorrhoeal stricture of the urethra. The ordinary treatment employed by most genitourinary specialists is advocated for stricture of the urethra in various situations. Perineal urethrotomy is discussed at some length and the operation described in detail. Divulsion and electrolysis are condemned. [A.B.C.]

5.—Pedersen in discussing the treatment of the complications of acute gonorrhoeal posterior urethritis subdivides the complications into local and general. The former include urethrocystitis, cystitis, ureteritis, pyelitis, pyonephrosis, funiculitis, epididymitis, prostatitis and seminal vesiculitis; while the general complications include arthritis, endocarditis, pericarditis, pleuritis, meningitis, etc. The author recites the treatment for the several local complications. Hygienic treatment is common to all. In urethrocystitis the chief indication is a bland and antiseptic urine. This is met by a milk diet, water and the urinary antiseptics. Anodynes may be necessary. Cystitis is not a frequent complication. Fever, larger area of hypogastric pain and tenderness differentiate it from urethrocystitis. In addition to the treatment for the latter condition we may use antipyretics, sedatives, anodynes, fomentations and counterirritants. Instillation and irrigation may be necessary. For this purpose protargol is recommended. The treatment for the other complications is discussed at some length. Gonorrhoeal arthritis is discussed and the ordinary treatment advocated. [A.B.C.]

Philadelphia Medical Journal.

May 18, 1901. [Vol. 7, No. 20.]

1. The Disinfection of Wounds with Pure Carbolic Acid. VON BRUNS.
2. A Further Report on a Case of Presystolic Murmur, Associated with Pregnancy, etc., Originally Reported at the Meeting of the Association in May, 1899. JAMES TYSON.
3. An Exceedingly Rare Case of Imperforate Anus. CHARLES B. KELSEY.

4. Relations of the Public to the Medical Profession. WILLIAM H. THOMPSON.
5. Gastric Tetany, with Report of Cases. WILLIAM GERRY MORGAN.
6. The Functional Tests of Hearing. WILLIAM LINCOLN BALLENGER.
7. Report of a Case of Rupture of the Eyeball from Contusion—Luxation of the Lens. Hernia of the Iris and Ciliary Body. J. W. SHERER.
8. Anisometropia. NÖRBURNE B. JENKINS.

1.—See page 194, Vol. I, No. 5, AMERICAN MEDICINE.

2.—Tyson makes a further report of a case of **presystolic murmur** as associated with pregnancy, admitted to the hospital the second time, suffering from faintness and syncopal attacks with distinct systolic heart murmurs; relieved and admitted the third time nearly a year later with the complication of grip. Her cardiac condition was much improved and she recovered rapidly. The case is of interest as showing different stages of returning compensation and also illustrating typically the changing physical signs of mitral stenosis. [W.K.]

3.—Kelsey reports the case of a man of 24, born with an **imperforate anus**, and in whom there had been a free communication between the bladder and rectum since an artificial anus was made in infancy. The patient often went for 3 months without fecal evacuation. An incision for colostomy revealed a large muscular pouch spreading over the small intestine and reaching from the anus to the diaphragm. The wall of the gut was greatly hypertrophied and contained enormous veins. At the ordinary point of junction of the transverse and descending colon this pouch suddenly narrowed to the size of a normal large bowel though the muscularis was still greatly thickened. An artificial anus was made at that point. [A.G.E.]

4.—Thompson, in his paper on the **relations of the public to the medical profession**, first considers the estimation in which the profession is held by the public. He says that in general the public regards the medical profession as a mere trade, the members of which look upon it solely as a means of obtaining a livelihood; that it is a close corporation, strongly dominated by class feeling and that it aims to monopolize, to its exclusive profit, the whole field of the treatment of disease, wherein it is very jealous of all competitors. He then speaks of the willingness with which the public receives and welcomes any prophet or prophetess hailing from realms unknown, and that the more mysterious their ideas the higher their position in the estimation of the public. As one such class of impostors he speaks of the Christian Scientists and of the danger to the community from their teaching and treatment, particularly of contagious diseases. To impress the public with the complexity of the human body and the foolishness of trying to cure disease by the aid of these fakirs, he advocates the teaching of anatomy and physiology in the public schools. For the protection of the public against the spreading of contagious diseases by these same people, he advocates appropriate legislation, but remarks that the starting of such legislation must be by some other body than the medical profession, as any movement thus started would be construed by the laity as mere jealousy. [H.H.C.]

5.—In his paper on **gastric tetany**, Morgan, after reviewing the etiology, pathology, symptomatology, etc., of the disease, cites 2 cases which came under his supervision. These he treated with Strontium bromid, in 5-grain doses, given before meals, and a suitable diet, finding that as long as this treatment was continued a marked improvement in the condition of the patient was apparent. [H.H.C.]

6.—Ballenger, in a very comprehensive and lengthy paper on the **functional tests of hearing**, explains the various tests and gives their range of usefulness in the various forms of aural disease. [H.H.C.]

Berliner klinische Wochenschrift.

April 15, 1901. [38 Jahrg., No. 15.]

1. Hyperesthesia of Nasal Mucosa. B. FRÄNKEL.
2. Glycogen Formation after Ingestion of Albumin. F. BLUMENTHAL and WOHLGEMUTH.
3. The New Massage-Institute of Berlin University. J. ZABLUDOWSKI.

4. The Physiology of the Kidneys and Ureters. E. WARSCHAUER.
5. The Case of Plague in Bremen. KURTH and STOEVESENDT.
6. The So-called Enteritis Membranacea. H. WESTPHALEN.

2.—After a series of experiments with frog material for the purpose of ascertaining the possibilities of **glycogen formation when albumins are used as food**, Blumenthal and Wohlgenuth reach the following conclusion: (1) That feeding with casein results in very little if any increase in the total amount of glycogen found in the animal; (2) that feeding with gelatin causes no increase in the amount of glycogen; (3) that feeding with ovalbumin (an albumin containing a carbohydrate radical) results in production of glycogen. [H.H.C.]

3.—Zabludowski gives a description of the new **Institute of Massage** at the University of Berlin and the purposes for which it was established. [H.H.C.]

4.—As a result of experiments in the catheterization of the ureters, Warschauer reports the following interesting facts concerning the **physiology of the kidneys and ureters**: (1) If catheters are introduced into both ureters as far as the pelves of the kidneys, the flow of urine is continuous, dropping slowly from the ends of the catheters; (2) in such cases all the urine passes through the catheters, none escaping into the bladder; (3) if the catheters are withdrawn slightly, the flow of urine is no longer continuous (in drops), but in interrupted jets, due to the contractions of the renal pelves and ureters, the action of both sides not being synchronous; (4) while the introduction of the catheters is hardly felt, the injection of fluid into the ureters causes an immediate colicky pain, especially if the distention be great; (5) the existence of a renorenal reflex is undoubted, as shown by the operation cited under this heading; (6) in at least some cases an upward flow of urine from the bladder into the ureters takes place; (7) the former theory that a pyelitis may be diagnosed by the presence of certain epithelial elements in the urine, can no longer hold, since the urine drawn by ureteral catheterization from patients suffering from pyelitis revealed no such structures, but instead leukocytes in varying stages of disintegration; (8) unless anomalies in the shape of malposition, neoplasms, calculi, diseases of the uterine adnexa, etc., the ureteral openings are easily seen by the practised operator, and catheterization is consequently easy. [H.H.C.]

5.—Kurth reports in detail the case of **bubonic plague** which occurred in Bremen during October, 1900. Clinically the case resembled a severe cellulitis of the cervical region, the spleen was only slightly swollen, and there was an entire absence of other glandular complications. The lungs were unaffected until just before death, when a slight infiltration of the right lower lobe occurred. The diagnosis was based entirely on the antemortem bacteriologic examination. [H.H.C.]

April 22, 1901. [38 Jahrg., No. 16.]

1. The Conservative Treatment of Purulent Adnextumors (Pyosalpinx, Pyoovarium) and the Results of Vaginal Incision. DÜRRSEN.
2. The Diagnostic Value of the Freezing Point of Blood. A. V. KORÁNYI.
3. A Case of Carcinoma of the Stomach with an Unusual Course. B. LEWEY.
4. The Splashing Sound in Atony. H. ELSNER.
5. The So-called Enteritis Membranacea. H. WESTPHALEN.

1.—Will be abstracted when concluded.

2.—Von Korányi, of Budapest, as a result of his investigations on the **diagnostic value of the freezing point of blood**, states that a freezing point of 0.56° , or at the highest 0.58° , is compatible with adequate renal function, but that 0.59° denotes a functional disturbance of both kidneys as far as insufficient respiration and acetoneuria are concerned. He finds that insufficiency of renal function may be due to reflex causes (unilateral renal pain, the other kidney being intact), or to mechanical causes (large tumors in the abdominal cavity, whether connected with the kidneys or not). In conclusion he condemns the careless technic and incorrect results of Waldvogel's work along the same lines. [H.H.C.]

4.—In his article on the diagnostic value of **splashing sounds** in cases of **atony of the stomach**, Elsner asserts that these phenomena are in themselves of indifferent value, except

when they occur at least 7 hours after a test meal or in an empty stomach—provided always that the stomach be in its normal position. Under these conditions splashing sounds may be regarded as a rather poor diagnostic substitute for the evacuation of the stomach contents by means of the stomach tube. Splashing sounds are never of diagnostic value in cases of gastropnoia. [H.H.C.]

5.—In the conclusion of his article on **membranous enteritis**, Westphalen reaches the following conclusions: (1) The separation of the so-called enteritis membranacea into 2 etiologically different groups (Nothnagel)—into an enteritis as the expression of an intestinal catarrh and into a colica mucosa, an intestinal neurosis—is scarcely possible. All cases of the disease should be regarded from a common etiologic standpoint. (2) The formation of the so-called enteritic membranes is probably due to a nervous hypersecretion of mucus in the intestine. (3) If the case be one of uncomplicated secretion—neurosis, abnormally copious quantities of mucus are evacuated. (4) If the case be complicated by spastic conditions of the intestine (obstipatio spastica), the excessive quantity of mucus is compressed and evacuated as a cord-like mass. (5) Should the evacuation of these masses be accompanied by intestine pain, we may assume (with Rosenheim) the existence of a concomitant sensory neurosis of the intestine. [H.H.C.]

Deutsche medicinische Wochenschrift.

April 18, 1901. [27 Jahrg., No. 16.]

1. Cardiac Neurosis. AD. SCHMIDT.
2. Defective Sugar-Oxidation in Organisms. P. MAYER.
3. The Adaptation of Plant Albumin for Food. E. ROOS.
4. A Rare Case of Hysteria. J. ARNETH.
5. The Origin of Aceton from Albumin. L. SCHWARZ.
6. The Determination of the Freezing Point of Blood in Abdominal Typhus. WALDVOGEL.
7. MAX V. PETTENKOFER. F. ERISMANN.

3.—Roos reports the results of a number of experiments in the use of **plantose**, a vegetable albumin derived from rape seed. It consists of a tasteless powder, light yellow in color and insoluble in water. He finds that its dietetic value is equal to that of meat, but that the best results in its use are obtained when given in connection with a plentiful supply of ordinary food. [H.H.C.]

4.—Arneth reports a remarkable case of **hysteria** in which, during inspiration, the epiglottis was drawn down over the entrance to the larynx causing marked dyspnea and cyanosis until the muscles relaxed at the end of each attack. [H.H.C.]

5.—Schwarz, in a paper on the **production of aceton from albumin**, states that, according to the investigations of Bhmen-thal and Neuburg, it cannot be proven that aceton is ever artificially produced from albumin by means of oxidation at body temperature outside of the body, but that this fact does not necessarily imply a like condition of affairs within the body. [H.H.C.]

Zeitschrift für Heilkunde.

February, 1901. [Vol. XXII, Part 2.]

1. Experimental Investigations Concerning the Principles of Detoxification (Entgiftung). ERNST VON CZYHLARZ and JULIUS DONATH.
2. Concerning Clinical Observation of the "Tension-Period" (Anspannungszeit), Based upon Retardation of the Pulse, and its Significance in the Diagnosis of Mitral Insufficiency. RUDOLPH SCHMIDT.
3. Malignant Tumors of the Lung. MAXIMILIAN WEINBERGER.

1.—Von Czyhlarz and Donath, from a review of the literature, conclude that it is generally conceded that the **liver possesses the power to diminish the toxic properties of various alkaloidal and other poisons**. To determine whether this power really belongs to the liver and whether a similar power is possessed by other organs, they performed 3 series of experi-

ments—71 in number. In the first series, mixtures were made of strychnin and different organs (liver, spleen, kidney, brain, and blood), and the mixtures were injected into lower animals. It was found that the poison was thus deprived of some of its toxic property—the loss being greater the longer the organ-emulsions were permitted to act on the poison before being injected into the animals. There was no marked difference in the detoxifying power of the different organs. It was noted, however, that the richer the emulsion in organ-cells the greater was the reduction of the poisonous power of the strychnin; whole blood also was active, whereas emulsions poor in cells and the blood-serum were inactive. In a second series of experiments, the liver, immediately it was removed from the body of an animal, was deprived of its blood, and through it was passed for a certain time a solution of strychnin. The strychnin solution was then injected into other animals with the result that it was found to have lost considerable of its poisonous properties. Thus was demonstrated that detoxification is a property of the organ tissues and is brought about without the intervention of the blood. In the third series of experiments, after ligating an extremity of an animal, strychnin in toxic doses was injected into the extremity. No ill effects resulted upon the removal of the ligature at the end of 4 hours—demonstrating that during life detoxification may be brought about through contact and interaction of the tissues and the poison. From the results of the experiments it is concluded that the liver possesses the power of reducing the poisonous properties of strychnin, but that this power is not characteristic of the liver alone, being possessed also by other organs. [A.O.J.K.]

2.—Schmidt refers to Martius' division of the ventricular systole into the closed-period (verschlusszeit) and the expulsion-period (austriebszeit), and to the later substitution of the term **tension-period (auspannungszeit)** for closed-period. Although used for the same period of the cardiac cycle, correctly both terms tension-period and closed-period are not interchangeable. Martius characterized the closed-period as that period of the cardiac cycle during which all of the valves are closed. Such being the case it has been held that in mitral insufficiency there could be no closed-period. Schmidt employing the term tension-period and basing his opinion upon clinical observations and theoretic considerations, believes that in mitral insufficiency not only is the tension-period present, but that it is also prolonged. He reports a case of mitral insufficiency and stenosis, aortic insufficiency, and tricuspid insufficiency with distinct heart-beat and apex-beat. He states that but little attention has been paid to **retardation of the pulse** as contrasted with the apex-beat, and he concludes that neither the apex-beat nor the heart-beat is dependent upon the presence of a closed-period and that neither occurs at the same time as does the closed-period; that paying attention to the retardation of the pulse as contrasted with the apex, is possible even clinically to observe marked prolongation of the tension-period; that in many cases of organic mitral insufficiency, both those well compensated and those developing acutely in the course of articular rheumatism, the pulse is markedly retarded after the apex-beat; that this retardation of the pulse is to be attributed to prolongation of the tension-period, and the prolongation of the tension-period to the mitral valves remaining open during systole; that this marked retardation of the pulse is no more pathognomonic of mitral insufficiency than is any one of the classic cardinal symptoms; that, nevertheless, in the combination of signs it deserves consideration and in difficult cases it may serve as a differential diagnostic sign between uncomplicated mitral insufficiency and murmurs occurring in anemia and after infections. [A.O.J.K.]

3.—Weinberger, referring to the varieties of **malignant tumors of the lung** that may occur, reports 2 cases of **primary bronchial carcinoma**. The first case, that of a man of 42, is interesting in that the course at first resembled that of tuberculosis. The diagnosis, however, was soon made with certainty by means of tracheoscopic examination. The second case, that of a man of 52, is interesting in that the diagnosis was made by means of microscopic examination of particles of the tumor that the patient expectorated. There is reported also a third case, that of a girl of 20, who suffered from a **lymphosarcoma**

of the mediastinum that invaded the lung by continuity of structure. The cases present additional interest in that besides the usual methods of examination the Röntgen-rays were made use of. Several radiographs are shown. By means of these it was possible to compare the pictures secured during life with the conditions found after death, and from this to draw various diagnostic conclusions. [A.O.J.K.]

March, 1901. [Vol. XXII, Part 3.]

1. Further Observations on Congenital Inguinal Hernias. CARL BAYER.
2. Inferior Peritoneal Adhesions. JOSEF ALTENEDEK.
3. Resection of the Esophagus with Primary Circular Suture on Account of Cicatricial Occlusion. TH. ESCHER.
4. Enteroplasty. TRNKA.
5. Contribution to the Diagnosis and Differential Diagnosis of Extra-uterine Pregnancy. JOSEF FABRICIUS.

1.—According to Bayer the congenital nature of an inguinal hernia is demonstrated when the sac of the hernia is made up of the nonobliterated or but partially obliterated processus vaginalis (hernia testicularis, hernia funicularis); when the spermatic cord is not a single cord, but when on the contrary, its various constituents—vessels, nerves, and vas deferens—are separated and repose in a small amount of adipose tissue; when the tissue surrounding the hernial sac is the unbroken, and not perforated cremasteric muscle; when, as an indication of persistence of embryonal conditions the aponeurosis of the external oblique muscle forms an unbroken, and not perforated membrane at the external inguinal ring; when because of the conditions just mentioned the external inguinal ring really does not exist; and when the hernial contents exhibit peculiarities with regard to the hernial sac, that permit of the supposition of primary failures of localization during development (heterotopia). The report of several additional and illustrative cases and a discussion of the subject are appended. [A.O.J.K.]

2.—Under the designation inferior peritoneal adhesions, Altenecker discusses a symptom-complex, which he believes presents a characteristic clinical and anatomic picture. Of clinical interest is the symptom-complex as given recently by Gersuny: Pain in the lower abdomen on both sides usually chronic constipation and increase of the pain, at times extreme colicky pain shortly before defecation, especially if the feces be inspissated; increase of the pain by bodily movements, and during menstruation; tenderness in the region of the appendix (McBurney's point), and at a corresponding point on the left side of the abdomen—pain in the region pressed upon and not in removed areas as occurs sometimes in chronic appendicitis; pain on coitus and vaginal examination. The results of objective examination are distinct in primary genital disease; in other cases they are absent or slight. In general, the palpation of the appendix is the only objective manifestation. Altenecker gives the results of the operative treatment of 42 cases, of which 35 were diagnosed correctly before the operation. One patient died. In only 33 of the remaining cases could the result be ascertained. Among these there occurred 13 cures, 18 improvements, and 3 nonimprovements. There follows a lengthy discussion of the etiology and pathology of the condition. [A.O.J.K.]

3.—Escher, referring to the cases of resection of the esophagus already reported and found by De Quervain in 1898 to be 14, reports a case—that of a woman, who had been suffering about 2½ years with gradually increasing difficulty in swallowing. Examination revealed occlusion of the esophagus due to a cicatrix about 1 cm. thick, on a level with the fourth tracheal ring. At operation 1.5 cm. of the esophagus was removed and the 2 ends of the esophagus brought together by circular suturing. The patient made a good recovery, and some months after the operation she reported that she could swallow as well as ever. The cicatrix was thought to be syphilitic. [A.O.J.K.]

4.—Trnka reports a case of extensive destruction of the cecum and ascending colon, in which it was found necessary to supply the defect with skin-flaps. This was done with complete success. For 8 days after the operation the intestines were kept empty, the patient being nourished with subcutaneous injections of oil; the following 8 days he was given liquid diet and then ordinary hospital diet. [A.O.J.K.]

5.—Fabricius, writing of the diagnosis and differential diagnosis of extrauterine pregnancy, states that the history of the case, the genital bleeding, the discharge of decidua, the cramp-like pains that sometimes occur, the growth of an adnexal tumor and the development of a hemocele are quite characteristic of extrauterine pregnancy. The adnexal tissues of the opposite side are usually normal. A ruptured extrauterine pregnancy or tubal abortion may be diagnosed when the dorsal vaginal wall is prominent and displaced to one side by a hard or sometimes semifluctuating tumor the size of a fist or child's head behind the uterus; when the somewhat enlarged uterus is displaced laterally and upward behind the symphysis, when its posterior wall cannot be marked out on account of the tumor and when the vaginal portion is discolored; when the adnexal tissues of one side are normal, whereas those of the other cannot be limited; when we ascertain that recently menstruation has been irregular and that the periods have been missed once or twice, or have been delayed, and that bleedings with or without decidual discharge have occurred; when the abdomen is enlarged and a resistance can be felt in the region of the symphysis or to one side thereof; when rectal examination reveals the organ displaced and its lumen constricted by compression. The differential diagnosis between retrouterine hemocele and conditions that may simulate it, such as retroflected uterus 3 months gravid, transitory amenorrhea with hematometra, cyst in Douglas' culdesac, soft myomas in Douglas' culdesac, further growth of an extrauterine pregnancy and parametric and perimetric exudates is detailed. Reference is also made to the fact that a gravid tube may become displaced either before or behind the uterus and simulate a pregnant uterus. Finally, reference is made to the features of pregnancy occurring in malformed uteruses, and to the fact that there occur cases in which, in addition to an intrauterine, there is also an extrauterine pregnancy. [A.O.J.K.]

April, 1901. [Vol. XXII, Part 4.]

1. Elongation of the Tubes Associated with Ovarian and Parovarian Cysts. HARRY LEPMAN.
2. Malignant Myoma of the Uterus. ANTON MASTNY.
3. Concerning the Relations Between Toxin and Antitoxin. RICHARD KRETZ.
4. Concerning the Anatomic Findings in Death by Strangulation and by Hanging. FRITZ REUTER.

1.—Lepman, as the result of prolonged investigations, concludes that the elongation of the tubes associated with ovarian and parovarian cysts results from the tubes participating in the general increased growth of the vicinity, and that a mild mechanic irritation may engender a marked hypertrophy of the longitudinal bundles, whereas, when a marked stretching occurs, the hypertrophy is associated with atrophy. [A.O.J.K.]

2.—Mastny, after a discussion of the literature, reports a muscular tumor of the uterus that assumed large dimensions and gave rise to numerous metastases in different organs. It is included among those rare cases of myomas of the uterus, in which the muscle tissue has lost its typical structure and, through the agency of some unknown influence, has become transformed into sarcomatous tissue—that is, round and spindle-shaped cells, between which there is but a fine connective tissue reticulum. It is believed that one is justified in designating such tumors as myoma sarcomatodes (Williams) or better, myoma malignum. [A.O.J.K.]

Endowment for the Roswell P. Flower Library.—In 1897 Governor Roswell P. Flower presented to Cornell University \$5,000 to found a library for the use of the New York State Veterinary College, and now Mrs. Flower has given \$10,000 to endow this library. With the books and periodicals purchased with the original gift and those which can be added from year to year by the income of the endowment, it is expected and believed that the Flower Library will become one of the best equipped libraries in comparative medicine in the world, and be not only of great service to the live stock interests of the country, but also in solving some of the interesting and important questions relating to the diseases common to men and animals.

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 17, 1901:

SMALLPOX—UNITED STATES AND INSULAR.

		Cases	Deaths
Arkansas:	Presentt.....May 8.....	5	
California:	San Francisco.....May 4-11.....	3	
Colorado:	40 counties.....Apr. 1-30.....	430	
Illinois:	Chicago.....May 4-11.....	9	
	Freeport.....May 4-11.....	2	
Iowa:	Clinton.....May 4-11.....	1	
Kentucky:	Lexington.....May 4-11.....	8	
Louisiana:	New Orleans.....May 4-11.....	10	
Massachusetts:	Boston.....May 9.....	1	
	New Bedford.....May 14.....	1	
Michigan:	Detroit.....May 4-11.....	1	
	Grand Rapids.....Apr. 29-May 11.....	6	
Nebraska:	Omaha.....May 4-11.....	18	
New Hampshire:	Manchester.....May 4-11.....	8	
New Jersey:	Camden.....May 4-11.....	1	
	Newark.....May 4-11.....	3	
New York:	New York.....May 4-11.....	107	19
Ohio:	Cincinnati.....May 3-10.....	8	
	Cleveland.....May 4-11.....	32	
	Dayton.....May 4-11.....	1	
Pennsylvania:	Philadelphia.....May 4-11.....	3	
	Pittsburg.....May 4-11.....	7	
Tennessee:	Memphis.....May 4-11.....	27	2
	Nashville.....May 4-11.....	8	
Washington:	Tacoma.....Apr. 27-May 4.....	2	
West Virginia:	Huntington.....Apr. 13-May 11.....	27	
Wisconsin:	Milwaukee.....May 4-11.....	1	
Porto Rico:	Ponce.....Apr. 22-29.....	3	

SMALLPOX—FOREIGN.

China:	Hongkong.....Mar. 23-Apr. 6.....	22	17
Colombia:	Panama.....Apr. 29-May 6.....	4	1
France:	Paris.....Apr. 22-27.....	1	20
Germany:	Bremen.....Apr. 13-20.....	1	
Great Britain: Eng., Scotland:	Sheffield.....Apr. 13-20.....	1	
	Glasgow.....Apr. 26-May 3.....		3
India:	Bombay.....Apr. 8-16.....		6
	Calcutta.....Mar. 27-Apr. 13.....		339
	Karachi.....Apr. 7-14.....	3	3
	Nadras.....Mar. 30-Apr. 5.....		5
Italy:	Naples.....Apr. 22-29.....	149	30
Mexico:	Mexico.....Apr. 28-May 5.....	1	
Russia:	St. Petersburg.....Apr. 13-20.....	13	1
Spain:	Corunna.....Apr. 1-30.....		2

YELLOW FEVER.

Cuba:	Havana.....Apr. 23-May 4.....	1	
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CHOLERA.

India:	Bombay.....Apr. 8-16.....	3	
	Calcutta.....Mar. 23-Apr. 13.....		194

PLAGUE.

China:	Lain Ko district.....Feb. 14-Mar. 26.....	10,000	
India:	Bombay.....Apr. 8-16.....	681	
	Calcutta.....Mar. 23-30.....	2,557	
	Karachi.....Apr. 7-14.....	229	214
Japan:	Nagasaki.....Apr. 19.....	1	1

On Japanese steamship Taichu Maru.

Changes in the U. S. Marine-Hospital Service for the 7 days ended May 16, 1901:

GODFREY, JOHN, surgeon, upon being relieved by Surgeon J. J. Kinyoun, to proceed to Wilmington, N. C., and assume command of the service, relieving Surgeon T. B. Perry—May 11, 1901.

WEADIN, EUGENE, surgeon, to proceed to Gardner, Ill., for special temporary duty—May 14, 1901. Bureau order of May 14, directing Surgeon Weadin to proceed to Gardner, Ill., revoked—May 14, 1901.

PERRY, T. B., surgeon, upon being relieved from duty at Wilmington, N. C., to proceed to Baltimore, Md., and report to medical officer in command for duty and assignment to quarters—May 11, 1901.

WOODWARD, R. M., surgeon, granted 10 days' extension of leave of absence—May 13, 1901.

YOUNG, G. B., passed assistant surgeon, granted leave of absence for 2 months and 22 days from May 30—May 9, 1901.

STIMPSON, W. G., passed assistant surgeon, to proceed to Guthrie, Oklahoma, for special temporary duty—May 14, 1901.

MYDEGGER, J. A., passed assistant surgeon, granted leave of absence for 1 day—May 15, 1901.

GREENE, J. B., passed assistant surgeon, granted leave of absence for 10 days from May 13—May 14, 1901.

FOX, CARROLL, assistant surgeon, to proceed to Sitka and Juneau, Alaska, for special temporary duty—May 10, 1901.

TURNBURY, F. J., assistant surgeon, relieved from duty at Chicago, Ill., and directed to proceed to Dutch Harbor, Alaska, and assume command of the service—May 16, 1901.

DUFFY, FRANCIS, acting assistant surgeon, granted leave of absence for 2 days from May 21—May 16, 1901.

ULRICH, C. F., acting assistant surgeon, granted leave of absence for 12 days from May 14—May 10, 1901.

MASON, M. R., hospital steward, relieved from duty at San Francisco, Cal., and directed to proceed to Dutch Harbor, Alaska, and report to Medical officer in command for duty—May 16, 1901.

Changes in the Medical Corps of the U. S. Army for the week ended May 18, 1901:

GRANDY, Major LUTHER B., surgeon, recently appointed, now at Atlanta, Ga., will upon the expiration of the leave granted him May 1, proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

WILKINSON, Captain H. BROOKMAN, assistant surgeon, recently appointed, is granted leave to include June 7.

HALLOCK, Captain HARRY M., assistant surgeon, is granted leave for 3 months, from about June 1.

BLOCK, Captain WILLIAM H., assistant surgeon, is granted leave to include May 29.

CUTLIFFE, Captain WILLIAM O., assistant surgeon, recently appointed, is relieved from further duty in Porto Rico, and will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

CUTLIFFE, Captain WILLIAM O., assistant surgeon, is granted leave for 1 month.

MENAGE, H. E., acting assistant surgeon, is granted leave for 1 month, with permission to apply for an extension of 1 month.

MASON, Captain CHARLES F., assistant surgeon, upon the completion of the duty assigned him May 7, will proceed to Fort Sam Houston, for duty to relieve Lieutenant-Colonel Charles B. Byrne, D. S. G. Lieutenant-Colonel Byrne will proceed to St. Paul, Minn., and report to the commanding general, department of Dakota, for duty as chief surgeon of that department.

CARLING, Captain JOHN, assistant surgeon, leave granted May 1, is extended 1 month.

MASON, GEORGE L., contract dental surgeon, will proceed from Cambridge, Mass., to San Francisco, Cal., for transportation to Manila, P. I., where he will report for assignment to duty.

WILKINSON, Captain H. BROOKMAN, assistant surgeon, now at Bishopville, S. C., will upon the expiration of the leave granted him May 11, proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

SILMER, First Lieutenant IRA A., assistant surgeon, is granted ordinary leave for 1 month, to take effect upon the expiration of his present sick leave.

Changes in the Medical Corps of the U. S. Navy, for the week ended May 18, 1901:

DIEHL, Surgeon O., detached from the Indiana, upon reporting of relief, and ordered to the League Island Navy Yard, immediately.

BIDDLE, Surgeon C., detached from the League Island Navy Yard and ordered to the Indiana, immediately, as relief of Surgeon O. Diehl.

WISE, Medical Director J. C., appointed member of a board for the physical examination of candidates for appointment to the Naval Academy, May 17.

GROVE, Passed Assistant Surgeon W. B., order appointing him a member of a board for the physical examination of candidates for appointment to the Naval Academy, May 17, revoked.

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\$4.00 PER ANNUM.

The Disunity of the New York Profession is most regrettable. Whatever may be the judgment as to the causes that led to the result, there is but one feeling as to its continuance. So great are the evils of division and sectarianism that the entire profession will not long tolerate them, whatever justification or excuse may be offered. In the face of our reiterated scorn of sectarianism as to schools, so-called, of medicine, it is clear self-stultification to encourage or permit the thing itself among ourselves. The astonishing fact that over 67% of the members of the State Association hold membership in the county societies (the basis of the rival organization) is proof that the individual physicians concerned do not themselves look upon the sectarianizing logic as a very serious affair. There sometimes comes a time in the wrangles of men and societies when principle demands the surrender of principle. The higher principle must supplant the lower. We do not say either controversialist is right or is wrong. We take no side, because we think that so long as there are "sides" so long is the higher duty of unity not triumphant. With disunity the profession cannot secure the legislation imperatively demanded. Lawmakers only await our common single-voiced request. No state can have rival representatives in Congress, and so this controversy prevents a proper representation in our medical congress, the American Medical Association. Professional disunity is professional sin.

The Need of a Reorganization of the Business Work of the American Medical Association has been alluded to in previous editorials and we last week copied the outlines of a plan to bring this about which has been reached by a committee appointed for this purpose. Even in 1887 a similar committee concluded that "The desirability of having more time and deliberation given to the purely business matters of the Association by a properly organized council or standing committee on business, has long been recognized by all the more experienced members of the Association; and various plans have been suggested from time to time without leading to any definite action." At this time there were only 3,278 members. How much greater is the desirability now! The work of the present committee has been onerous and most conscientiously done. Doubtless there will be differences of opinion as to details, but as to the wisdom of the large principles stated and suggestions made, there should be a general accord of the members.

It is evident that the fundamental needs of the professional unity and association efficiency have been present in the minds of the committee as the guiding principles and motives. Their plan, we believe, will bring about the realization of these things. Surely it is only by means of some such a reorganization as the committee have proposed can there be, as it says, "Good reason to hope that in five years the profession throughout the entire country may be welded into a compact organism, whose power to influence public sentiment will be almost unlimited, and whose requests for desirable legislation will everywhere be met with that respect which the politician always has for organized votes. With the Association in constant, personal, definite, and essential touch with each State medical society, and through them with the societies in every county, the profession of medicine can at no distant day demand and receive that respect from law-makers, from government officials, and from the general public to which it is admittedly entitled by reason of its ideals, its education, and its power for doing good to all mankind."

Vacation Schools.—Sixteen years ago, a physician, Dr. Win. N. Barringer, then Superintendent of Schools at Newark, N. J., proposed, and the citizens of Newark accepted, the plan of vacation schools. Since that time one city or community after another has followed the excellent example, until now there are probably a score or more in which it is in practical working. Nature-study, cooking, wood-carving, bent-iron work, drawing, painting, basket-weaving, cane-seating, athletics, are some of the subjects taught. The women's clubs have been most active in encouragement of this progressive movement. Physicians will certainly help to make it general, and see that proper athletics and physical culture are parts of the program. Such schools, rightly managed, are surely great preventives of disease, and helpers in establishing a high grade of healthful life. Coupled with the vacation playgrounds they constitute a powerful sanitary as well as moral influence for the betterment of the lives and bodies of the coming generations.

State Regulations Concerning Tuberculosis.—Dr. Walter Wyman requested the health officers of the States and Territories of the United States to inform him concerning the laws in force as to the registration and notification of tuberculosis. No replies from Georgia,

Kentucky, Missouri, New York, Oregon, Tennessee, Texas, District of Columbia, Alaska, Arizona, Indian Territory, New Mexico and Oklahoma were received. In the States not listed below there is no law as to registration and notification. In the following States the conditions are as follows:

Their ingenuity and pertinacity in infesting all ships and the unsanitary quarters of all cities is most remarkable. The medical commission of the Japanese Government says that to avoid the spread of bubonic plague, rats must be exterminated. But this is plainly an almost impossible task. It would, however, seem possible to

STATES.	NOTIFICATIONS.	SANITARY MEASURES.	REMARKS.
Indiana.....	Required to be reported.....	Not quarantined.....	The State board, under the health law of Indiana, is given power to pass rules and ordinances for the enforcement of the act to prevent outbreaks and the spread of contagions, infectious and other diseases.
Kansas.....	No State law bearing directly on the subject. A statute exists, granting authority to the municipalities to make the necessary regulations to prevent the spread of epidemic diseases. Notification is required at Topeka.		Under the statute named, ordinances may be passed requiring such notification.
Maine.....	Cases required to be promptly reported.	Not subject to quarantine or isolation. Disinfection is advisory when the family owns the house; compulsory when the house has been vacated by a family in which the disease has occurred.	Local boards of health are instructed and advised by the State board to furnish families in which tuberculosis is present with the circular of the board, giving instructions relative to precautions against the spread of infection.
Massachusetts.....	Physicians and householders are required to notify the local board of health of each case of disease dangerous to public health. The interpretation of the phrase is left to the discretion of each local board.		
Michigan.....	Phthisis pulmonalis is being reported.		A statute law exists relative to notification of cases of sickness from certain diseases. Phthisis pulmonalis has been declared by the State board to be a disease dangerous to the public health. A test case is before the State courts to judicially determine whether or not phthisis pulmonalis comes within the meaning of the statute.
New Jersey: Asbury Park, Montgomery, Trenton.	Ordinances requiring notification of cases of tuberculosis have been enacted.		
Washington.....	Practising physicians in cities of the first and second class are required to report each case of tuberculosis which has been attended by them, or which has come under their observation.	Each patient, or the head of the family, shall be furnished with printed rules for the prevention of the spread of communicable diseases. The local board shall see that the premises occupied by said patient are kept in a sanitary condition. Within 5 days after death or removal of said patient, the board shall see that the premises are properly disinfected.	Failure to comply with Section 1 of the act for preventing the spread of tuberculosis which requires a report of cases of said disease is subject to fine.

The Extermination of Rats, because they are the carriers of plague-infection, seems fast becoming a duty of all civilized governments. The Local Government Board of England recognizes this fact in a circular to the sanitary authorities, on the risk of importing the disease by means of ships infested with plague-infected rats and the precautions necessary to prevent such introduction. On other grounds it would be well if these justly detested animals could all be killed. These pests have been supposed to be scavengers, but the answer to the plea is that the filth upon which they live is unnecessary, and even a danger.

Simond believes the infection is due to the fleas with which rats are commonly infested; but Dr. Nuttall, who has made an extensive study of the subject, claims that his researches do not bear out Simond's theory. Professor Ashburton Thompson, in an account of the plague in New South Wales, says that he is convinced the disease reached Sidney through the rats on vessels from Noumea, at which place plague existed. His investigations lack a connecting link between rats and man, and the hypothesis that infection is conveyed by a suctorial insect infecting rats and transferable to man would furnish this link. Certain it is that rats are easily inoculable, and that they do carry the disease over the world.

kill them on ships from infected ports. An effective method of doing this has been suggested by means of sulfurous acid forced into all parts of the vessel for twenty-four hours.

Experimental Production of Cirrhosis of the Liver.—There are many problems in connection with cirrhosis of the liver that require elucidation, the two most interesting being the etiology and the ultimate pathogenesis. The solution of either one of these will greatly help us in solving the other. It is still unknown whether the first change produced by the morbid agent affects the liver-cells or the connective tissue. When a typical example of atrophic, or Laennec's, cirrhosis, is examined, the first impression is that the connective tissue bore the brunt of the attack; but there are many points which suggest that primary chronic interstitial inflammations are exceedingly rare, and that when we find inflammatory changes in the connective tissue, they are the expression of a reaction secondary to changes in the parenchyma or higher tissues. The experimental evidence in proof of this explanation of interstitial inflammations is still meagre. In connection with the liver, Charrin was one of the first to produce interstitial inflammations. He employed pyocyanus for this pur-

pose. Flexner obtained cirrhotic changes in the livers of animals after the injection of toxalbumins of bacterial, vegetable and animal origin. Weaver employed a bacillus belonging to the colon group, and Hektoen, the colon and pseudodiphtheria bacilli. Flexner's experiments seemed clearly to show that the cirrhotic changes were a secondary reaction—an attempt on the part of the liver to repair necrotic changes in its parenchyma. By employing antipyrin in small doses over a long period, Marekwald has succeeded in producing in frogs a fairly typical picture of interstitial hepatitis. He was able to prove that the inflammation was not primary, but was caused by an antecedent degeneration in the liver-cells. When he took starving frogs, the only change obtained was an extensive degeneration of the liver cells, without reaction of the connective tissue; when, however, he fed the frogs—he had accustomed twelve of them to live on meat—an inflammatory process in the connective tissue was superadded to the degeneration of the liver cells. Marekwald explains the difference in the reaction between the starving and the well-fed frogs, as being the result of the depression of the vital functions in the former, so that the liver was incapable of reacting with the production of new cells.

There is, of course, a wide abyss between the frog and the higher mammals, and it would not be proper to apply the results obtained in the former to the explanation of cirrhosis in man; but the unity of the inflammatory process in the animal world, the demonstration of which we owe to the magnificent studies of Metchnikoff, permits the belief that the results of animal experiments may, with proper limitations, be employed in the explanation of morbid processes in man.

The extermination of birds is not alone the work of fashionable vanity but of fashionable gluttony. The recent seizure in a New York cold-storage warehouse of great numbers of dead birds during the close season illustrates the easy evasion of the law by those careless of consequences. In hotels travelers often find upon the bills of fare the names of birds unknown to ornithologists and dictionary-makers. When asked what kind of birds these represent the waiters are permitted to answer only by smiles and silence, or by confessions of ignorance. In the cold-storage house in New York were found so many birds that the legal fines would have run to millions of dollars. What would they amount to for the United States? As a result of such practices everywhere those butchers and dealers who obey the law are really punished for their honor while the reckless are rewarded by great profits. We are fond of pointing out excellent spheres of work and usefulness for those who are greatly troubled by a few deaths of animals in scientific laboratories. Why should this stupid and ruinous war of extermination of birds with its great resultant suffering not arouse the energies of the S. P. C. A.?

Summer Play-Schools.—In Europe, play-schools for city children have long been organized under the guidance of competent teachers, and in American cities more recently the same excellent plan is being started.

In New York it is to be carried out with more thoroughness this summer than ever before. Last year as many as 1,000 children in the city were taught to swim, and the School Board will issue certificates of proficiency to these. The schoolhouses and yards are to be utilized for carrying on instruction in sewing, modeling, wood-carving, in kindergarten and household work. Gymnasiums are also planned. In Boston last summer 20 school yards were used by 3,800 children. What a great influence for health, good morals and a better life must be exerted by such methods of getting children out of the hot, crowded streets, with their evil associations of all kinds. It is an unselfish charity—one that prevents disease as well as cures it. The School Boards of the country have in this scheme a noble opportunity to do a great work for the betterment of their communities, not only educationally but also physiologically and sociologically.

Arsenic Poison in Beer-Drinkers.—Drs. T. N. Kelynaek and William Kirby, of Manchester, have recently published an interesting work on Arsenic Poisoning in Beer-Drinkers (London, Baillière, Tindall & Cox. 1901. Svo., pp. 125, with Bibliography), based upon the epidemic of last summer among the habitual consumers of beer in England, especially in Manchester and vicinity.

The fact that peripheral neuritis among alcoholics has been for years past a prolific cause of paralysis in Lancashire had something to do with the fact that suspicion of arsenic poisoning was not aroused until the cases of so-called "alcoholic paralysis" had become so common in June, 1900, as to constitute an epidemic. Unfamiliar symptoms, such as pigmentation of the skin, soon led to the suspicion that something was "wrong" with the beer, especially as the patients themselves held the beer to blame; but the suggestion that the poisoning was due to arsenic was not made until November, by Dr. Reynolds. It required but a few hours to confirm his suspicion and this confirmation was followed by thorough scientific investigation covering over 300 cases in Manchester alone. The majority of cases occurred among the working classes; but individuals of both sexes and all ages were afflicted. No cases occurred among drinkers of whisky or brandy, the epidemic being confined to consumers of beer and stout.

The patients complained of prickling sensations in the extremities, great weakness, thickening and desquamation of the skin, alteration of the nails in transverse ridges, eruptions, cold in the head, and especially of pigmentation of the skin. Walking was painful and difficult in most cases, there was marked mental sluggishness, loss of flesh, erythromelalgia and other manifestations of peripheral neuritis. In the majority of cases improvement began at once when the contaminated beer was stopped.

Previous to this epidemic there seems to have been no indication in medical literature that arsenic was ever considered as a possible impurity in malted beverages, and this lack of suspicion together with the frequency of alcoholic paralysis and the delicacy of the available methods for the detection of small quantities of arsenic in organic fluids undoubtedly accounts for the

extensive spread of the epidemic before the detection of its cause.

The use of glucose and invert sugars by English brewers appears to be the rule; in some instances as much as 50% of the malt was found to be substituted by sugar. The general practice of using arsenic pyrites in the manufacture of the sulfuric acid employed in the preparation of glucose, whereby the acid is contaminated with arsenious acid to the extent in some instances of 1.4% of its weight, lay at the foundation of the difficulty, the arsenized glucose carrying with it as high as 2 grains of arsenious oxid to the gallon of beer.

This English epidemic calls for a close inspection of glucoses by Board of Health chemists generally, for the hitherto unsuspected danger of arsenic contamination of malt beverages and of "soft" drinks in which glucose is used, inasmuch as it is clear that cases of chronic arsenic poisoning among the poorer classes and alcoholics may exist over very considerable periods without detection and without becoming epidemic.

The Medical Department of the Philadelphia High School for Girls was established in 1893. Prior to this time the attendance of any physician was depended upon in an emergency, so that much time was lost and the uncertainty of obtaining assistance was great. In 1893 the services of a graduate of the Woman's Medical College were secured. The duties of the head of the Medical Department constantly increased from one hour a day to the continual attendance from the opening of the school at 9 a. m. until the close of the session at 2 p. m.

At the beginning of each school year in September all vaccination certificates and scars are examined; in doubtful cases a certified re-vaccination is required. Teachers at the beginning of each morning session inquire whether any student is suffering from sore throat, headache or other ailment; all such are at once referred to the Medical Room. A daily record of students sent to the Medical Room is carefully kept. Any student with a temperature of 100° is detained in the "sick room" until the temperature becomes normal. If a rise takes place the student is sent home in a carriage. On stormy days students who have wet shoes, stockings or skirts are required to report at the Medical Room, where dry garments are provided. All wet clothing is dried in a room prepared for the purpose, and is made ready for the student at recess in the Medical Room at noon. Every part of the entire building is thoroughly cleansed daily. The bannisters and desks throughout are carefully cleansed each day with antiseptic solution. The drinking water is filtered, then sterilized, and the ice is made from sterile water. The sanitary condition of the toilet rooms is excellent. There are now individual compartments, where formerly there were congregate rooms.

The medical department is ideal in location, having a south and east exposure, with a good supply of sunlight, while its situation, back of the "library," insures all the quiet necessary. This room is supplied with all that is required for any emergency that is likely to occur. There is an ample supply of filtered water and

appliances for obtaining boiling water. The department is provided with four wicker couches with cushions covered with linen slips; the latter are frequently removed and laundered, while the cushions themselves are detached, shaken and placed in the sunlight. A part of the engine room space is used for drying clothing, etc.

That the work of the department has been greatly appreciated is evident by the letters and personal visits from parents and physicians of the students. The number of students on roll during one school year was 3,402, with a faculty of 87 teachers. During the year 2,233 students were referred to the medical room: 702 with headache, 137 with sore throat, 127 with toothache, 531 with dysmenorrhœa, 21 with epistaxis, 45 with diarrhea, 26 with earache, 139 with indigestion, 150 with nausea, 99 with hysteria, 21 with grip. *Accidents*: Dislocations (minor) 3; sprains, 18; burns (slight), 11; scalds (slight), 3; splinters, 54; contused wounds (slight), 28; lacerated wounds (slight), 34; incised wounds (slight), 4; punctured wounds (slight), 4; poisoned wounds (slight), 3; foreign bodies in eye, 49; foreign bodies in ear, 1. *Contagious Diseases*: Measles, 6; scarlet fever, 2; ringworm, 1; pediculosis capitis, 9. Seventy-four were sent to their homes.

Syndicating the specialists has been attempted in Birmingham, England, where an institution with five specialist consultants has been formed. The English profession has "resolved" against the scheme, and has already secured the resignation of one of the consultants. In the United States the same plan has been tried, and has, of course, failed. It would seem to many at first, as if it would be of advantage both to the patients and to the physician. In reality it can work nothing but injury to both. The reason lies in a fact we must ever relearn after the sorry forgetfulness of it has harmed us all. This fact is the old truth that money-getting as the primary object of the physician's life and work destroys his therapeutic ability and scientific judgment. The relation of the physician to the patient is an intensely personal one, and at the touch of the corporation's impersonality, it is withered as by a poison. The financial reward in a moderate degree must be secured, but only as secondary to the ideal of healing and preventing disease. Watch the medical man in whose mind and ideals money or personal success is slowly or rapidly supplanting the nobler professional aim, and we as surely recognize his loss of the power to cure, a paralysis of the deft touch, the shirking, averted, or overbold gaze, the coarsening of word and action, the failure of the healing art. Syndicating specialism multiplies geometrically the degrading selfishness of the individual.

Two Methods of Treatment are illustrated by two excerpts from a recent number of the same New York newspaper:

"Dr." David R. Jenkins, a negro, who was arrested at his office, No. 249 Sixth avenue, some time ago, at the instance of the County Medical Society, for practising medicine without a license, pleaded guilty in the Court of Special Sessions to-day. He did a good business with the colored population, posing as a "voodoo" doctor. When he pleaded guilty, Jenkins said:

"The only thing in God's world that I give my patients is Croton water. I put up Croton water in various kinds and

sizes of bottles and call each one by some different name. The coloring matter is the same as they use in making candy, and don't hurt any one. Croton water is just as good to cure rheumatism, diphtheria, cholera, or any other kind of disease, as anything. It don't hurt the patients, anyway."

The Christian Scientists have opened an institute in Brooklyn. The institute might be called a "Christian Science Hospital," for twenty healers are attached to it, and healing will be the chief work done. Nine fine rooms in the new Temple Bar Building have been engaged, and every sign of prosperity is displayed.

It will also be remembered that a year or two ago almost all aristocratic and educated England poured wealth into the pockets of a medical nostrum company, and the only medicine used by this company was proved to be simply water. Which is the greater criminal, the humbuggers or the humbugged? Of the former, our sympathies would be with the Voodoo doctor, and yet he is the only one who was punished. As to the dupes—they surely have their proper reward!

The Antitoxic Properties of Bile.—Among the means of protection possessed by the organism against infectious diseases and toxic agencies, laboratory investigation has recently placed the bile; but, as is true of so many other facts in medicine, empiric knowledge anticipated scientific discovery. Thus, the natives of Africa, according to Fraser, have long known the value of serpents' bile as an antidote in the treatment of snake-bites, and among the natives of Bengal it has been a custom, centuries old, to employ the liver of mad dogs as a protective agent against hydrophobia. In a letter to the *Gazette hebdomadaire de Médecin*, a French traveler writes as follows:

About three months ago a mad dog bit six or seven persons, among whom were two of my porters. I ordered bits of iron to be heated white-hot for cauterizing the wounds; but the natives said to me with a laugh, "Oh, Sahib, that is nothing; we have an excellent remedy for hydrophobia; you shall see." The mad dog approached again; one of the natives took a club and killed the animal. Another opened its body, took therefrom the palpitating liver, cut it into small bits, and gave them to the wounded man, who ate them raw. "There is no more danger," they said to me. As I remained incredulous, they brought me to a young man who bore large scars on his legs. He had been bitten five years before by a mad dog, but had eaten a raw piece of the animal's liver, and had felt no ill effects.

These events took place in March and it is now July 3. The wounds are cured and all the men continue to do well. Our natives even assert that their remedy will cure a man after he has been attacked by the disease.

Wehrmann found by experiment that bile destroys the toxic properties of ecl serum and of snake venom, but that it apparently has no protective or curative properties. The active antitoxic principle of bile was found by Phisalix to be the taurocholate, and especially the glycocholate, of sodium.

The important experiments of Fraser are well known. He found that the bile of both poisonous and non-poisonous serpents counteracts the toxic effects of snake venom. Oxgall has similar properties, but was estimated to be 70 times weaker than the bile of poisonous serpents. The bile also neutralizes diphtheria toxin; but, as Fraser's experiments show, only when it comes from the same species of animal as that injected with the toxin.

Perhaps the most interesting observations connected with the antitoxic properties of bile are those made by Koch in his study of the rinderpest in South Africa. It was found that cattle can be immunized when injected with the bile of animals that have died of rinderpest on the fifth or sixth day of the disease. The protection conferred lasts for a period of four months. Kolle and Turner have, however, improved upon Koch's method of immunization: by the injection of virulent rinderpest blood and of serum from animals that have recovered from the disease they have obtained an antitoxic serum that is much more powerful than bile. Kolle is of the opinion that the antitoxic properties of bile are not due to the presence in it of any soluble poison or antitoxin, but that with the bile are introduced microorganisms of the disease which grow at the point of inoculation, their dissemination being prevented by the action of the bile on the surrounding tissues. In other words the immunity is *active*, analogous to that conferred by vaccination against anthrax, and not passive, as is the immunity obtained by means of antitoxins against diphtheria and tetanus.

Vincenzi found that the bile of animals suffering from tetanus is able to antagonize a certain amount of tetanus toxin, while the bile from healthy animals is devoid of such property. That the bile has also the power of neutralizing certain poisonous alkaloids, was shown by Arnold. This investigator injected a series of frogs with varying doses of strychnin, and recorded the onset of convulsions, the severity, duration, and the time within which death occurred. Another series of frogs were injected with the same doses of strychnin mixed with fresh frogs' bile; a third with similar doses of strychnin mixed with oxgall; and a fourth, with bile alone. The frogs that had received the strychnin mixed with bile survived doses of strychnin which were surely fatal when given alone. The symptoms appeared later and were less severe. The fresh frogs' bile was more active than the ox-bile. None of the frogs died after the injection with bile alone. The bile was excreted rapidly in the urine. Finally, strychnin was mixed with fresh frogs' bile and allowed to stand for three hours. At the end of this period, strychnin could not be found by the ordinary chemical tests.

In connection with the subject of the antitoxic action of bile, it is interesting to note that the theory, so long maintained, that bile in the intestines exerts antiseptic properties, is not supported by recent investigations. Albu and others have shown that the reputed antiputrefactive property of bile is a myth. Mosso likewise demonstrated that bile has no power to arrest putrefaction, although in his experiments it seemed slightly to hinder the growth of bacteria. Whatever influence the bile possesses upon putrefactive processes in the intestine is indirect. It stimulates peristalsis, and thus shortens the time during which proteid substances are exposed to the action of intestinal bacteria. The writer has more than once noted in cases of catarrhal jaundice, in which the common duct was so completely obstructed that no bile whatever entered the intestines, that the stools were by no means unduly offensive.

Important researches upon the enzymes have been made by Professors H. W. Harper and J. K. Kastle. There are over fifty of these mysterious bodies known of which pepsin, ptyalin, trypsin and invertin are examples. Professor Harper thinks their wonderful power of inducing chemical changes in other substances without apparent change themselves is due to the vibrations of the ether-waves which they set up and which correspond in period with those of the fermentable substance. This theory of sympathetic vibrations coordinates the mechanism with that of the action of light, electricity, etc.

The transports from unsanitary and infected Cape Town are conveying bubonic plague to Southampton, Sydney, Port Elizabeth, and Western Australia. The English authorities have at last been compelled to undertake the segregation of the Kaffirs at the point of the bayonet. Up to April 27 there had been 319 cases with 217 deaths from plague at Cape Town. In modern life the *furcâ* of the old Latin proverb, *Naturam expellas furcâ*, etc., may often be translated *bayonet*.

Another physician's strike has taken place at Bamberg in Bavaria, where the physicians were treating 800 members of a *Krankenkasse* at the rate of seven cents per visit. A quack hypnotist turned the heads of the members of the Association by his abuse of the medical profession. The mountebank was not acceptable as a colleague, according to the demand of the majority of the members, and the physicians threw up their contract.

Recent investigations have demonstrated that the localization of sound by the ear is due not to the intensity but to the quality, or overtones, of the waves. In monaural hearing the localization is accurate in proportion to the complexity of the overtones. In binaural hearing the ear nearer the sound-producing point, or which more perfectly brings the waves to a focus, indicates the direction and distance.

The efforts of the Philadelphia Pediatric Society to secure pure milk for children by guaranteeing the purity of the milk of certain dairies inspected by its experts, are being widely commended. The society wisely appeals to the love of profit in the dealers competing for the society's guarantee rather than to laws and punishments.

Two French scientists report that of twenty-seven guineapigs kept in disinfected cages, fed upon sterilized food, and allowed only sterilized air, nineteen died. Of twenty-nine others treated the same way except that there was no sterilization of food and air, only ten died. The latter also lost less in weight. But why did the ten die?

It is plainly evident that the anti-canteen controversy is developing into a condition in which a desire to verify prejudice and prove "I-told-you-so" is the motive of both sides: rather than the good of the soldier, or of the service. We hope soon to see a dispassionate and scientific settlement of the vexed question.

EDITORIAL ECHOES

The Role of Fat in political physiology cannot be summed up in a simple formula; but for practical purposes it will be found tolerably safe to assume that thinness makes for revolution and fleshiness for repose, which, expressed in terms of politics, means Conservatism. The ideal demagogue is lean—*tourmenté par son caractère*, as Madame de Staël said Napoleon ought to have been. A man who has a full round belly, with good capon lined, is by the law of his physical being a Conservative, whose principle is *Quies non movere*, though he may delude himself and others with the fancy that he is a Radical. Those of our American friends who think that the well-being of the United States depends on the maintenance of a republican form of government will do well to take steps at once to repress the tendency to abdominal expansion among their citizens, or they may live to see the President transformed into an Emperor.—[*British Medical Journal*.]

Sanitation of Churches.—According to the *Revue Scientifique* of April 27 one of the Italian bishops, Monsignor Franceschini, has sent to the clergy of his diocese a circular enjoining them to adopt sundry sanitary precautions in their churches. Immediately after saints' days, when the congregations have been large, the paved floors are to be cleansed with sawdust soaked in a solution of corrosive sublimate (1 in 1,000). On ordinary occasions the floors are to be frequently swept, after a preliminary sprinkling with water in order to avoid raising dust. Every week or oftener the seats and confessional boxes are to be dusted with damp sponges and cloths. Every week or oftener the grilles of the confessional boxes are to be cleansed with alkaline lye and afterwards polished. The holy water fonts are to be emptied every week, or oftener if necessary, and washed either with boiling alkaline lye or with solution of corrosive sublimate (1 in 1,000).—[*The Lancet*.]

The County Society should have on its roster the name of every regular practising physician of good standing in the county, and each should consider it his duty as well as privilege to be a member of that body. It is by means of the State body acting through the immediate and local influence of the county organization that the power of the profession will be made felt, and through that agency more than any other will it be able to command the respect and consideration that society in general owes to it. The county society will have the additional influence of promoting a better acquaintance among its members and of breaking down that condition of selfishness that too commonly arises when one busies himself solely with his own affairs and takes no interest in the general welfare of his profession. It promotes a better understanding of each other, elevates professional regard, and stimulates the interest in the work of the State organization.—[*St. Louis Courier of Medicine*.]

Temperance Physiology in the Public Schools.—We are glad to note the signs of revulsion against the extreme temperance reformers, who have by the trick of their laws forced so much nambypamby stuff into the schools under the head of physiology. Bugaboo morals are the most childish and the soonest outgrown. We deplore the absolute ignorance of American teachers as well as children, concerning the fundamental laws of health, and we wish most heartily that temperance in the matter of eating, of tea- and coffee-drinking, and common sense concerning fresh air, exercise and sleep, as well as the economic value of foodstuffs, might be particularly taught in schools; but so unfair has been this temperance movement, and so great have been the exaggerations perpetrated on an unwary public, that we fear

the influence that the schools should have on all matters of public health, including the dangerous effects of intoxicating drinks and tobacco, will be greatly diminished. Already Western educators are opposing the teaching in its present form, and the Massachusetts Legislature is tightening the reins. Other States are realizing that they are not only being made ridiculous by their laws, but are seriously handicapped by sentimentality.—[*Medical News.*]

Truth Suppression.—The subject of prompt announcement is so woven into the affairs of practical municipal and maritime sanitation as to necessitate the fullest recognition as an elementary and indispensable part. It is inconsistent with every known law of God, of every principle of sound policy, and of well doing among men, that an individual or a city or a State can successfully protect itself behind the flimsy barrier of a lie, particularly in dealing with the phenomena of nature. If a case of cholera occurs in a city and be hidden under the disguise of a simple intestinal derangement, to avoid public clamor and injury to the commerce and revenues of the State, the last hope of destroying the contagion is wiped away and thousands of lives and the general ruin of industry must pay the penalty of the sordid, short-sighted, wretched policy. So of smallpox and so of yellow fever. The deadliest enemy of a State is the man guilty of intentional concealment.

Now, in all seriousness, the position taken by your humble servant over a year ago in the eradication of plague from San Francisco seems to be finally to be carried out. I sincerely trust that the efforts now about to be made will lead to the early termination of the disease in San Francisco, and in other places as well. The disease cannot, or never will be, stayed or eradicated, by any or all the methods which have been the main reliance for the past year in San Francisco. The problem is entirely medical, and must necessarily be solved by medical men. There must be a return to first principles—principles which are to be the guide for our faith and practices.—[Dr. J. J. Kinyoun, address before the Alameda County Medical Society.]

The Young Graduate.—At the beginning of their respective professional lives, the graduate of the present has had the advantage over the graduates of long ago, of an actual superior amount of knowledge, together with the advantage of the lengthened course of preparatory collegiate training. To the qualified and ambitious young graduate of the present, one year is the equivalent of two, at least, in the good old times. There were giants in those days, but what they accomplished was done slowly, and had to be done largely by their own unaided efforts in all the various departments of medical science, while now, by the development of the specialties and the increase in the number of workers in them, our younger physicians are furnished with abundant material ready to hand with which to build, much more rapidly and less laboriously, as the spirit moves them. It is not the number of years of natural or professional life which constitute the age or maturity of a physician, but the ability to do good work. By their fruits shall ye know them. It would be foolish to attempt to deny the beneficial effects of years in tempering and restraining even too exuberant scientific activity, but this is at all times sufficiently provided for by the inexorable fact that we all must and do grow old; but rather a thousand times the restless enthusiasm of youth than the self-satisfaction of premature senility. Age does not, however, protect from folly, neither does youth render its possessors immune to wisdom. But while it is our duty in no case to belittle any man's work on account of his youngness, it is equally the duty of the young to remember that they have no monopoly of knowledge, and that wisdom will in all probability not die with them.—[*The Hahnemannian Monthly.*]

AMERICAN NEWS AND NOTES

GENERAL.

The case of yellow fever in Havana, Cuba, has been discharged cured, it is officially reported, and there is no further occurrence of it.

Food Preservatives have been investigated by Professor Bigelow of the Agricultural Department at Washington, who finds that the manufacture of them has become a distinct line of business. Out of the 67 samples of the most common preservatives in use, each of which was obtained with great difficulty when it was known that it was wanted for a chemical analysis, 33 of them contained borax or boric acid; 10 sodium, potassium or calcium sulphite; 8 salicylic acid or its sodium compound; 7 benzoic acid or its sodium compound; 1 boric and salicylic acid; 1 boric acid and ammonium fluoride; 3 formaldehyd; 1 ammonium fluoride; 2 pyroligneous acid, and 1 B-naphthol. Professor Bigelow holds that those undoubtedly injurious, such as formaldehyd, salicylic acid and sulphites should be proscribed, and some stringent law enacted to control their use.

Obituary.—WILLIAM HENRY MORGAN of Nashville, Tenn., May 16, aged 83.—P. R. MOORE of Los Angeles, Cal., May 13, aged 65.—M. PAFFORD of Cecil, Ga., May 6.—MILES R. BIGGAR of Detroit, Mich., April 30.—SELTON W. STEVENS of Scranton, Pa., April 25, aged 39.—CHARLES D. SHERMAN of Boston, at Lancaster, Pa., May 18, aged 52.—ALONZO C. CASLER of St. Johnsville, N. Y., May 11.—EDWARD SULTAN of Baltimore, at St. Louis, May 15.—BENJAMIN F. STANLEY of Dublin, Ga., May 17, aged 67.—JOHN A. WELLS of Englewood, N. J., May 21, aged 45.—WILLIAM D. THOMAS of the Chair of Psychology of Richmond College, Va., May 21, aged 65.—JANE KENDRICK CULVER of Boston, May 23.—JOHN T. HAGAN of Baltimore, May 23, aged 51.—THOMAS F. RUMBOLD of St. Louis, Mo., April 23, aged 71.—W. L. WITHAM of Lebanon, O., May 24.—EUGENE D. ANDRUS of Seattle, Wash., May 18, aged 59.—R. A. GOTTSLEBEN of Mayville, Wis., May 23, aged 50.—GEORGE HEITZMANN of Marinette, Wis., May 22, aged 62.—HUGH STOCKDELL of Petersburg, Va., May 23.—H. T. PHILLIPS of Cheshire, Mass., May 24, aged 68.

Smallpox.—The Board of Health of New York urges vaccination as the only means of stamping out the disease of which there is no abatement, 26 cases having been reported in 1 day recently. Bureaus for free vaccination are kept open day and evening, but there is a failure on the part of the people to avail themselves of this privilege to any great extent. The president of the Camden, N. J., Board of Health has issued a circular forbidding the return to that city of all cabs, carriages, laundry wagons and other vehicles which go to Gloucester, as it is reported that from 12 to 60 cases of smallpox exist in that city. Hamonton, N. J., fears an epidemic from the exposure consequent upon a case of smallpox in a young Italian from Naples who had been detained in New York in quarantine for 10 days previous. In Plainfield, N. J., 3 cases are cited. A case of smallpox has been discovered in Baltimore, imported by a negro from St. Mary's County and a corps of 15 vaccine physicians accompanied by police have vaccinated the neighborhood. Notification was received by General Chaffee, the American commander, as he was about to leave Pekin, that 2 cases of smallpox existed among the Indian troops in camp at Tonku, where the Americans were to board their transports. Further cases of smallpox are reported on the United States transport Indiana.

EASTERN STATES.

Diphtheria exists at Princeton, N. J.; 4 cases are reported.

The **Newton Hospital** of Massachusetts, is the recipient of a large bequest by the will of Mary Shannon, which divides \$125,000 among several institutions.

Carney Hospital in Boston, in which the late Mr. Julius Adams was treated while suffering from typhoid fever from October 1896 to February 1897, will receive \$56,500 from his estate.

A "**Magnetic Healer**," named Paul Castor, has been convicted in Portland, Me., charged with practising medicine without being a duly licensed physician. This case is the first of its kind ever tried in the courts of the State.

An **Emergency Hospital** has been established by the women of Union Hill, New Jersey, from money realized from fairs, etc. It has 25 beds, a modern operating room, a staff of trained nurses, a resident physician and a surgeon.

The **New Hampshire State Medical Society** held its one hundred and tenth anniversary meeting May 16 and 17. The officers elected for the ensuing year are: President, Dr. D. S. Adams, of Manchester; vice-president, Dr. Irving A. Watson, of Concord; secretary, Dr. G. P. Conn, of Concord; treasurer, Dr. M. H. Felt, of Hillsboro.

Medical Inspection.—The authorities of Newton, Massachusetts, are holding under advisement the question of daily medical inspection for the schools of Newton. The Board of Health is in favor of the movement so far as contagious disease is concerned. The cost is estimated at \$2,000 for a single term.

Elmhurst Sanitarium, for the treatment of tuberculosis, was opened at Shrewsbury, Massachusetts, on April 6. It has 6 free patients recommended by the leading practitioners of Worcester County. Dr. W. H. Bliss will be in charge. The people were at first disposed to combat the institution, but they have been assured by the officials that there is no danger of contagion.

NEW YORK.

Free Treatment for Tuberculosis.—At the Tuberculosis Congress, Dr. Ellinger stated that a free annex for the treatment of tuberculosis would be opened next Thanksgiving Day at the Montefiore Home for Incurables in New York.

The New York Homeopathic Medical College and Flower Hospital, through a gift of \$25,000 by Anson R. Flower, have been enabled to purchase the building they occupy as dispensary and dormitory. They formerly paid an annual rent of \$1,800.

The Congress of Nurses which will be held at Buffalo, N. Y., will have representatives from all parts of Great Britain and its colonies who wish to confer with their American sisters as to the best method of advancing the profession of nursing and getting a proper recognition for it in society.

A Faith Christ, J. Luther Pierson, was held under \$500 bail for refusing to obtain medical aid for his adopted daughter. The child died of catarrhal pneumonia through lack of proper care. The bond has been signed and the man is out on bail. It is said that the case will be taken to the Appellate Division of the New York Courts.

The East Side Physicians' Club has been organized at 165 Henry Street, New York, by doctors who live on the east side, south of Fourteenth Street. Its object is the discussion of medicine and surgery, and the agitation of severer laws against quacks. The society, with a reported membership of 175, is to be nonpartisan and nonpolitical.

The Long Island College Hospital in Brooklyn will have its main building, which was erected 50 years ago, supplanted by a structure at a cost of more than \$175,000, of which about \$120,000 has already been contributed. Henry W. Maxwell, it is said, subscribed \$50,000. George Foster Peabody and Edward M. Shepard are also large contributors to the building fund.

Austro-Hungarian Hospital and East Side Dispensary will be the name of a new hospital to be remodeled from the building known as the East Side Dispensary of New York. The capacity is from 30 to 35 beds and \$10,000 has already been raised. The money has been contributed by the Austro-Hungarian Hospital Association, which has charge of the alteration, Hungarian miners from Pennsylvania, and others in the colony.

Stony Wold Sanatorium Building Fund Committee is the name of a committee of women who feel the urgent need that exists for the establishment of sanatoriums for working girls, young married women and children suffering from tuberculosis, as in spite of several organizations in the city and State of New York which care for tuberculous patients the number of the latter is so great that many urgent cases are suffering from lack of proper treatment, and they cannot be received in the hospitals except in the few which have special wards for the purpose. It is estimated that in New York City alone there are 30,000 cases.

Tuberculosis Hospital Site.—The fear is baseless, it is believed, that the action of the Legislature in making the selection of a site for the hospital for the treatment of incipient cases of tuberculosis subject to the approval of the Governor, the Speaker of the Assembly and the President pro tem., will delay the construction of the building. The Dannemora tract in the Adirondacks lying entirely outside the State forest preserve is the site agreed upon by all officially interested, and it is anticipated that this site will soon be approved by the Governor and the 2 other officers, and the work of construction for which the plans are already drawn will soon be commenced.

PHILADELPHIA, PENNSYLVANIA, ETC.

Henry Sheridan Keyes has been appointed surgeon-in-chief to the Emergency Hospital, now building at Los Angeles, California.

An Epidemic of Typhoid is reported at Beaver, Pa., and more than 40 cases listed; the malady is most prevalent among children. Pittsburg chemists have been asked to analyze the water and milk supplied to the town.

Mosquitos.—The people of South Orange, N. J., under the auspices of the Village Improvement Society, planning for the extermination of mosquitos and ridding the village of malaria, have had an investigation made of the ponds and lowlying places by Prof. L. O. Howard, Chief Entomologist of the Department of Agriculture, Washington, who saw no reason why there should not be a successful issue to the undertaking.

Prevention of Idiocy.—The Thomas bill before the House for the prevention of idiocy was passed in executive session, May 21, by a vote of 108 yeas and 44 nays, after a discussion of the subject from the standpoint of the physician. The bill provides that in certain cases surgical science may be called upon as a preventive agency. A circular from 5 medical authorities of Philadelphia had been sent to every member of the House and Senate advocating this treatment.

Prevention of Tuberculosis.—At the recent annual meeting of the Pennsylvania Society for the Prevention of Tuberculosis, Dr. Howard S. Anders reported having written (February) to Chairmen Hardenbergh and Bliss, of the Senate and House Appropriation Committees, respectively, urging the passage of a bill in the interests of a State hospital for the tuberculous poor; that favorable and encouraging replies were had from both gentlemen; and that his reprints on "The Necessity for State Aid in the Treatment of the Consumptive Poor" had been distributed among the members of these Committees to further the movement for such a sanitarium.

Is Diphtheria Quarantinable?—On May 20 the steamer Rhyndland, from Liverpool and Queenstown, arrived at the port of Philadelphia with 3 cases of diphtheria on board. She had been passed by both the Federal and the State Quarantine Stations, located at Reedy Island and Marcus Hook respectively, on the ground that the quarantine regulations, while considering diphtheria contagious, do not declare it quarantinable. The ship had left Liverpool on May 1, 1901. On May 9, 1901, the disease developed in 3 Italian children, natives of Turin. On the following day the sufferers were isolated. Thereafter no other case occurred, although numerous children were on board. An examination of the children's throats at the time of landing, by Dr. J. S. Bogges, confirmed this fact. The municipal health authorities, in view of the attitude of the national and State quarantine officers, refused to prevent the debarkation of the passengers, and merely transferred the sick children at once to the Municipal Hospital. Lists were, however, made of the passengers, in order that those remaining here could be kept under surveillance. Lists of the passengers destined for points in Pennsylvania were moreover supplied to the State authorities, and the health boards of the cities throughout the country for which any of the immigrants were bound were also notified.

SOUTHERN STATES.

Increase in Insanity.—It is reported that 400 persons have been pronounced insane within a year in Washington, D. C., and new cases are occurring daily.

Typhus Fever.—Health Commissioner Bosley reports 3 cases of typhus fever in Baltimore in one of the hospitals. The patients are Lithuanians who came from Sparrows Point, where they are supposed to have contracted the disease from sailors.

John Hopkins Medical School.—The present graduating class of 9 women and 47 men, composed of members from all parts of America and from Hawaii and India, is the largest in the history of the university. Much creditable work is reported to have been done.

Correction.—Dr. Guy Steele, city and county Health Officer of Cambridge, Md., corrects the official statistics published in AMERICAN MEDICINE of May 18, in which that city is credited with 5 cases of smallpox from April 1-30. He says there have been 2 cases, one of which was sent at once to quarantine at Baltimore, and 1 colored child quarantined in her home. A house to house vaccination was instituted and there have been no cases for 2 months.

WESTERN STATES.

Norval H. Pierce has been appointed specialist in ear diseases at the Illinois Charitable Eye and Ear Infirmary in Chicago.

E. E. Evans has been elected demonstrator of anatomy in the medical department of the University of Kansas.

The John A. Creighton Medical College, of Omaha, graduated a class of 28 on May 6. The doctorate address was delivered by Dr. W. O. Henry.

Dr. Matthews, professor of physiologic chemistry of the Harvard Medical School, has accepted a position on the faculty of the Medical School of the University of Chicago.

An antisputting ordinance of the Chicago City Council has become operative, but it has been agreed that no arrests shall be made at once, but policemen and conductors will warn all offenders.

FOREIGN NEWS AND NOTES

GENERAL.

Obituary.—PIETRO PANZERI, of Milan, aged 52. For nearly 30 years bringing under special treatment every infantile victim to faulty development among the poor of Milan and rearing many seemingly hopeless cases to normal strength. CHARLES HITCHMAN BRADDON, of Manchester, England, May 10, aged 63. FERDINAND A. HEIDENRICH, of Tilsit, Prussia, aged 80. S. PERRET, of Lyons, France. Professor AGRÉGE, of Lyons, France. EDUARD GOLEMIOWSKI, of Berlin. GEORGE ASP, Professor of Anatomy in the University of Helsingfors, aged 67.

Bubonic Plague.—Up to the week ending May 11, 610 cases of bubonic plague, with 275 deaths, have occurred in Cape Colony. The disease seems to be on the wane owing to the efficacy of the sanitary measures adopted. That the unhygienic condition of Capetown did not result in such dire calamity long ago must be principally owing to the violent gales from the southeast which prevail during the summer on the shores of Table Bay, and which are locally known as the "Cape Doctor." A considerable number of whites have fallen victims to the plague and the fact that a number have been discovered dead, would show that concealment is not confined to the natives. The disease is centered in Capetown and there does not seem to have been extensive spreading, although sporadic cases have occurred which may yet form epidemic centers. The Government ordered a regiment of foot and mounted armed police to march to the most unsavory parts of the city and take positions at the entrances to the thoroughfares diverging therefrom. A staff of physicians accompanied them to search for unreported cases; some distinct cases were discovered and sent together with those having contact with them to the hospital at Uitvlugt. About 6 or 7 colored people decidedly stricken managed to escape with the aid of their friends. In India, the plague is decreasing, and in Bombay a considerable section in the heart of the city is free from it for the first time in months. In China, up to March 31, there have been 76 cases with 73 deaths. In New South Wales a fatal case of plague occurred at the quarantine ground at Sidney. The patient was a seaman on a ship that had been at Cape Town for 2 months. A great many rats had died during the voyage, and he had assisted in removing the bodies. A bacteriologic examination proved that the rats were infected with plague bacilli, and that the seaman was a victim. The ship was thoroughly fumigated and many rats were killed. The period of quarantine completed, the vessel was about to be released when a storeman aboard was taken ill. His case so far has been mild and the only one reported. In Tokyo, Japan, the authorities are issuing to the lower and poorer class of citizens nearly 50,000 improved rat traps, at a cost of 9,392 yens. Including this sum, and that for other implements and drugs for the crusade against the rats in Tokyo this season, the amount to be devoted to this purpose figures in the estimate at 20,000 yens.

GREAT BRITAIN.

Sir Frederick Treves.—The King has conferred upon Mr. Treves the honor of knighthood.

Dr. R. J. M. Buchanan has been appointed to the office of Assistant Physician to the Liverpool Royal Infirmary. He succeeds T. R. Bradshaw who has recently been elected to the office of physician.

Extermination of rats. by means of the generation of sulphurous acid gas of a high strength, has been successfully tried on the Jelunga, a steamer of the British India line. The apparatus used is a small cylinder in which rolled sulphur is burned until it vaporizes and air being admitted into the chambers where this vaporizing takes place the combination of oxygen and sulphur vapors furnishes the sulphur oxid gas. The hatches of the Jelunga were closed and the gas admitted. The space to be operated on held 600,000 cubic feet. The next day when the vessel was opened dead rats were lying about and all other forms of vermin were extinct.

CONTINENTAL EUROPE.

The Hospital of Aix-les-Bains, France, is the recipient of a gift of 50,000 francs from Mr. J. Pierpont Morgan.

University of Halle.—Professor v. Bramann, director of the surgical clinic, has been elected rector of the university for the year beginning with the spring semester.

Diphtheria is reported so prevalent in France that Prime Minister Waldeck-Rousseau has issued a circular to French physicians in regard to its alarming spread and urging the prompt application of the anti-diphtheria serum.

Children's Hospital.—As a memorial of the Czar's coronation the Municipality of St. Petersburg has concluded on the erection in that city of a new hospital for children, consisting of 8 pavilions and containing 402 beds, at an estimated cost of 1,700,000 roubles.

SOCIETY REPORTS

ILLINOIS STATE MEDICAL SOCIETY.

FIFTY-FIRST ANNUAL MEETING HELD AT PEORIA, MAY 21, 22 AND 23, 1901.

[Specially reported for AMERICAN MEDICINE.]

At a preliminary meeting of the Society called by the Legislative Committee, several propositions were discussed. The question of a medical practice act and board of examiners was taken up, freely discussed, and a committee appointed to draft a bill providing for a Board of Medical Examiners in the State, the committee to consult such laws as are operating best in other States.

A resolution was adopted requiring that if a bill be introduced into the next Legislature, the true names and quantities of ingredients be plainly printed on each package of patent medicines and nostrums offered for sale, the Society being instructed to do what it can to further the passage of such bill, provided the Legislative Committee believes it can be done without jeopardizing other desirable bills.

Hypnotism Should be Confined to the Profession.—It was recommended that the Legislative Committee attempt to pass a bill forbidding in any wise exhibitions of hypnotism for the purpose of obtaining money.

Epileptic Colony.—The Legislative Committee was instructed to use all its power to secure the location of an epileptic colony in Illinois, which was provided for by a bill passed by the Legislature 2 years ago.

Sanatorium for the Tuberculous.—The question of attempting to secure legislation in favor of the establishment of a sanatorium for the tuberculous was referred to a special committee to report to the preliminary meeting next year.

Questions of Organization.—(1) Define exact status of membership: (a) Membership lost in a local society should also be lost in State society. A motion was made and carried that all members of the State society shall be members of some local society unless the Judicial Council sees fit to elect them members at large. (b) If honorable, qualified and not sectarian, college of graduation should not act as a bar to membership in the State society. After considerable discussion, Dr. E. Fletcher Ingals offered the following resolution, which was unanimously adopted:

Resolved, That school of graduation shall be no bar to membership in the Illinois State Medical Society, providing such physician is recognized by the local society as qualified and not claiming to practise any exclusive system of medicine.

STATE SOCIETY JOURNAL.

- a. Editorial work.
- b. Advertising.

After a free discussion of these topics, the following resolutions were offered and adopted:

Resolved, That as far as practicable the Journal of the Society be made the official organ of the city, local, county and district societies in the State.

Resolved, That the Journal may accept all ethical advertisements under the same restrictions that apply to advertisements in the Journal of the American Medical Association.

Resolved, That the judicial council select some member of the Society to act as editor and manager of the Journal, said editor and manager to be paid a reasonable salary out of the net profits derived from the publication, the amount of salary to be determined by the judicial council.

DIVERSION OF PUBLIC FUNDS.

A resolution on this subject was adopted as follows:

Resolved, That the Society looks with disfavor on any process by which public moneys appropriated for charitable institutions are diverted from their intended uses by assessments or otherwise.

Reorganization.—A committee of five, consisting of Drs. Graham, Pettit, McAnally, Ochsner and Roskotten, was appointed to study the plan of reorganization as submitted by the Secretary of the American Medical Association, Dr. George H. Simmons. This committee reported as follows: Your committee would respectfully recommend the following, believing that this form of notice is sufficiently comprehensive to allow of all desired changes and yet sufficiently specific to meet the requirements of the Constitutional provision relating to amendments:

Notice is hereby given in accordance with Article IX of the Constitution, that at the next annual meeting of the Society, to be held in May, 1902, such changes in the Constitution and By-Laws will be presented for consideration and adoption as will provide for reorganization on the basis of the following propositions:

1. That the work of the Society be divided into 2 parts, scientific and general business, the latter to include the nomination of officers, the control of finance, the conduct of the Journal, work relating to legislation and such other matters as may be referred by the Society, and to be conducted by delegates who shall be chosen by the constituent societies.

2. That membership in good standing in a county medical society, or, in the absence of such county society, then in a district or city society covering the county of residence, shall constitute membership in the State society.

The committee also recommended that the Society be requested to appoint a committee of 3 to formulate and adjust the proposed amendments during the coming year. The report was unanimously adopted.

This meeting was the most successful in the history of the Society, both as regards its scientific work and attendance. The number of members who registered was a little over 400, and at one of the sessions nearly 600 physicians were present.

The following officers were elected for the ensuing year: President, Dr. J. T. McAnally, Carbondale; first vice-president, Dr. M. L. Harris, Chicago; second vice-president, Dr. J. W. Hensley, Peoria; secretary, Dr. E. W. Weis, Ottawa; treasurer, Dr. Everett J. Brown, Decatur; editor and manager of the society journal, Dr. George N. Kreider, Springfield. Quincy was selected as the place for holding the next annual meeting.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

SEVENTH ANNUAL MEETING, HELD AT NEW YORK ON
MAY 23, 24, 25.

An address of welcome was delivered by Dr. D. B. Sr. JOHN ROOSA who, describing himself as a New Yorker of New Yorkers, and one who took an interest in everything connected with the metropolis, said they were in the habit of saying things to one another that might be supposed to reflect on the city, but they never said them to others, and in any case so far as the medical profession was concerned, they had reason to feel nothing but pride and self-respect because of the position it occupied and the work it had done. It aimed to keep abreast of the profession in all other parts of the world, and he thought it had been fairly successful in doing so. He then proceeded to give a short sketch of what the profession in New York had done, and referring specially to the branches that come more immediately within the scope of the society, he remarked that, contrary to the saying embodied in the old Roman maxim, it had been given to not a few planters to see the fruits of the trees they had assisted in planting. The progress made in laryngology and rhinology in recent years was as great as that made in any other department of medicine or surgery, and there again the advance had been as great as in the rest of the material world.

Presidential Address.—Dr. MYLES, in the course of his opening address, said the history of the society, though brief, had been one of brilliant success. Speaking as a specialist to specialists, he appealed for the recognition of a broader conception of the field of specialism. The tendency of such work as theirs was to narrow rather than broaden. They were apt to concern themselves too much with local conditions, and there was ground for the taunt that specialism militated against scholarship in medicine. He urged them all to strive against these tendencies, and also against everything that tended to give a mercantile character to their profession.

Presentation of Cases.—A number of cases, specimens and instruments were presented, among the cases being one in which external and internal deformity of the nose had been corrected by Dr. T. P. Berens, New York, by means of external appliances, while among the specimens were cancer germs collected by Dr. Eisen, San Francisco, and presented under somewhat melancholy circumstances by one of his colleagues, the doctor himself having fallen a victim to the disease he was investigating, the infection, which it is feared will soon terminate fatally, being directly traceable to the work in which he had been engaged.

A case of **Traumatic Dislocation of the Left Arcartilage** was described by Dr. HENRY L. WAGONER, San Francisco.

A paper on **Disease of the Upper Air Passages in Relation to Mental Development** was read by Dr. L. F. PAGE, Indianapolis, and gave rise to an interesting discussion. The author mentioned a number of diseases, including asthma and epilepsy, which had been traced to irritation of the upper air passages. The effect of these irritations was to cause an increased drain on the nervous system, and the result was sure to be exhaustion sooner or later. It was self-evident that the existence of these physical defects on the part of the children was bound to retard their mental development. He had had experience of many cases in which the performance of a single operation on the nose, throat or ear had had the effect of removing a cloud from children's minds.

Dr. PRICE BROWN (Toronto) thought they could not have too strongly impressed on their minds the fact that adenoids and other growths and affections retarded mental development. He had in his mind 2 boys who had been bright when young but afterwards became extremely dull, one becoming an absolute dullard, and all because of stoppages in their air passages. He did not hesitate to say that children in that condition ought to have the adenoids and other obstructions removed.

Dr. GEORGE L. RICHARDS (Fall River) told of a boy who refused to go to school because deafness, due to the stoppage of the upper air passages, prevented him keeping up with his

classmates. When the adenoids were removed the boy came back with an entirely changed expression. He thought the general profession ought to be educated to an appreciation of the importance of making these operations.

Dr. E. B. HOLT (Portland, Me.) thought every city should have one or more school physicians whose duty it should be to deal with abnormalities of every kind, as well as with contagious diseases. If there was to be a higher state of human beings in existence at the end of the century than there was now, it would be necessary to make fresh arrangements for looking after the health and mental as well as physical development of the young. If officials of the kind he spoke of were appointed, a young man's school record could be looked up when he proposed to get married, and the young lady's father could be guided by it in giving or refusing his sanction to the proposed union.

Dr. SARGENT F. SNOW (Syracuse) expressed concurrence with what had been said by previous speakers as to the harm caused by these obstructions to the upper air passages, and said that he had had a case of epilepsy that most surely was the result of unnatural nasal pressure.

Dr. F. C. COBB (Boston) suggested that if they agreed among themselves what operations were called for in cases of the kind, and when they should be performed, they would have no difficulty in gaining the confidence of the general practitioner.

Dr. JAMES F. McCAW (Watertown, N. Y.) said he did not believe the retardation of mental growth was due to physical causes as represented for example by the adenoids, but to the deafness resulting therefrom.

Dr. LEWIS A. COFFIN (New York) also took this view of the matter, contending that the dullness of such children was frequently apparent rather than real. As proof of this he mentioned that the same symptoms were often noticed on children who did not see well.

Dr. F. T. POWERS (Providence, R. I.) mentioned that in that city defective children were being looked after in the way that several speakers had recommended, and the results were very satisfactory.

Dr. A. B. ABRAMS (Hartford, Conn.) also made some remarks, after which the reader of the paper closed the discussion.

A case of **tuberculous and syphilitic granulomas of the nose** was described in a paper by Dr. WILLIAM LINCOLN (Cleveland, Ohio) and some observations upon the diagnosis and treatment of specific disease of the nasopharynx were offered by Dr. PATRICK S. DONNELLAN (Philadelphia) who referred to the impossibility of depending on the statements of patients in such affections, and said they should always insist on looking for syphilitic symptoms.

Dr. RICHARDS remarked that when the diagnosis was doubtful no operation should be attempted until antisyphilitic treatment had been continued for some time.

An **Operation for Prominence of the Auricle** was described by Dr. THOMAS R. POOLEY (New York) who confessed that he had undertaken the operation with some reluctance, but said the result had given satisfaction to the patient, an actress who had represented to him that her large ears had prevented her securing engagements.

Clinical Notes on Adrenalin.—A paper under this title was read by Dr. NORTON L. WILSON (Elizabeth, N. J.) giving the characteristics of the drug, the history of its discovery and its use in ophthalmologic work chiefly, and particularly as an hemostatic. He noted but little anesthesia. He dwelt particularly on the fact that it might be sterilized readily. Its results seemed unvaryingly accurate, and he thought its discovery of much importance.

Discussion.—Dr. J. A. STUCKY (Lexington, Ky.) said he would like to add his testimony in regard to the remarkable properties of this drug. About the first of December Dr. Takamine sent him some of the solution and powder, and since then he had used it extensively in nose, throat and ear work, and unlike Dr. Wilson, he found that it produced some anesthesia. The effect of using it was that they required less cocaine and got a longer action of that drug. He had, too, found adrenalin particularly valuable in middle ear operations. One thing which the reader of the paper had touched on they should always bear in mind, and that was the recurrence of hemorrhage afterward. He did not believe, however, that there was more hemorrhage than they might expect under ordinary circumstances when the drug was not used. He had used it in cases of acute and subacute laryngitis. He usually used a solution of 1 to 3,000 or 1 to 5,000, and he found that he could sterilize and re-sterilize it as much as he pleased. He generally added 5 grains of resorcin, which he thought a good thing to mix with it. In his opinion it was one of the most remarkable drugs they had to help them in their work. Another class of cases besides those he had referred to, in which it could be used with advantage, consisted of those in which patients were in a state of collapse as the result of anesthesia. In 1 case, that of a child who did not rally properly, he had given half a drachm of the 1 to 5,000 solution, and in 5 minutes the color came back to the child's face.

Dr. T. P. BERENS (New York) said he wished also to bear his testimony to the usefulness of the drug, which he had been using in a variety of cases. One advantage it possessed was that it kept well. He had opened a bottle and kept it on his office table for 6 weeks, and he found it perfectly sweet and

clean and its blanching qualities not at all deteriorated. Then he sterilized it, and found it very efficient for the purpose for which he wished to make use of it. It had been his habit to inject a few drops of the drug through a catheter, blowing it directly into the eustachian tube. He had also used it hypodermically, and in that way also he found that it worked very nicely.

Dr. M. D. LEDERMAN (New York) said he could endorse a great deal that had been said by the reader of the paper as to the value of the drug. "He thought they owed a great deal to it for enabling them to lessen the quantity of cocaine. He did not think there would be nearly so many cases of toxemia from cocaine after the use of adrenalin became more common. The result of his experience with the drug and the suprarenal extract was to convince him that it could be used as an internal remedy as well as a local application.

Dr. O. J. STEIN (Chicago) said all the remarks so far had been very commendatory; but it was well also to hear the other side, and he had to confess he had had some disappointing experiences with the drug. He had used it in a case of antrum trouble, and thought that the effect would surely be to give him a bloodless field to work upon. Yet he had quite as much hemorrhage as he would have expected to have without it. Again he had used it in a case where the maxillary sinus was affected, and there also he had as much hemorrhage as if he had not used it. In some cases it undoubtedly gave good results, but considering the extent to which the drug was lauded as a hemostatic it was remarkable that there should be such an amount of hemorrhage in cases of the kind to which he had referred.

Dr. T. R. CHAMBERS (Jersey City) said they should certainly hear the other side if there was one, but he had seen a good number of cases in which the Wilson operation on the septum was performed, and he had scarcely seen any blood—certainly not more than 5 or at most 10 drops—when adrenalin was used. In certain mastoid operations which he had performed enucleation would have been impossible without adrenalin because of the hemorrhage which would have taken place. The use of adrenalin made these operations successful.

Dr. H. HOLBROOK CURTIS (New York), while prepared to admit that Dr. Bates' discovery of the use which could be made of the suprarenal capsule ranked with the discovery of cocaine, agreed with the speaker who said they should hear both sides of the matter, and personally he had come to the conclusion that there were cases of individual idiosyncrasies in which it acted very badly. There were in short cases in which there was an absolute intolerance of adrenalin or the suprarenal extract. One man to whom it had been given sneezed continuously for 2½ hours afterwards. He had given it to several hay-fever patients, and after they had used it for several days they had the most intolerable pain and had to cease using the drug. He had used it on himself and the result was to set up violent coryza. Not thinking it was due to adrenalin he kept on using the drug until he found himself with a typical case of hay fever, which only stopped when he discontinued the use of the drug. In some cases it acted admirably, but it was necessary to take note of the unsuccessful as well as the successful case. He wished to ask others who had used the drug whether they had found that violent pains or fits of sneezing were frequent results of its employment. He knew of 1 case of hemorrhage of the nose in Bright's disease in which remarkable relief was given by the use of the drug.

Dr. E. B. DENCH (New York) said he had not used adrenalin, but in all cases in which he had used the suprarenal extract it had given entirely satisfactory results as regarded the control of the hemorrhage. In middle ear work in particular he thought it was of great value.

Dr. S. MACCUEEN SMITH (Philadelphia) added his testimony to the value of the drug, especially in cases where cocaine was used. As a preventative of cocaine poisoning it was of singular value.

Dr. W. H. JOHNSON (Paterson, N. J.) thought a very important matter was the preparation of the field on which the drug was to be used. It should be rendered perfectly clean. He did not know that there was any difference between the action of adrenalin and that of the suprarenal extract, but adrenalin possessed a great advantage in this respect that it was a clean and reliable solution and was always ready. Personally he had not come across any cases of idiosyncrasy of the kind that had been spoken of. In all the cases in which he had used the drug the results had been perfectly satisfactory. He had no doubt one of its principal uses would be as an agency for blanching the eyelids. It certainly did work of this kind most efficiently, and at the same time it permitted more rapid dilation of the eye in atrophy.

Dr. M. A. GOLDSTEIN (St. Louis, Mo.) supported what Dr. Curtis had said as to the irritating effect the drug sometimes had, and said he would like to ask the resourceful chemist to whom they were indebted for adrenalin whether it would not be possible to remedy this defect by making up the solution in oil? Possibly a combination with menthol or camphor would have the desired result. He had found the drug of great use to singers suffering from acute laryngitis. An application of the drug in such cases gave remarkable results, and enabled singers to go on with their work when otherwise it would be impossible for them to do so.

[TO BE CONCLUDED.]

CORRESPONDENCE

CONSERVATIVE TREATMENT OF BUBOES.

BY

ABRAHAM L. WOLBARST, M.D.,

of New York.

Referring to the editorial on "The Conservative Treatment of Buboës," in the first number of *AMERICAN MEDICINE*, I would like to add a few words in favor of the method advised by Krulle. For the past 2 years I have treated buboës by this method (slightly modified) almost exclusively, and the results have been most satisfactory.

About 30 cases were treated in this manner. The inflamed glands were dressed with an ointment containing iodine and belladonna, and tightly compressed by a spica bandage. Often this treatment seemed sufficient to abort suppuration; when, however, suppuration appeared to be inevitable, it was found advisable to wait until all the glands had completely broken down and formed one abscess-cavity, before the incision was made, thereby preventing the formation of deep-seated pockets and sinuses.

The incision was made under cocaine anesthesia, and in most instances was painless. An opening is made in the direction of the long axis of the swelling, not more than a half-inch in length. The secretion is not squeezed out, but is permitted to escape through the opening without pressure being exerted from without. The cavity is then carefully cleaned out with warm sterilized water or (in some instances) with peroxid of hydrogen. The silver solution is then injected by means of a small glass syringe, and the opening is covered with a pad of lint on which some soothing ointment, preferably boric acid ointment, has been smeared. A tight spica bandage is then applied, and removed on the third day, when the silver nitrate solution is again injected as before.

By this method of treatment the patient is not compelled to take to his bed; anesthesia is unnecessary; and the resulting scar is so small as to be hardly visible. Recovery is also attained in less time than by the more expensive open operations, the usual time being from 2 to 3 weeks, and in some instances even less than this period.

At first I used a 10% solution of silver nitrate, with most satisfactory results; but the pain following the injection was so great in some of the cases that the strength of the solution was reduced to 5% with equally good results, and with little, if any, pain. The pus disappeared after a few injections; the wound was then treated by dry dressings in the usual manner.

Unless every gland has broken down, recovery will be delayed by the formation of deep-seated pockets, which will not heal unless they are opened and exposed. Then they heal very rapidly.

There can be no doubt as to the superiority of this method of treatment over the radical method of opening up the entire abscess-cavity and removing all the glands. By the latter method, the open wound is often converted, by direct infection with the knife, into one large chancroidal ulcer, which is as obstinate to treatment as the original chancroid.

OBSCURE HEMORRHAGE FOLLOWING LANCING AN ABSCESS OF THE NECK.

BY

BAILEY P. KEY, M.D.,

of Tracy City, Tenn.

The patient, age 5 years, male, first had measles that ran a typical course. When the eruption disappeared from the face, rtheln followed at once with adenitis on the left side of the neck. The inflammation extended from the ear to the median line. It was indurated for 6 days, when a circumscribed cavity could be made out, involving the external carotid and jugular vein.

The attending physician punctured the abscess on a line anterior to the stonocleidomastoid, where the artery and vein emerge from beneath the muscle into the anterior triangle. To all appearances the abscess-cavity emptied through the opening without even a stain of blood and healed up at once with a scab adhering to the point of puncture. For 10 days all went well and the child was playful. The neck in the region of the puncture continued to fill out and grow larger from day to day

(so I was informed) until an alarming hemorrhage spurted out at the point of puncture one day while the child was playing in the room alone with its mother. The mother caught up the child in her arms and placed her finger over the opening in the skin until assistance arrived. The pressure of the mother's finger at the point of the puncture produced a large coagulum beneath the skin and arrested the hemorrhage temporarily. When the attending physician arrived, the little patient was faint and pulseless, and he returned to his office for instruments. When I came I enlarged the opening, cleared away the coagulum and caught up the bleeding vessel between the index fingers and the thumbs below and above the point of puncture and directed an assisting physician to pass a threaded needle through the skin and beneath the vessels out through the skin on the opposite side of the incision and tie the skin, tissues and vessels. The opening in the skin was then closed, antiseptic compress dressing applied as tight as could be at this point.

Seventy-two hours later the dressing was removed and the part inspected. There being no signs of hemorrhage, the dressings were reapplied. The patient had rallied from the loss of blood, and to all appearance was about well. However, the watch over him was kept up. At dawn the next morning and the fourth day from the first outbreak of hemorrhage I was again hurriedly called.

I found the patient pulseless, faint, and bleeding at a fearful rate. I opened the wound, secured the bleeding points with catch forceps, sponged the wound dry, and secured the vein above and below with catgut ligature. I then ligated the external carotid at 2 points, 2 inches from each other. Also ligated facial artery and vein, and tied 5 other bleeding points in the locality of the opening. I tied the vessels with strong catgut. I now put in 8 interrupted catgut sutures. In this row of sutures I included the soft tissues and fascia and the vessels previously ligated. I then closed the opening in the skin with interrupted catgut suture, sealing the part completely. Not a drop of blood was visible.

At 4 p. m. I was on watch, and gave the little patient some hot milk to drink. While inspecting the dressings I noticed fresh blood stains. I at once removed the dressings and attempted to arrest the bleeding, which seemed to come from the common carotid artery below and above the point of puncture. The patient bled to death before I could secure the vessels, and when assistance arrived, it was too late to transfuse.

What caused this hemorrhage? Was the vein wounded by the puncture and a thrombus formed? Was the coat of the artery punctured or an aneurysm formed? Or was there a sloughing of the veins in the locality? I incline to the last hypothesis.

HOSPITAL ABUSES IN SOUTH AFRICA.

BY

ALBERT S. ASHMEAD, M.D.,

of New York.

AMERICAN MEDICINE, May 11, quotes from *The Practitioner's* remarks regarding the report of the Royal Commission on hospital abuses in South Africa as follows: "The British public has got to realize that war is, as the American general said, simply h—l. But Mr. Burdett-Coutts apparently expected it to be a kind of game in which those who were hurt were to be sprayed with rosewater and fed on chocolate creams by smart ladies who found a new sensation in playing the part of ministering angels." "Qui n'entend qu'une cloche n'entend qu'un sou," as the French say, therefore please print the following opinion of the editor of the *Medical Press and Circular*, of March 27:—"The report of the Commission appointed to investigate the condition of the military hospitals in South Africa was generally regarded as a whitewashing document. If doubt remained on the point, it has been effectually swept away by Mr. Burdett-Coutts' speech in the House of Commons on March 20. It would be hard to imagine * * * a more damning indictment of a public inquiry of a matter of national interest. Mr. Burdett-Coutts has shown throughout the whole series of events in South Africa the valuable qualities of sturdy industry, perseverance, accuracy, and power of expression. He has analyzed the work of the Commission with relentless logic, and it is not too much to say that he has thoroughly riddled the Commission. One of the 2 officers of the Royal Army Medical Corps, who were appointed by the Commission to visit the hospitals to select the evidence, and prepare the way for the Commission, stated that everything that mental

knowledge and foresight could supply was at hand, etc. Yet this same officer had been informed by a chaplain of the forces that enteric and dysenteric patients had to walk 400 yards to a latrine, in May; that there were no bedpans, no disinfectants, no nurses, in June, etc. For such shortcomings, the editor of *The Practitioner* holds responsible "the military advisers of the Secretary of State for War, who, apparently out of mere caste prejudice, have systematically snubbed and starved the service regardless of possible consequences."

Do such delinquencies belong to the "plain unvarnished tale of war's inevitable horrors, which come upon us with an appalling shock"? The editor of *Medical Press and Circular* says further: "Mr. Burdett-Coutts appears to have established beyond contention that if the National House can be put in order only by a full-searching and relentless investigation of its defects, then the worst model we can adopt for that process, and the weakest and rottenest basis of reform will be the inquiry for which we are now voting this large sum of money."

Had the editor of *The Practitioner* been better informed on the subject which you quote, Mr. Burdett-Coutts might have been spared the ludicrous experience of his sneer.

PRACTICE OF MEDICINE IN NORTHWESTERN STATES.

BY

W. JAMES HOWELLS, M.D.,

of Spokane, Washington.

There seems to be a mistaken idea in the minds of many Eastern medical men regarding the practice of medicine in the Northwestern States; and as a consequence many young men come west with expectations of easy success, only to be disappointed.

The notion seems prevalent that the medical profession of the Western States is not only poorly represented in numbers, but poorly in ability, and that the people will flock to a young Eastern physician as soon as they see his sign. This is a great mistake, particularly in Washington State, as the medical profession is well represented in numbers (the cities averaging 1 medical man per 400 population), and in ability—many of the men now established being graduates of Eastern medical schools and frequently returning East for postgraduate study. They are hustlers and up-to-date men, well informed on the latest discoveries in medicine and surgery, and men who can hold their patients.

I have not written this short note with the intention of discouraging any of my brother practitioners, who may be contemplating locating in the West; but only to warn them that they must come prepared to meet men of ability, be willing to wait—and have the money to pay expenses while they wait—a year or two in the cities and large towns.

REMOVAL OF POWDER STAINS WITH HYDROGEN DIOXID.

BY

COLIN R. CLARK, M.D.,

of Youngstown, Ohio.

I wish to add a case confirming Dr. J. Neely Rhoad's method of removing powder stains with hydrogen dioxid. A few days after reading his note in your first issue a boy came into the office with severe powder burn of whole face and neck. We cleaned him up thoroughly and removed several grains of powder from each eye, but the face was black with stains and imbedded particles of powder. I sent him to City Hospital on account of the injury to the eyes, and ordered the face to be kept covered with pieces of lint saturated with glycerin, 1 part, and hydrogen dioxid 3 parts. A couple of days saw the complete removal of all the particles and stains, without any of the tedious and painful picking process we are accustomed to; and all marks promptly healed.

ORIGINAL ARTICLES

A CASE OF ANTRUM INFECTION AND SIGMOID SINUS THROMBOSIS WITHOUT PRESENT MIDDLE-EAR DISEASE, PRESENTING THE SYMPTOMS OF FACIAL NEURALGIA AND NONE OF THE ORDINARY SYMPTOMS OF DISEASE IN THE PETROSA; RETROPHARYNGEAL GRAVITY-ABSCESS, GENERAL SINUS THROMBOSIS WITHOUT MUCH IMPAIRMENT OF CEREBRATION, DEATH AFTER THREE MONTHS, PARTIAL AUTOPSY, PRESENTATION OF SPECIMENS*.

BY

DR. BAYARD HOLMES,

of Chicago, Ill.

Professor of Surgery in the University of Illinois, Attending Surgeon at the Baptist Hospital.

The following case is one of a series in which the diagnosis presented unusual difficulties. The propriety of reporting it to such a society as this may be questioned as the case presented few psychic symptoms. Well reported histories of carefully studied cases have always been of the greatest value to me in my attempts to get a vivid and working knowledge of the course of disease, and although this case was so unfortunately misunderstood as to come, perhaps unnecessarily, to a necropsy, I hope it may all the more attract your attention and thus lead to the illumination of some of its obscure manifestations, and a better interpretation of similar cases hereafter.

Synopsis:—Rigor and high temperature beginning without apparent cause. Neuralgia of right fifth nerve for 10 days. Typhoid or septic condition resembling sinus thrombosis for 6 weeks. Abscess appearing suddenly in the posterior right pharynx. Six weeks later discharge from the right ear, paralysis of the right leg, and death. *Necropsy*:—Antrum and general mastoid disease, sigmoid and general sinus thrombosis extending into the cortex of the left hemisphere.

Dr. W. had his birth, education and active life in the Mississippi Valley. He was a well-built man, 5 feet 9 inches tall, of perfect physical growth and development. He had been in the active practice of medicine in a country district for the greater part of his life. He was a hearty eater, but temperate in other respects. He was the father of a large family of perfectly healthy children. He had himself suffered from no disease, except malaria and gout. The evidences of gout were present in his thin and over-aged skin, in the enlargement of his joints, in Dupuytren's contraction of the flexor tendons of the palm and in an irritability or excitability of temper, which occasionally showed itself. I had been well acquainted with him for 10 years.

On May 20, 1898, he came in from some slight exercise out-of-doors after a long day's work in the office, complaining of a chilly sensation. He removed his shoes and outer garments and lay down on a lounge with a hot waterbag and a great many covers. In spite of these precautions he went into a terrible rigor, which lasted over an hour. After this he had a temperature of 101° F. and pain through the back and legs. Headache was not a noticeable symptom at the beginning. The fever continued, and at the end of 48 hours, general headache came on, and, about 4 or 5 days after the chill it had located as a distinct

neuralgia over the distribution of the *right* fifth nerve. Dr. Weller Van Hook saw him twice during this period and found the pharynx deeply injected, hyperemic and somewhat edematous. He believed the temperature due to an acute pharyngitis. No cultures were made from the throat. Local antiseptic treatment was instituted, but without much effect. His temperature remained high and the pain grew worse.

Sunday morning, May 28, he came to Chicago and I examined him. The patient was extremely hyperesthetic and dreadfully broken down and nervous, resembling a person in the early stages of delirium tremens. He described his symptoms and the history of his case with unnecessary picturesqueness and detail. At this time the pain over the right side of the face and scalp was intense. There was tenderness on pressure over the exit of the right supraorbital and right infraorbital nerves. The entrance of the inferior dental and the whole alveolus on the right side were exceedingly tender to pressure. The patient complained of tenderness on the right side, deep in the neck, behind the angle of the jaw. There was no evidence of suppurative disease or obstruction in the antrum of Highmore. There was no difference in the appearance or expression of the 2 sides of the face, except for a slight swelling over the right parotid gland, where the tincture of iodine had been repeatedly applied. Pressure upon the mastoid and hard thumps upon it elicited no pain. The hearing was perfect in both ears. The question of suppurative otitis media was carefully considered. The patient himself declared that he had never suffered from earache or any difficulty with either ear. A present primary catarrhal otitis media was excluded by the good condition of the hearing, absence of any discharge from the ear, the absence of pain or earache and the normal appearance of the drumhead. The diagnosis seemed to rest between a neuralgia with malaria and an osteomyelitis of uncertain origin at the base of the skull, possibly from one of the sinuses of the nose. Antimalarial treatment was instituted, with laxatives and diuretics to counteract the influence of morphia, which had been necessary to relieve the pain.

After some slight improvement, the patient returned to his home feeling better. The temperature continued above normal, but the pain in the face gradually subsided.

On July 10 he entered the Polyclinic Hospital with a high temperature, rapid pulse and such symptoms as led to an examination of his blood for typhoid. At this time he was carefully examined by Dr. J. B. Herrick and Dr. Weller Van Hook. There was no pain now and the symptoms were those of hyperpyrexia and excessive irritability. The pharynx continued red and received local treatment. At noon, on July 14, Dr. Van Hook discovered in the right vault of the pharynx a large fluctuating tumor, which he at once recognized as an abscess. He felt certain that this tumor was not present in the morning. I saw him in the evening of the 14th and easily opened the abscess through its thin wall between the arches of the palate and allowed about 3 ounces of pus of a light chocolate color to escape. The cavity was washed out repeatedly. On the following day the tongue cleared up and the temperature became nearly normal, his appetite returned and he decided to go home.

On July 21, he again sent for Dr. Weller Van Hook, who found a temperature of 103°, his pharynx was still red with the appearance of another abscess, but this time on the *left* side. One or two unsuccessful attempts were made to open it. The

* Presented to the Chicago Neurological Society.

patient was brought to Chicago and placed in the Baptist Hospital, July 22; his temperature at this time was 102° in the rectum, and pulse 90. His subsequent temperature and pulse are represented in the accompanying chart.

On entering the hospital, a careful examination was again made to discover the source of suppuration. The patient had

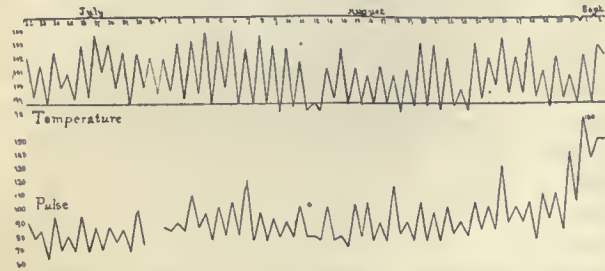


Fig. 1.—Temperature and pulse record showing the highest and lowest records each day.

lost considerable in weight and strength, but was in better mental condition than when he left the city. His hearing was good in each ear and his sight was unimpaired. He was able to sit up every day and read the newspaper.

There was somewhat more tremor of the hands than when last seen, but his grip was equal and not less than would be expected with his general debilitated condition. He took liquid nourishment freely and with relish. He complained constantly of a nasty, bloody taste in his mouth. He was almost sleepless, but not from any localized pains. His greatest pain and tenderness was over the toothless gums of his lower jaw, on the right side. There was no edema, fluctuation, nor other evidence of infection of the lower jawbone or between it and the periosteum. The whole pharynx was red, smooth, and in places edematous. In the neighborhood of these edematous places were three openings from which bloody pus could be extracted. Swallowing was slightly painful and made a liquid diet necessary. There was no adenitis over the mastoids or about the neck. The urine was normal in amount and composition.

Each of the nostrils, orbits and ears was separately and carefully examined. Disease was looked for unsuccessfully in both frontal and maxillary sinuses. The mastoids were separately examined and the eardrums inspected but no symptoms of disease discovered. The openings in the pharynx, seeming to give inadequate drainage, were greatly enlarged and found to connect from the right to the left side of the fauces. In this way a very complete irrigation was possible. He liked to have forcible irrigation in spite of our fear of damage.

The throat and the open spaces behind were irrigated many times daily with all ordinary antiseptics. The short rubber syringe and the fountain-syringe were used, the former to wash out the mouth and pharynx and the latter to irrigate the abscess-cavities. The amount of pus which came from these openings was many times larger than anyone would expect from all the possible findings, but gradually diminished.

The patient complained of little chills at intervals, and vomited without apparent reason, so far as the condition of the stomach and vomited matter was concerned, on July 26, 27, 28 and 29. His temperature gradually rose and on August 5, he complained of great and unaccountable nervousness. On that day he had the most pronounced chill since the beginning of his sickness. It was far short of a rigor. He did not read so much after this, but talked rationally and sometimes in an animated manner. On August 6 he complained for the first time of severe pain in the head. On the 9th, he vomited and was extremely nervous. On August 10, he was examined by Dr. T. Melville Hardie. His temperature was 99°, pulse 78, and he sat up in a chair for examination. "Posterior rhinoscopy was easily made. It showed nothing abnormal. Transillumination of the face showed 2 sides alike, not well lighted; this probably due to either thick cheeks or small antrums. Nothing abnormal by anterior rhinoscopy." Both ears were examined perfunctorily with everything apparently normal, and hearing good. No pain or tenderness in the region of the ear.

From August 5, the patient was so nervous and restless that it was necessary to give a small quantity of morphin daily. He was occasionally seen by Dr. J. B. Herrick, and I visited him twice a day, always looking for the source of infection. August 16, an abscess was opened between the lower jaw and the right side of the tongue. It communicated with the pharynx. August 25, he vomited and had a slight chill. Temperature 102°, pulse 100. He complained of stiff neck.

August 26, I made the following entry on the history sheet: "Opened an abscess over right lower jaw near angle. Felt thickening and edema above and behind the angle of the lower jaw on the left side (not the cause of high temperature). Patient complained of severe pain in left ear for a few minutes, at 10 o'clock this morning. This paroxysm was preceded by several hours of discomfort and crackling in the left ear. Growing tendency to nausea on slight provocation, especially during the last 2 days." Again the mastoids were examined but there was no indication of any disease. The hearing was good in both ears.

During the night of the 27th, at least 2 drams of dark pus was discharged from the right ear. This pus came through a perforated drum-head and gave some relief to pain and nervousness. He still took a large quantity of nourishment—about 2 quarts of milk a day.

On the morning of August 30, the right leg was completely paralyzed below the knee. This had been coming on for 4 days. At 7.15 a. m. there was a convulsion, frothing at mouth, stertorous breathing and imperceptible pulse. This convulsion lasted 20 minutes. Following this convulsion Dr. Arthur Edwards saw the patient and confirmed the findings. There were no other localizing symptoms. The discharge from the right ear continued. The eyes, face, and tongue were normal. There was no paralysis of the arm. The sensations over the affected right leg and elsewhere were normal.

A diagnosis was made of "localized lesion, probably abscess, in the neighborhood of motor cortical area for right leg and foot, secondary to suppuration in pharynx." An exploratory operation was undertaken on these imperfect indications.

During the 6 hours after the convulsion and before the operation the temperature was 100° and the pulse between 105 and 138. At 5 p. m., in the presence of Dr. Arthur Edwards and after the usual preparations, the left hemisphere of the brain was approached by means of 2 1-inch trephine openings connected by a third. There was evidence of a little pachymen-

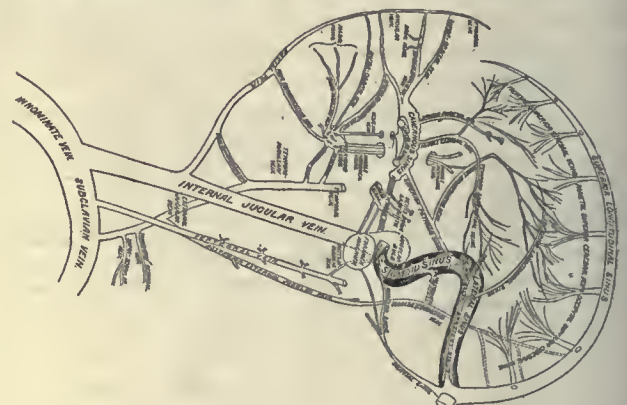


Fig. 2.—The veins and sinuses of the head and ovale from Macewen.

gitis at the upper border, such as we often see in old drunkards. The dura bled. The brain pulsated. The dura was opened. No leptomenigitis. The brain was systematically explored with an aspirating needle 10 cm. long and 1 mm. in external diameter. No result. The bone was replaced and the scalp-wound closed. Skull-cap dressing. The anesthetic was given by Dr. D. H. Galloway. The pulse at the beginning of the operation was 130, but during the operation it fell to 80, and at the close was 140. When the patient was placed in bed his pulse

was 124. The patient did well after the operation and the wound healed completely. He was conscious and rational the day following the operation and inquired about members of his family and business affairs. He knew his end was near and disposed of several affairs requiring his signature.

On September 3 he died, gradually sinking away. On the following morning the necropsy was made by Dr. Arthur Edwards. The trephine wounds had healed without suppuration. The skullcap was moderately adherent over the longitudinal sinus. There were some flakes of pus on the convexity of the dura over the anterior portion of the sinus. The left hemisphere showed several punctate extravasations about the needle-wounds. The dura was only slightly adherent over the upper border of the left hemisphere with light fibrous exudate. The bloodvessels of the dura and pia were thrombosed over at least 6 cm. of the upper surface of the left hemisphere nearest the longitudinal sinus. The cut surfaces of the cortex itself had a dull, greenish-white appearance. The longitudinal sinus was filled with a suppurating thrombus. There were a number of flakes of suppurating fibrin along the lateral walls of the sinus. Both lateral and both sigmoid sinuses were full of pus and blood, the right distinctly fluid (Fig. 2). The dura over the right petrosa was adherent on the posterior surface. The jugular veins in the neck were not examined. No indications of infection were found in the lungs, in the heart, or in the abdominal organs.

The right temporal bone was removed for more careful study, and with it portions of the surrounding bones. This specimen is presented for examination, and the following points should be noticed: The external auditory meatus shows little change from the normal. The drumhead still persists, and does not seem modified by infection. The muccosa lining the tympanic cavity is entire, except on the side toward the antrum. There is little or no evidence of otitis media. The sigmoid sinus lies in a deep sigmoid groove, the posterior wall of which extends downward into the completely excavated mastoid and

meatus, and this whole series of cavities, except the middle-ear, is bounded by an eroded wall. The mastoid does not open externally. The sigmoid groove at its internal end is completely denuded of periosteum and the occipital bone is infected and eroded. The wall of the jugular bulb is thickened and in places eroded and perforated, and everywhere its lumen is nearly obliterated by thickening. Across the jugular bulb, just as the sigmoid joins it, is a band of organized material, showing that at one time a thrombus bridged it over, and was partially organized. Subsequent suppuration has never completely destroyed it. The portion of the jugular external to the skull seems to be completely obliterated by new

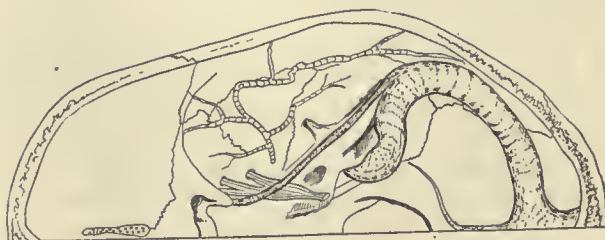


Fig. 4.—Showing the relation of the eighth nerve to the petrosal and sigmoid sinuses.

connective tissue which is stained very dark yellow with blood-pigment. Near the occipital condyle the jugular can again be recognized, but the jugular bulb is completely filled above with partially organized thrombus. The external surface of the occipital near the condyle is eroded and infected. The carotid is patent and easily recognized.

If we attempt, in the light of the autopsy, to analyze the symptoms in this case and refer each to its pathologic source, we must first assume an early forgotten or overlooked middle-ear disease, perhaps as early as childhood or babyhood. There can be little doubt that the antrum was the primary focus of the infection which made itself known by the chill of May 20. The pharyngitis which was subsequently observed could not have infected the sigmoid sinus without producing a middle-ear disease which certainly would have been recognized.

The facial neuralgia which was so marked a symptom during the first 10 days cannot be explained by any clinical history in the literature with which I am acquainted, nor by the pathologic findings in the neighborhood of the fifth nerve. Since all the branches of this nerve were equally and simultaneously affected, the lesion must have been somewhere posterior to the ganglion, and since the neuralgia was only of short duration without any remnant of subsequent pain or loss of function, it must have been nondestructive in its character.

The fifth nerve, as shown in the accompanying figure (Fig. 4), passes under the petrosal sinus and over the end of the petrosa. It does not pass very near the jugular end of the sigmoid sinus. If the petrosal sinus had been obliterated early in the course of the disease by the infected thrombus, the irritation of the nerve might have produced the pain. Had that been the case, the petrosal sinus would have been the center of infection which would have left traces on the bone. This was not the case.

The history immediately following the chill on May 20 is not sufficiently explicit to permit us to say whether the sigmoid sinus was or was not at once affected. Certainly



Fig. 3.—Section of the petrosa near its base and through the antrum and excavative mastoid. E, Extreme auditory meatus. S, Groove for sigmoid. M, The mastoid. The osteoporosis about the antrum is evident.

upward into the antrum (Fig. 3). The wall of the anterior surface of the petrosa over the antrum, just posterior to the tegmen tympani is almost perforated. The antrum opens into the middle-ear, and the middle-ear into the external auditory

by the last of June or the first of July, we have the picture of sigmoid sinus thrombosis and infection. On or about July 10 the sinus opened and drained into the retropharyngeal and retramaxillary spaces and this gravity-abscess was discovered and first opened on July 14. The character of the pus showed clearly that it arose from thrombosis.

There are 2 ways in which the pus might have escaped from the sinus into the retropharyngeal spaces, the more direct and likely method by way of the obliterated jugular, the less likely and less direct by way of the cavernous sinus, the meningeal veins and the pterygoid plexus. It seems highly probable from the symptoms that the jugular was obliterated in the neck during the first 10 days of the sickness. It is unlikely that the cavernous sinus and therefore the inferior petrosal sinus was obliterated before August 25, because until that time the hearing was good in both ears. This it seems could hardly have been the case if the labyrinthine veins had been obliterated.

During the latter part of July, the unobscured condition of the mind, the slight chills, the vomiting and the septic temperature all spoke plainly for sinus thrombosis.

About August 5, the drainage into the pharynx and retramaxillary spaces became obstructed, probably by granulation tissue which was found post mortem to almost completely close the posterior lacerated foramen, and the infected thrombus began to advance into the superior frontal sinus and at last on August 25, into the lateral and sigmoid sinuses of the opposite side of the head. At this time the left jugular became thrombosed and practically an abscess as indicated by the pain, tenderness and swelling in the neck. The slow coming paralysis of the right leg speaks for the thrombosis advancing from the dura into the pia and cortical center.

August 30 some sudden and very general extension of the infection took place probably entirely within the skull. This produced the convulsion and chill which began the end.

This exceptional case illustrates the great difficulty of diagnosing disease of the antrum or mastoiditis. Disease of the right petrosa was always suspected even from the very first. No one can say that the consultants in this case or even the attendants are or were ignorant of the disease or inexperienced in its diagnosis and treatment. It was always talked of as a possibility, but was quickly excluded by the lack of tenderness, the presence of hearing and an intact and unscarred ear-drum and by the absence of pain. The fact that the patient was a doctor and that he insisted upon his entire freedom all his life from any symptoms of middle-ear disease, stopped the consideration of latent disease in the mastoid antrum more effectually than a similar history would do from most patients.

We must, however, insist that sufficient importance was not given the presumptive source of infection within the skull. When there is evidence of peritonitis we do not neglect to presume it a case of appendicitis unless some other source of infection can be demonstrated. Infection of the mastoid antrum is the appendicitis of the head. In the great bulk of cases the source of infection is through the nose and nasopharynx. Had this fact been

adequately considered the right mastoid would have been opened July 14 and there would have been some chance at least of perfect recovery. It would not have been a serious procedure, and had the mastoid been found healthy the retramaxillary abscess could have been opened outward and the source of infection sought elsewhere.

From a study of this case in connection with the literature of the subject, it seems reasonable to make the following brief conclusions:

1. Mastoid antrum disease is the appendicitis of the head.
2. In every case of infection within the head where some other source of infection cannot be demonstrated, the mastoid antrum should be explored.
3. The facial neuralgia is not explainable by the pathologic findings.
4. The excellent mental condition even up to the last seems hardly consistent with the obliteration of both jugulars and the suppuration in all the great sinuses of the dura, although mental or cerebral disturbances are not prominent symptoms of sinus thrombosis.
5. The convulsion is unexplained.
6. The clinical picture is otherwise quite fully explained by the pathologic findings.
7. The case was of neglected rather than of erroneous diagnosis.

TYPHOID FEVER AND PHARYNGEAL DIPHTHERIA.

BY

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The more or less markedly stupid state of patients attacked with typhoid fever, associated with the fact that physicians as a rule pay little attention to the condition of the mouth beyond inspection of the tongue, may be the explanation why so little has recently been written about the changes in the pharynx in this disease. It is only when difficulty in swallowing, hoarseness or dyspnea develop that a search for the causes of these symptoms reveals conditions which may easily escape notice both during life and at postmortem examinations. This will also explain why there is such a wide divergence in the various works on typhoid fever as to the relative frequency of pharyngeal complications. That they are by no means uncommon becomes at once apparent after a study of the literature of typhoid fever, especially of the older writings. Indeed, it is to the older writers that we are indebted for the terms "pharyngotyphoid and laryngotyphoid fever." Huxham, Louis, Chomel, Bouillaud, Murchison and Griesinger had recognized and carefully described the initial erythematous angina and the various manifestations of diphtheria at the onset and during the course of the disease, and they had also studied and classified the different forms of ulceration which may occur in the larynx, pharynx and esophagus.

As most of these cases occurred in "prebacterial times," the correctness of the diagnosis of diphtheria

has been questioned by numerous writers; indeed, so experienced a clinician as Curschmann¹ expresses his views very positively in his classical treatise on typhoid fever:

"Diphtheritis and typhoid fever have been regarded as coexistent, especially by the older writers, and chiefly during severe epidemics. 'Undoubtedly in these cases we are dealing with diphtheritis in the older anatomic sense. So far as I know no thorough modern bacteriologic investigations have yet been made. I myself have never seen typhoid fever complicated with diphtheria according to the modern etiologic view, with the demonstration of the Klebs-Löffler bacilli."

This view is not correct. In 1893, F. H. Williams² of Boston, reported a case in which diphtheria and typhoid fever occurred simultaneously:

"L. J., a girl, 17 years old, complained of sore throat 5 days before admission, and 2 days later a membrane was seen in the throat, in which Dr. Councilman found the Klebs-Löffler bacillus. The membrane was seen for the last time on the eighth day after admission. On admission to hospital the temperature was 104°-105°, pulse 130-140, but on the following day the temperature reached 105° and the pulse 150; 1 rose spot was found on the abdomen; the number of spots increased daily for 7 days, and were unusually profuse and characteristic. Spleen enlarged, hemoglobin 90%, and the number of leucocytes normal, 7,500. The temperature remained about 104° for a week and then fell by lysis to normal. Recovery."

Dr. Councilman, in commenting on this case, stated³ that:

"While it is not at all true or even probable, that all the pseudomembranous inflammations of the pharynx in typhoid fever are due to the Klebs-Löffler bacillus, this gives at least one positive case in which the organism was found. On the same day cultures were made from a case of virulent diphtheria, from a case of pseudomembranous inflammation accompanying scarlet fever, and from this case of typhoid. In all these the identical organisms were found. Inoculations of guineapigs were made at the same time from the cultures obtained from these 3 cases. All 3 of the guineapigs died within 36 hours, and the organisms were recovered from the animals in all cases. The pseudomembranous inflammations accompanying typhoid fever are much more common than is usually supposed. In our experience the membrane is more apt to be found just at the beginning of the esophagus on the posterior pharyngeal wall than any other place. Like the scarlet fever pseudomembranes, it is very probable that they are generally produced by the streptococcus, but so far as we know, no bacteriologic examination has been made in these cases."

In 1896 Hektoen⁴, of Chicago, published 2 fatal cases of typhoid fever complicated with diphtheria, in both of which virulent Klebs-Löffler bacilli were found. In the one case (man, 29 years old) in the membranes found post mortem in the pharynx, larynx and esophagus, Streptococci and Staphylococci (citens) were also present. Tracheotomy was necessarily late in the third week of the disease on account of dyspnea and dysphagia; but the patient died soon after. The other case was also an adult man who very early in the disease had grayish-white membranes on the tonsils and soft palate. Klebs-Löffler bacilli were found. The patient died 3 days after admission in the second week of the disease. Double infection with Klebs-Löffler bacilli is also admitted by Dreschfeld⁵ and Baginsky⁶.

Osler⁷ reports the case of a man of 22, who on the sixteenth day developed a diphtheric membrane on the lower lip, 2 by 3 cm.; the throat was reddened and inflamed, but presented no membrane. Cultures from

the membrane showed diphtheria bacilli. None was found in the throat. On the same day 600 units of antitoxin was injected; the membrane cleaned off in a few days. This complication did not seem to influence the course of the disease in any way.

Catrin⁸ reports the case of a young soldier who on the nineteenth day of his typhoid fever complained of difficult swallowing. The tonsils were swollen, especially the right; on the same side small submaxillary gland. Two days later, 2 or 3 small whitish patches appeared on the right tonsil; the condition was unlike Bouveret's ulcers or diphtheria. Two days later orthopnea appeared, the throat was completely covered with false membrane and he coughed up membrane. In the latter pure cultures of Klebs-Löffler bacilli were found. Death on same day. At autopsy it was found that the membranes extended into the finest bronchioli.

My own cases, which will be detailed below, also show that Klebs-Löffler diphtheria does occur in typhoid fever and that it is by no means rare.

The bacteriologic evidence of these various cases, therefore justifies us in assuming that some of the cases reported by the older clinicians were infections with true diphtheria. It may also be added that 2 epidemics of this double infection have been reported, 1 by Oulmont⁹ and the other by Holst¹⁰. Councilman¹¹ also states that Wagner (who called special attention to this subject) pointed out that pseudomembranous throat inflammations accompanying typhoid fever were most frequent when epidemics of diphtheria prevailed at the same time.

The prognosis of these cases is gloomy, especially in children; it was fatal in the majority of cases reported. That recovery is possible even after tracheotomy had been necessary was shown in the case (that of a boy, 8 years old), reported by Gayton.¹² (No cultures made.) Recovery also followed in the case of C. E. Paget¹³ of a pregnant woman who, during the course of her typhoid fever had 2 attacks of diphtheria, one of which lasted 15 days. (No cultures made.) Osler's observation that the presence of the false membrane did not seem to influence the disease in any way coincides with my own experience in some of the cases reported below, only 1 of which was fatal. The diphtheria antitoxin was well borne in all of the cases.

CASE I.—M. J., 25 years old, female nurse; admitted to hospital June 6, 1899. History was typical of typhoid fever, of 1 week duration. On admission temperature was 105°; no Widal or Ehrlich reactions; Widal reaction was only partially obtained on forty-ninth day of the disease. Roscola did not appear till twentieth day. On the eleventh day complained of sore throat; on examination it was found red, dry and glazed with 2 small grayish patches on right tonsil. Cervical glands enlarged. Cultures from throat showed Klebs-Löffler bacilli, streptococci and staphylococci. Two doses, each of 1,500 units of antitoxin were injected on June 12. On next day leucocytes were 12,000; general condition improved. Throat clear on June 15; cultures showed only staphylococci and streptococci.

The subsequent history was that of a very severe typhoid fever, the disease being complicated with a right pyelitis, lobar pneumonia of right lower and left upper lobes, singultus and a relapse. Temperature did not reach normal till fifty-fifth day.

CASE II.—B. S., 20 years old; domestic; admitted on Novem-

ber 27, 1899, to Female Ward III, to service of Dr. Brill, with symptoms of typhoid fever of 1 week's duration; no Widal or Ehrlich reaction. The course of the disease was moderately severe. Temperature normal on thirty-seventh day (December 26). Relapse on January 6, 1900. On that day temperature rose to 102.6° and she complained of severe headache and pain in throat. Grayish membranes were found on both tonsils; cervical glands enlarged. January 7, temperature 101°-101.6°; pulse 128-140 and very weak; respiration 32 to 44. Klebs-Löffler bacilli having been reported from the throat-cultures, the patient was isolated and 2,700 units of antitoxin was injected.

January 8. General condition much better; membrane disappearing rapidly from both tonsils, but the latter are still swollen and edematous. January 9, throat almost clear and patient is much stronger. January 12, throat cultures negative, returned to ward. January 31, normal. February 4, slight temperature with enlargement of both tonsils. February 5, white patches on both tonsils; cultures showed Klebs-Löffler bacilli. Pulse, respiration and temperature normal. February 7, tonsils clean; cultures negative. Pulse, respiration and temperature normal. February 11, discharged from hospital cured.

CASE III.—L. G., 14 years old; schoolboy; admitted to Male Ward II, May 22, 1900.

The onset of this case being so peculiar, the history is given in more detail. The history of a fall, combined with the patient's general appearance, led at first to an erroneous diagnosis of cerebrospinal meningitis.

Has had otitis media, but never had meningeal symptoms. Was well up to May 15, when he fell and struck on his head. This was followed by epistaxis. He walked home, ate supper, and slept well. Next day he had epistaxis, vomiting and head ache. On May 16, 17, 18 and 19, repeated epistaxis, and vomiting. Constipated, frontal headache, but no abdominal distention. On the 20 he became noisy and delirious, and continued so up to admission. No eruption was ever noted by parents. His general condition was poor, but he was fairly nourished. The tongue was moist and coated; pupils normal. There were some enlarged glands in neck, 1 macular rose-spot in left hypochondrium. No tache cerebrale, but marked Kernig phenomenon present, and cervical rigidity. Negative results from examination of the lungs, heart, and liver; abdomen, slightly retracted and rigid; spleen, not palpable, upper border at eighth rib, anterior border in anterior axillary line. On admission the pulse was 60, respiration 18, temperature 103.8°. There was slight epistaxis and involuntary urination. The Widal test was negative, as was also lumbar puncture. May 23, the pulse was dirotic; the Ehrlich reaction was present. Ophthalmoscopic examination was negative, and there was absence of Kernig's phenomena and cervical rigidity. The next day the rose-spots were more abundant and Kernig's phenomenon present. May 25, the pulse was 100, respiration 28 and temperature 102° to 104.8°. May 26, the Widal test was made with negative results. Rose-spots were noticed at the tips of the scapula. There was a trace of albumin in the urine and the Ehrlich reaction was present. May 27, Klebs-Löffler bacilli were found in throat culture, and an ulcer appeared on the right side of the uvula and patches on the uvula and fauces. There was considerable rigidity of lower limbs; no photophobia. Temperature 102.2°. He was sent to the isolation-house, and was given 2,000 units of antitoxin. This amount was repeated the following day. His highest temperature was 101.60°. He was given nutritive enemas. The rose-spots disappeared from back and the spleen was soft and palpable. There was considerable tympanites. The Widal test was positive. May 29, the highest temperature was 103.4°, and the membrane in throat had disappeared. May 31, highest temperature 102.2°. Spleen still large. June 2, pulse, respiration and temperature normal. The patient was transferred to the ward on June 11. After having been normal 9 days the temperature began going up, and reached 100°. He was put on a fluid diet again. The throat was a little reddened. June 12, he was limited to a soft diet. The temperature was up to 105°. The plunge baths were resumed. June 14, the temperature ranged from 102° to

103°. The spleen was still large to percussion, but not palpable. He was plunged regularly when the temperature was above 103.6°. June 18, Klebs-Löffler bacilli were again found in cultures from the throat. There was no membrane, but redness of fauces. He was retransferred to the isolation-house. June 20, pulse, respiration, temperature normal. June 25, spleen still palpable. June 27, full diet. Back to ward. July 11, discharged cured.

CASE IV.—N. R., 19 years old, peddler, admitted June 6, 1900. Had had typhoid fever 8 years previously. When admitted he had a history of typhoid fever of 6 days' standing. There were rose-spots present on the back, abdomen and arms; the spleen was enlarged, the abdomen tympanitic. Temperature 103.4°; pulse 84. Blood examination: Reds 5,400,000; whites 9,050. Widal test negative. Two days after entrance the throat was complained of; it was deeply reddened, but no membrane could be seen. Cultures made and the Klebs-Löffler bacilli were found. The temperature was 100.6°-103.6°; pulse 68; respiration 24. He was sent to the isolation-house and 2,000 units of antitoxin injected. On June 14 the temperature was normal, but Klebs-Löffler bacilli were still present. The rose-spots had disappeared but the spleen was still enlarged to percussion. June 17 the throat was free from diphtheria bacilli and on June 29 he was discharged.

It is noteworthy that the Widal reaction was never positive.

CASE V.—J. P., 12 years old, schoolboy, was admitted to service of Dr. H. W. Bey September 1, 1900, complaining of headache, poor appetite and vomiting of 8 days' duration. He had diarrhea, but no blood in the discharges. His general condition was good. He was well nourished, the tongue was clean, very red, and moist. There was one maculopapular rose-spot on the left arm. The lungs, heart, and liver were negative to examination. The spleen was not palpable, but the abdomen was moderately distended. Results were otherwise negative, except that examination of the blood showed 7,400 white blood-cells. The temperature was 103° to 105°. Pulse 100, and respiration 22. Plunge baths were given. He was quite delirious. September 8, the general condition was good. The spleen was palpable, the rose-spots marked, the stools loose and greenish. Temperature was 101° to 103.2°; pulse 100, respiration 22. September 15, he was highly delirious at times. There was dullness on the left side of the scapular region; below the angle there was flatness and diminished voice and breathing; the Ehrlich reaction was still present in the urine. The temperature ranged from 105° to 105.6°. Fresh crop of rose-spots appeared. White cells, 7,000. September 22, the Widal test was positive. Redness and congestion of pharyngeal mucous membrane existed. The temperature was 104.4°. September 24, subsultus was marked. The chest was about the same, there was some cough. There was marked congestion of the pharyngeal wall, and firmly adherent membrane on base of uvula which bled on attempt to remove it. Klebs-Löffler bacilli were reported. The patient was transferred to the isolation house, and 3,000 diphtheria antitoxin units injected. Pulse 128, respiration 38, temperature 103.2°. September 25, the general condition was much worse, pulse 148, respiration 38, temperature 101.4° to 102.8°. The patient was delirious, the tongue was dry, subsultus marked, the abdomen distended and tympanitic, the spleen dull in the seventh space, anterior axillary line, and not palpable, on account of tympany. There was no tympany over the liver. The lungs gave a dull note and breathing was very poor at both bases. There was exudate around base of uvula. September 27, the general condition was slightly better, but there was alternating delirium and stupor, and sibilant and sonorous breathing posteriorly. Pulse 130, respiration 32, temperature 100° to 104°. Involuntary urination was noticed, over the buttocks and left scapula were vesicles which first contained fluid and then became hemorrhagic. September 30, the general condition became much worse. The patient was hard to arouse, there was some rigidity of the neck and spine, but no tache cerebrale. The pupils reacted to light and accommodation. Pulse 138, respiration 32, temperature 99° to 104°. He complained of pain in the abdomen. On October 2, the general condition was about the same. There

was tympany over the liver, and there seemed to be slight bulging in the hepatic region. October 6, ophisthotonus was present, but the general condition seem to be somewhat brighter. The abdomen was still tender. Pulse 148, respiration 32, temperature 101° to 102.8°. October 13, the patient was much emaciated, but the general condition was improving. There was a discharge from the left ear, and tenderness over the mastoid. October 20, the general condition was much worse, the pulse reaching 130; respiration 26, temperature 100° to 103.8°. Dulness and moist rales were noticed at the angle of the scapula, on the left side. The heart was very weak. There were petechial hemorrhages on the front of the chest and edema of the eyelids. The patient died October 21. There was no autopsy.

I wish also to call attention to certain peculiar ulcers of the pharynx which occur in typhoid fever and which were first described by Bouveret in 1876, and after him by Duguet, Féréal, Landouzy and others. These ulcers have recently been carefully studied by Andre Schaefer¹⁴. They are situated on the anterior pillars of the fauces, and as they have certain typical features may be said to be pathognomonic of typhoid fever; and since they occur especially in the early stages of the disease, they may even be of value in establishing an early diagnosis. Duguet, Lecorché, Vaissan and Schaefer have reported cases in which these ulcers were observed before the rose-spots had appeared. The size and situation are very characteristic; as a rule they are symmetrically placed on the anterior pillars of the fauces, and are oval in shape, averaging about 6 mm. to 20 mm. in length and 4 mm. to 12 mm. in width, the long axis of the ulcer being parallel to the long axis of the tonsil. They are often surrounded by a small hyperemic halo; the base of the ulcers is grayish-yellow or grayish-red in color, usually smooth, but sometimes granular; there is no false membrane, nor is there any marked glandular enlargement. As a rule they are single; sometimes there are several smaller ulcers which coalesce into 1 large one. For 2 or 3 days they may increase in size and depth, but then heal rapidly within 5 days. The average duration, according to Schaefer, is about 12 days.

In 5 cases examined bacteriologically, Schaefer was unable to find typhoid bacilli in these ulcers; only the ordinary bacteria of the mouth were obtained. Their presence is explained by the fact that these areas are part of the digestive tract which are rich in lymphoid tissue. As such, they are specially exposed to the action of the typhoid bacilli or its toxins; as the result of which necrosis of the epithelium follows, if its vitality has been lessened by dryness of the mouth, the relative immobility of the pillars of the fauces and compression; this process is hastened by the coaction of the ordinary saprophytes of the mouth.

Although I have looked for these ulcers during the past few years, yet none have come under my observation. For one case, however, I am indebted to Dr. H. W. Berg, to whose service the patient was admitted. The abstract of the history is as follows:

CASE VI.—M. F., 15 years old, admitted August 31, 1899, with history of 8 days' malaise, fever, headache, occasional vomiting, diarrhea, and abdominal pain. Three days before, he began to have sore throat and slight cough. On admission he presented a typical picture of the early stage of typhoid, with a few rose-spots on the abdomen and back. The tongue was coated, edges and tip clean. On both anterior pillars of fauces

were small symmetric ulcers (1 on each pillar) with prominent edges and covered with a whitish atypical patch. General redness of pharyngeal mucous membrane. Cultures from the throat show Klebs-Löffler bacilli. The Widal and Ehrlich reactions were negative. Temperature, 104.2°; pulse, 104; respiration, 32. Cultures from the throat on the next day were negative. On September 9 the ulcers in the pharynx persisted. The Widal and Ehrlich reaction were still negative. Course of illness in all respects typical of moderately severe typhoid fever. September 27 the temperature was normal. The ulcers in the pharynx persist and present a brilliant red surface, with well-defined edges. September 30. The patient had a relapse: this lasted till October 12. Unfortunately there is no note of the time of the disappearance of the ulcers.

It will be noted that the ulcers in this case were typical in situation and size and number; yet differed, inasmuch as there was an atypical whitish patch that Klebs-Löffler bacilli were present for 1 day, and that the ulcers lasted over 3 weeks. Clinically, therefore, they cannot be considered as typical Bouveret's ulcers, but must rather be regarded as Bouveret's ulcers with a diphtheric infection.

Very little comment need be made on these cases, since they prove conclusively the correctness of the views of Councilman, Hektoen and others, that true diphtheria may occur during the course of typhoid fever, and they also disprove Curschmann's statement to the contrary. The importance of Case 4 of this series is questionable, since there was no false membrane and the presence of the Klebs-Löffler bacilli in his throat did not affect the course of the disease in any way.

To determine the frequency of the presence of Klebs-Löffler bacilli in the ordinary course of typhoid fever, cultures were taken from the throats in 20 cases of the disease in 1899 and 1900; but in not one of them were they found.

Unfortunately the virulence of the diphtheria bacilli was tested in but 1 case, and in this, the guineapigs survived inoculation. That we were not dealing with very virulent organisms was also proved by the fact that but 1 in the series of 86 cases was fatal. However, this question of virulence was determined in the positive results of Councilman and Hektoen quoted above.

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- ¹⁴ L'ulcération des piliers du voile du palais dans la fièvre typhoïde, Paris Thesis, 1899. This essay contains a very complete bibliography.

Paupers in Kansas.—In 1896, Finney county purchased the poor farm for \$16,000, and spent \$7,000 for improvements. A superintendent was found who contracted with the county commissioner to take charge of the farm, to take all paupers applying for care without expense to the county, and to pay the expenses out of the proceeds of the farm. After a few years it was discovered that he had saved \$25,000, and he was removed and a closer contract was made with his successor, who also amassed a small fortune, and in turn was removed. Then the county commissioner made a contract with the probate judge of the county to act as superintendent of the poor farm. In 2 years this official saved \$25,000, and recently he was removed and the fourth superintendent hired on a salary. Finney county's poor farm now will net the county \$10,000 a year. There is only one pauper on the farm.

PRACTICAL THOUGHTS ON PULMONARY TUBERCULOSIS.

BY

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At a recent meeting of the Philadelphia County Medical Society the subjects of registration, and the home treatment of pulmonary tuberculosis, were treated in respective papers. Time, and the arrangement of the program with appointed speakers, did not permit of a general discussion, in which I had hoped to participate. Some thoughts, especially on treatment, not presented by others and which it was my purpose to offer then, have seemed worthy of writing down now with the humble hope that the few seeds of suggestive value may be as productive of benefit in the practice of others as they have in that of the writer.

Home Treatment.—While by this term is understood the treatment of consumptives in a hygienic home, as distinguished from distant climates, by an increasing number of writers*, it is doubtful whether it is so understood by the majority of practitioners, for whom it means the domestic care rather than the climatic attempt at cure of these patients. At this time when the treatment of tuberculosis in sanatoriums holds such a prominent and justly increasing interest for us, the appropriateness of the phrase "home treatment" is at once apparent; particularly since there is a growing judgment in favor of segregating consumptives in favorably situated (climatically, meteorologically, topographically) municipal and state institutions in or near the cities and counties where tuberculous cases are most numerous, rather than transporting them to distant regions which for decades have been celebrated for their salubrity and life-saving natural environments. Nevertheless, until the establishment of sanatoriums sufficient for the needs of the consumptive poor,†—whether the outcome of a government sense of duty or a philanthropic seizure of opportunity—or, until that philosophic and social Utopia is reached, when we shall cease to have the poor with us always, we must continue to grapple with pulmonary tuberculosis in a considerable number of thousands of patients whose limited means preclude their obtaining treatment away from the humble city dwellings in which they barely live and can hardly move and must inevitably and inexorably have their ending!

Concerning the home treatment of such as these I purpose offering a few more or less disjointed remarks:

Fresh Air and Sunlight.—Patients that are confined to the house, owing to weakness or fever, for example, may be seated or couched near an open window, with all other windows and doors kept closed to avoid draughts. Even in winter, for certain periods during the day, patients can be wrapped well and exposed, just as is done on the piazzas of sanatoriums,

where they often sit for hours with a temperature so low as zero Fahrenheit, or as has been recorded at the Loomis Sanatorium, N. Y., in an atmosphere 15° below zero. Of course, windows facing east should usually be closed during the prevalence of raw, damp, stormy northeast winds; and likewise windows facing north, when northerly or northwesterly winds prevail with heavy blasts and much flying street dust. Mouth breathing should be prohibited as far as possible.

Rooms having southern exposure are always most desirable, and are the only ones that get all the sunshine there is to be had in winter. Whenever most convenient and the temperature is safe the patient should be instructed to lie quite nude exposed to the sun's rays for ½ hour to 2 hours at a time, so that whatever beneficent effects the sun may have upon tissue nutrition, repair or vigor, may be obtained from his actinic (probably) rays.

There is a very general prejudice against admitting night air into the sick-room; but it should be insisted upon that night air is purer than day air (barring sunlight's effects), as the dust raised by traffic, and the smoke of factories, are comparatively absent.

The problem of house ventilation in the congested, crowded and cramped districts of a great city will not be solved fully and satisfactorily, however, until better *street ventilation* is provided for by the razing of slum tenements, the opening and widening of streets, the effacement of narrow, partly closed or cul-de-sac alleys, the judicious distribution of city parks, and the planting of trees along the streets. For, as I have shown in my thesis ("Street-Width: Its Causal Relation to the Mortality of Phthisis," *University Medical Magazine*, October, 1890), there is a close and direct relation between a high mortality rate from pulmonary tuberculosis and street narrowness. "The free course of pure air through wide, unobstructed streets is as clearly necessary for the proper ventilation of cities as it is for the ventilation of habitable rooms." * * * "Streets are the ventilating flues of cities." The topographical improvement of our cities means much in forestalling a predisposition to, as well as preventing an aggravation and aiding in the amelioration of tuberculosis in the individual.

Respiratory Exercise.—This should be encouraged in practically all cases that are not advanced to the condition of constant prostration in bed. Standing erect with shoulders back, and unimpeded by outer garments, the patient should breathe in deliberately and deeply and at the same time slowly raise the arms straight out and up so that the hands meet over the head at the end of the inspiration; with held breath, the abdomen and diaphragm should be contracted firmly for a few moments, thus squeezing the air, as it were, into the ordinarily unexpanded vesicles of the lungs; expiration and lowering of the arms then follow: this may be repeated several times, until the patient begins to feel tired, or perhaps, a little dizzy. Both at night and in the morning, these exercises kept up for weeks tend to be of service in pulmonary expansion, in oxygenation, in nutrition, and in affording useful mental diversion. As to the last named, my experience has been that although the more intelligent consumptives are outwardly

*Also by the American Climatological Association, in its preliminary program for the 1901 meeting.
†The Necessity for State Aid in the Treatment of the Consumptive Poor, by the author, *Philadelphia Medical Journal*, June 16, 1900.

and expressibly cheerful and hopeful, nevertheless, evidences of profound discouragement and despondency sometimes manifest themselves, so that any measure which contributes to psychic buoyancy as well as to physical elasticity is to be recommended. I have not infrequently seen annoying cough much diminished by the practise of forcible expiratory efforts. And this leads me to say that, in a majority of the cases, no symptom of the disease seems more distressing than the harassing cough; in a minority of cases, tuberculous diarrhea, and the pain of a tuberculous laryngitis, are characteristically agonizing.

Postural Alleviation of Cough.—It is a common observation that the cough of consumptives is worse on lying down. A distinct improvement of this may be gained so that the patient may have additional relief in the avoidance of sleepless nights, by assuming the extreme flat dorsal decubitus for short periods several times during the day, and practising the deep breathing exercises. This may be combined occasionally with the naked sunning. In this manner the pulmonary circulation may be influenced and the lungs trained, so to speak, to be less irritable at night, so that cough may not be easily provoked; just as the bowels may similarly become responsive to the will from the habit of regular voluntary solicitations to action.

Medication.—This is so generally well known, and the resources are so many—too many in fact, for the little good gained and the many stomachs deranged—that I merely wish to mention 2 drugs, seldom referred to, that have proven to me of distinct value in some cases. They are aromatic oils: The oil of sandalwood and the oil of erigeron. The first, in 10 drop doses on sugar, every 3 or 4 hours, or as needed when the cough is unusually distressing, has seemed to afford much relief for this symptom, especially in the earlier stages of the disease; the latter, a much neglected drug I believe, has, under my observation, been of decided benefit in the hemoptysis of tuberculosis, administered in 5 minim capsules every 2, 3 or 4 hours. Only recently, in a case of acute pneumonic tuberculosis with moderately profuse hemorrhages from the lungs, a most gratifying response was obtained.

In the discussion on tuberculosis which led to the writing of this article, as hinted at the beginning, Dr. R. G. Curtin did not refer to these 2 oils, and yet it is to his suggestive experience of some 10 or 12 years ago that I owe my first ideas regarding their therapeutic value.

Chest Strapping.—In several cases of tuberculosis where the cough was apparently excited to a large degree by dry pleuritis, considerable relief was obtained by strapping the affected side with adhesive plaster, as for fractured ribs.

Olive Oil.—As a substitute for plain or emulsified cod liver oil, or even other animal fats, as cream and butter, I have found olive oil most desirable, palatable and digestible. It keeps well, may readily be taken with celery or lettuce salad, or soaked up with day-old whole wheat bread, and is not so apt to cause eructations, nausea and indigestion.

Registration of Tuberculosis.—Dr. Matthew Woods' opposition to this public health measure of registration

is analogous to Ingersoll's antagonism to religion. Just as the brilliant colonel delighted his modern audiences in smashing a "man of straw" caricature of the "cruel" theology of the past, so Dr. Woods imagines a panorama of the horrors of registration to be, protests, and enlists our sociologic sympathies for the despairing few; while he courageously and ironically ignores a safe step toward sanitation for the many—for the "majorities" that "are always wrong" (quoted from M. Arnold by him). If the reporting of the cases of tuberculosis in the manner proposed by its advocates, and as tested in New York City, was as "unnecessary, unscientific, ghastly, barbarous, extravagant, cruel, and misery-producing" as he so adjectively assumes it to be, then truly, let us have none of it. The time to report a case, especially if the patient is ignorant and careless, or surrounded by such as are, is when the results of the physical examination are corroborated by a cough giving rise to tuberculous sputum.

THE RECOGNITION OF TABES DORSALIS.*

BY

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The first clear clinical description of locomotor ataxia was given by Todd in 1847, and the first description of the characteristic changes in the cord was that made in 1858 by Türk. An English physician, now living, upon returning home from a visit to Germany, told his colleagues that his attention had been called, while in Germany, to a new symptom of tabes—called Westphal's Sign—consisting of a loss of kneejerks, which he believed was of value in the diagnosis of the disease. Thus it will be seen that the recognition of the clinical picture and the pathologic changes of this most striking disease have been made within the professional lives of physicians still living. But since these first descriptions of the disease, numerous contributions to our knowledge of its pathologic anatomy and clinical manifestations have been made, so that today a complete description of it cannot be made in a short essay, but requires a volume to contain it.

While the most striking pathologic changes are still found in the posterior columns of the cord, the posterior nerve-roots, with their attached ganglia, are as constantly involved in the same degenerative process. The accumulation of evidence seems to point to the peripheral sensory neuron, with its cell in the ganglion of the posterior nerve-root and its process extending downward to the skin, muscle, joints, etc., and constituting the sensory nerve, and its process extending inward to the nerve-cells of the cord or upward in the columns of Goll and Burdach to the nuclei gracilis and cuneatus at the top of the spinal cord as the primary seat of the disease. According to this view, the degeneration of the posterior columns of the cord and of the peripheral sensory nerves is merely a secondary or Wallerian degeneration. Dr. Batten,¹ however, holds that the initial change is in the muscle-spindle; that the peripheral portions of the sen-

*Paper read before the Allegheny County (Pa.) Medical Society, December 18, 1900.

sory nerve are first to degenerate, and that the disease is primarily a disorder of the muscular sense-organ. The disease is not confined to the posterior columns of the cord, the posterior nerve-roots and the sensory peripheral nerves; it may involve any of the cranial nerves or their nuclei, especially those having a sensory function. The gray matter of the cord is sometimes involved in the degenerative process, especially Clark's vesicular column.

The symptoms of tabes are chiefly those due to the involvement of the peripheral sensory neurons, viz.: the lost kneejerks, ataxia, the various paresthesias, anesthesias, analgesias and painful sensations. Loss, diminution or perversion of pain, tactile and muscular sense are observed. Trophic changes, sometimes profound, are also seen; and occasionally, though rarely, except in the advanced stages of the disease, motor symptoms are present.

A typical case of tabes, with absent kneejerks, ataxia, Argyll Robertson pupils and lightning-pains, is very easy to recognize and is seldom mistaken for any other disease. As a rule, it is only in the early or pre-ataxic stages that tabes presents any real difficulties in diagnosis, and ataxia is seldom an early symptom of tabes. Patriek says emphatically it is never the first symptom. Certainly tabes may be established for years before the appearance of this symptom. In a few cases, indeed, it never appears. Doubtless, too much importance has been attached to staggering as a symptom of tabes, and many cases are unrecognized simply because of the absence of this symptom. While, of course, ataxia constitutes a striking and highly characteristic symptom when present, the diagnosis of tabes may and should be made in most cases in its absence with clearness and certainty.

Another stumbling-block in the diagnosis of the disease is the insistence upon the absence of kneejerks. The kneejerks are absent in about nine-tenths of all tabetic patients, and absent early, too; but in the other one-tenth of the cases they are either present or only diminished. The shape and position of the patella tendon varies so much in different persons that a number of efforts should be made to obtain it before the jerk is pronounced absent, as the first taps may fail to bring it out. The patient's attention should be diverted while his kneejerks are being tested, and he should, at the same time, be directed to grasp firmly his own or the hands of an attendant (so-called reinforcement) while the test is being made.

A third stumbling-block in the diagnosis is the insistence upon the presence of the Argyll Robertson pupil. There is, according to Limbach,¹ some pupillary change in about 70% of tabetic patients; but this change does not always consist in the loss of the light reflex of the pupil with contraction of the pupil upon convergence (the Argyll Robertson pupil), although this is the most frequent and most characteristic pupillary change. Like the kneejerk symptom, the Argyll Robertson symptom may not be complete; *i. e.*, there may be present a very slight contraction of the pupil to light stimulus. In cases like this it is helpful to test the pupils of a normal person as a control experiment, just before or after testing those of the patient. Occasionally, but rather rarely, the

light reflex is preserved while the accommodation or convergence reflex is lost—a reversal of the Argyll Robertson pupil. Myosis, mydriasis, or inequality may be observed.

The Argyll Robertson pupils, the absent kneejerks, and the ataxia, when it is only brought out by having the patient stand or walk with the eyes closed, are not symptoms for which the patient consults the physician. The three chief symptoms which do lead him to seek medical aid are: (1) lightning pains in the legs; (2) loss of functions of bladder and sexual organs; and (3) double vision or failure of vision.

The lightning pains are well so-called, since they come and go quickly. The intervals between them may be minutes, hours, or days; and they may last for a second, for some minutes, or even hours. They usually appear in the legs or around the waist, but, occasionally, when the tabetic process is high in the cord, they are present in the arms. This symptom was the first to appear in 9 of 24 of my cases whose histories I have examined. The presence of these pains commonly leads the patient to diagnose his case as one of rheumatism, and this view is unfortunately too often concurred in by physicians, notwithstanding that these pains constitute such a striking and significant symptom that they should always lead to the suspicion of tabes.

Ocular symptoms were the first to appear in 6 of my series of 24 cases: in 4 cases as transient diplopia or ptosis; in 2 cases as optic atrophy; while in 2 other cases, optic atrophy was an early, although not the first, symptom to appear. In the presence of a transient and recurrent diplopia, or ptosis, or an unexplained optic atrophy, one should always suspect tabes and seek other signs of the disease; and should he fail to find them or any other adequate explanation of the symptoms (as *e. g.*, paralytic dementia, brain-tumor, disseminated sclerosis, or cerebral syphilis), the patient should be regarded as a "suspect" and reexamined from time to time. Many observers contend that when optic atrophy appears as an early symptom, the other symptoms are late in their appearance or may never appear. My own experience leads me to believe this view correct. In one of my cases optic atrophy was the only symptom present for many months. In another case optic atrophy and absent kneejerks were the only symptoms present when I first saw the patient. Optic atrophy is present in about 10% of all cases of tabes.

Cystic weakness, or sexual impotence, or both, were the first symptoms complained of in 3 of my 24 cases. At some time in the course of the disease, 10 suffered from vesical weakness, 9 from impotence and 2 from defective control of the anal sphincter. Generally, cystic and sexual weakness were present in the same patient. Cystic weakness is usually manifested by difficulty in starting the flow of urine and in completely emptying the bladder. The abdominal muscles are called into requisition to empty the bladder. The flow of urine is often slow and intermittent.

Two patients complained of weakness in the legs as the first symptom, and in 5 other cases this symptom appeared at some time in the course of the disease. This feeling of weakness was largely or wholly due to sensory

disturbances in the legs (paresthesia or anesthesia), or disturbances of muscular sense in the legs, and was not a true motor paralysis. These perverted or lost sensations, and ataxia in the legs are frequently described by patients as "weakness."

The loss and perversion of sensation constitute a significant set of symptoms in tabes, and should be carefully inquired into. Paresthesia was recorded as present in 8 of my 24 cases. Limbach recorded its presence in 64.5% of the 400 cases whose histories he examined, and this observer found that 33.75% of the cases in his series exhibited slight analgesia of the legs. Trunkal anesthesia or girdle-sensation was present in 8 of my patients. Testicular anesthesia, impairment of muscular sense, persistence of painful impressions, and delayed sensory impressions, are sensory phenomena which are present occasionally, though less commonly. Hypotonus is also an interesting and common symptom of tabes, but how frequently it occurs I am not prepared to state.

Occasionally, though infrequently, the tabetic process attacks the upper portion of the cord, and when it does pains and other sensory disorders occur in the arms and hands. Again, also rarely (except of the nerves of the ocular apparatus), the process largely invades the brain, and in such an event any of the cranial nerves may be involved. Oppenheim¹ records a case in which the solitary bundle and the fifth nerve-root on the left side were, upon postmortem examination, found completely atrophied. He believes that the involvement of the oblongata is not rare.

Gastric crises (sudden attacks of vomiting, or gastric pains, or both together) occur in about 5% of all cases (Limbach). In 2 of my cases this symptom occurred, and in both it was the first symptom to appear. Sudden pains in the larynx, intestines or bladder, constituting crises, may also appear occasionally. When the gastric or other crisis is present as the first symptom of tabes, the physician is often misled as to the diagnosis. Paralytic symptoms due to motor involvement are rare in the early, but common in the later, stages of tabes. Trophic disorders affecting various tissues of the body are seen in tabes. Such changes in the bones render the tabetic patient, like the paralytic dement, liable to sustain fractures. The Charcot or tabetic joint, characterized by sudden enormous, painless swelling with subsequent disorganization of the joint, is another striking symptom of tabes. Perforating painless ulcer of the foot and herpes zoster are among the other trophic changes seen in the disease. When the disease-process attacks the fifth nerve-ganglion, the teeth may loosen and fall out.

Tabes may be confounded with paralytic dementia and, indeed, the tabetic symptoms indicate sometimes but the beginning of the larger process of paralytic dementia. These diseases are closely allied; and Fournier asserts that they are but one in their underlying pathologic process. But ordinarily the mental and speech disturbances of paresis will serve to distinguish it. Tabes sometimes closely simulates cerebrospinal syphilis; but the differential diagnosis cannot be entered into here.

Multiple neuritis may be mistaken for tabes, for it

exhibits 3 of the 5 chief symptoms seen in tabes, viz.: absent kneejerks, ataxia and pains in the legs. But in multiple neuritis the Argyll Robertson pupil is absent, the onset of the disease is more acute, there is tenderness upon pressure along the nerve-trunks, and more or less atrophy, with loss of power, appear early. The symptoms related to the bladder and genitals, so commonly present in tabes, are absent in multiple neuritis.

If one has in mind the larger picture of tabes and does not insist upon the presence of any single symptom, and, above all, is on the alert to recognize the disease before the advent of ataxia, failure to detect the condition will occur only occasionally. To test the kneejerks and pupils, and examine for sensory changes is easy enough. In any patient complaining of lightning-pains in the legs, or of failure to empty the bladder with ease or completely, or who complains of impotence, or who exhibits transient diplopia, ptosis or optic atrophy, tabes should, if possible, be established or excluded by examination, unless these symptoms are clearly explained upon other grounds.

In patients complaining of paresthesia or anesthesia, or who are subject to obscure attacks of gastric pains with vomiting, laryngeal or cystic pains, or who exhibit trophic changes in the skin, nails or joints, the possibility of tabes should be considered.

Upon the presence of how few symptoms may the diagnosis be made?

The following symptoms, I believe, may be said to be the cardinal ones of tabes, and are named in the order of their importance:

1. Failure of kneejerks.
2. Romberg symptoms (swaying with eyes closed).
3. Argyll Robertson pupil.
4. Lightning-pains.
5. Loss of functions of the bladder or sexual organs.

With the presence of any 3 of these symptoms, I believe the diagnosis may with certainty—and in the presence of any 2, with probability—be made, when evidence pointing to multiple neuritis, paralytic dementia or cerebrospinal syphilis is absent.

Among the important secondary symptoms or signs are:

- a. Paresthesia, anesthesia, or analgesia of the legs.
- b. Locomotor ataxia.
- c. Transient ocular palsies.
- d. Paresthesia in the ulnar distribution.
- e. Optic atrophy.

With the presence of 2 of the cardinal signs of tabes and 1 of the secondary signs, I believe the diagnosis may be made with certainty, and made as most probable, with the presence of 2 of the secondary, and only 1 of the primary symptoms, and, indeed, it may be made with certainty, in the absence of all the cardinal symptoms. Many combinations of symptoms are, of course, seen in tabes, and the evidence presented by each case should be carefully weighed. When this is done it will happen but rarely that the diagnosis cannot be made with certainty or probability.

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SIMPLICITY IN THERAPEUTICS.

BY

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Stories may live by tradition but therapeutics must be perpetuated upon facts. Individual experiences with drugs may vary, but they must admit of a reasonable verification to be of scientific value.

Taking these sentiments as the basis of a theme, we approach the subject of small doses with an explanation as to their use in therapeutics, with a degree of hesitancy, by reason of the criticisms that arise from prejudice and misunderstanding.

The small dose has not yet run the gauntlet of professional prejudice, but it has been championed by the people to such an extent, as to become a revolutionary agent in methods, and a positive contribution to therapeutics. We use this term with reference to the fractional, or the appreciative dose, with no regard for an infinitesimal standard.

The outgrowth of studying the effects of drugs upon the healthy body, has been the teaching of the elective affinity which all medicines seem to have for definite tissues.

Upon this subject the late Professor Stillé has said, "Future investigations will throw light upon this obscure department which must hereafter furnish the surest basis for a science of therapeutics."

The word "specific" is used in reference to a medicine which antagonizes disease, as quinine for malarial plasmodium; but in a physiologic sense it refers to the elective relation which certain drugs bear to certain tissues, parts, or organs. Thus podophyllin has a specific affinity for the small intestines, chiefly for the duodenum, and attacks these parts from whatever source introduced. The active principle of cantharides passes into the blood, producing acute congestion of the kidneys and urinary passages. Colchicum irritates the stomach and intestines, whether swallowed, or injected into the veins. Likewise, colocynth influences the colon; aconite the vascular system; gelsemium the cerebrospinal centers; aloes the rectum; others selecting glands, or organs according to their varied properties. Dr. H. C. Wood bases the eleventh edition of his "Therapeutics" upon physiologic study, while Cushney devotes a chapter to the special subject of affinity, with the comment that some cardiac poisons act only on the auricles, while others influence the ventricles.

Here, evidently, is a principle in therapeutics, supported by excellent authority, with very little evidence of its practical application in selecting medicines according to their specific relations. Apparently, some drugs act only through chemie union, combining with protoplasm to alter the function of cells; others increase functional activity by a law of stimulation, depending upon the *quantity administered*.

It is in the prescribing of the latter, that the small dose is particularly applicable, and may be selected with a fair degree of therapeutic precision.

We hazard the opinion that when a special part or organ becomes inflamed or disturbed in function, the physiologically selected medicine acts as a stimulant to restore balance of forces, when given in small and frequently repeated doses; but irritates, congests, or paralyzes recuperative power, thereby aggravating the malady, when given in *large* doses at *long* intervals, precisely as alcohol influences the system under like administration.

It is well known that a full dose of alcohol paralyzes the cerebrospinal centers; but if that same amount be administered in small doses at short intervals, instead of stupor, we obtain the highest degree of stimulation. Many medicines furnish the same evidence.

To illustrate: digitalis acts upon muscular fiber, causing slower relaxation, quicker contraction and is thus indicated in weak heart-action with low blood-pressure. Under such conditions 10 to 20 drops of the tincture may give excellent results; but more frequently the morbid action will not be corrected by this size dose. If, for convenience, we put the same quantity into 20 teaspoonfuls, or a half-glass of water, and give 1 or 2 teaspoonfuls every 1 or 2 hours (dose gtt. ½-2), the result will be better, and generally a slow, sustained action follows. The late Dr. Edward Mayer has written: "Small doses will steady the same heart that has been made to flutter under large ones."

Aconite influences the vascular system, and bryonia limits effusions of serous membranes. (Phillips.) In sickness characterized by fever, quick pulse, labored breathing, pleuritic pain and rusty sputa, 5 to 10 drops of these strong tinctures into 20 teaspoonfuls or a half glass of water, 1 or 2 teaspoonfuls given every hour or 2 hours (dose gtt. ¼-1), constitutes an early treatment for pleurisy and pneumonia that has given results incredible to those who have been accustomed to large doses and severe antiphlogistic measures. This fact has been verified by years of experience and is no longer in the "primary stage of laudation."

Dr. Cooper¹ writes: "In asthenic cases of pneumonia I rely on minute doses of aconite and bryonia, frequently repeated," and adds, "under this treatment we should not lose over 5% of our cases." The probable explanation is that the small dose stimulates and equalizes, without interfering with the essential *vis medicatrix nature*.

Belladonna determines blood to the capillary circulation with heat and redness; Rhus. tox. will in addition, produce a vesicular eruption. If in erysipelas either of these medicines, depending upon the character of eruption, be given as above directed, the results are fewer deaths and quicker recoveries, *ceteris paribus*, than when Tr. ferri. chl. is administered in unwelcome doses. We disclaim any estimate of the value of this medication, we only know that nature thus simply treated gives better results than when burdened by an irritating product, and in this particular instance we are supported by the testimony of Cushney, the Hôtel Dieu, (Paris), and the Royal Infirmary in Edinburgh.

Phytolacca is a specific irritant of the throat. It is physiologically indicated in follicular tonsillitis with fetor of the breath, and in small doses is a most positive

remedy. Jaborandi produces diaphoresis, yet in small doses will check the sweating of tuberculosis.

Nitroglycerin causes congestive headaches with intense throbbing; when properly selected for morbid conditions of similar character, gr. $\frac{1}{1000}$ doses will give relief.

Apomorphin acts upon the medulla, produces convulsions, rapid breathing and great prostration. A small hypodermic dose will stimulate the spinal centers, relieve hysteria, stop the convulsions in childhood, and abort the pains of vasomotor disturbances.

Ipecac and calomel, both nauseants, correctly prescribed, will stop bilious vomiting. Colocynth, universally known as a purgative, will, in small doses, relieve diarrhea characterized by griping umbilical pain. (Hughes.)

Fractional doses of podophyllin relieve a form of diarrhea characterized by dark-colored movements, cutting pains and worse in the mornings. (Ringer.) Less than 1 drop doses of cantharides relieve the distress of cystitis and hematuria. (Mayer.)

Arsenic, in minute doses, is extolled in the coryzas of childhood and in the vomiting of drunkards. (Murrell.) Potas. bichromate in gr. $\frac{1}{100}$ doses relieves hoarseness and aphonia. (Phillips.) Calomel in gr. $\frac{1}{2}$ doses every hour relieves irritable stomach (Aulde), and every 2 hours is a clinical routine treatment for certain systematic dyscrasia. (Knapp.) Strychnin arsenate, in doses of $\frac{1}{134}$ gr. every hour makes "the most permanent tonic stimulant." (Jackson.)

Malcolm Morris, of England, recommends the wine of antimony in drop doses as specific treatment for acute eezema.

These, with many similar facts, have long been known and admit of sufficient application to merit more general recognition. They must, however, be arrayed against other facts of a totally opposite character, and constitute no foundation for a belief in small doses only, or in the universality of a law of cure. There are many instances in which the fibril cannot replace the lash; when to remove conditions, to antidote poisons and to eliminate disease, vital, chemical, and well-proven drugs are essential in the fullest doses.

The physiologic action of a drug may point the way to its therapeutic use. Every prescriber should know not only the pathology of disease and the antagonizing influence of medicines, but also their elective affinity for tissues of the healthy organism.

Whenever it is possible to apply the stimulating influence of the physiologically indicated dose, prescribing becomes ideal; relief is not wrought at the expense of other organs, as is the case when syrups are given for coughs, nor is the physician's mind tormented by a senseless, unreliable symptomatology.

To prescribe, in every instance, opiate astringents for diarrheas, many of which can be relieved by diet; morphine for certain abdominal pains that readily yield to dioscorea; or massive doses of bismuth for vomiting that can best be treated by a judicious application of heat; burdens the system unnecessarily and prostitutes therapeutic measures.

The single remedy hygienically given in whatever

dose, not only simplifies prescribing, but is scientifically correct. Polypharmacy is largely the result of physicians writing their own histories and never taking their own medicines.

Dr. Hare has made a strong argument against the irrationality of this method of combining many drugs, whose action is little understood, and putting them into bodies of which we know less.

The experience of those treated by other systems makes the strongest argument. All believe that if there be no good in "infinitesimals" there is at least directly no harm.

"Yet," says Dr. Osler in his review of the nineteenth century medicine, "nobody has ever claimed that the mortality among homeopathic practitioners was greater than among those of the regular school," an observation well substantiated by statistics. But a more significant fact is observed in the psychic method of cure in which faith is the great lever. Faith, from childhood to age, is more or less a panacea for human ills, and, however reposed, should never be rudely shaken. Whether it be in prayer, or in the plainest doctor, it is the same precious commodity without which we can do nothing, and with which we, too, can work wonders.

To see a large assemblage of people, many from the highest circles of life, bright, animated, in full possession of all that is splendid in womanhood and manhood, to know that they sleep, eat, work, with all the functional activity of a God-given nature, without the stimulus of "pills" should have its lessons without necessarily endorsing popular fallacy. We are rapidly learning that to cure a patient is not so often to cast out disease by medicine as it is to return to natural methods of diet, rest, exercise, etc. Most generally the individual requires the special care rather than the disease. It is an everyday experience to meet those who are courting sickness through ignorance of natural laws, who need to be shown the way to health, rather than to be given medicine.

"Of all the ills that suffering man endures,
The largest fraction liberal nature cures."

The evolutions of medical practice, assisted by sanitary science, that brightest star of the closing century, has curtailed the once unlimited boundary of therapeutics, and has simplified its methods.

The alpha and omega of typhoid fever prescribing is no longer quinine, but diet and nursing. Innocent childhood with innocuous croup is no longer vomited with turpeth mineral, but is equally relieved by the gentleness of aconite and spongia; and in diphtheria, the long list of horrid doses has given way to antitoxin and supportative treatment. While in puerperal convulsions the unfortunate victim of her own economy is no longer held in the vise of overpowering hypodermics, but the system is rationally relieved of poisoned blood and the life-giving impetus of an intravenous transfusion takes its place.

Having been reared under influences which prompted relentless dosing for every ailment; when Watson was the authority recommending the scarifying and blistering of every pneumonic patient; when water was denied

to the burning thirst of fever till tongues were parched and nights were filled with dreams of constant drinking; having lived to see the decadence of nauseating compounds and temporizing dilutions, we thrice welcome the uprising of a new dispensation of medicine, which puts faith in natural methods and a few well-proven drugs, simply administered.

Were we to retrospect 30 years of general practice, to select one from many experiences, to leave as a parting injunction to the rising generation of physicians, it would be a request in the interest of humanity to simplify prescribing, in using the smallest dose and the least medicine possible to accomplish the therapeutic purpose.

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THE RADICAL CURE OF INTERNAL AND EXTERNAL PILES BY EXCISION.

BY

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Pittsburgh, Pa.

Demonstrator of Rectal Diseases in the Medical Department of the Western University of Pennsylvania.

The fact that so many different operations are recommended for the radical cure of internal piles clearly proves that something is lacking in all of them to make an ideal operation. This brings up the question as to what is to be considered the ideal operation for the relief of this distressing disease? It must be the one that can be done safely, rapidly and completely, free from pain at the time of operation and afterwards and allow the patient to resume his usual avocation in the shortest possible time.

The operation for piles by the ligature does not answer this definition. It is practically safe if properly performed. It is easily and quickly done and the results are good. It is followed, as a rule, by considerable pain frequently requiring a quantity of morphin to control it, and the patient is confined to his bed for a variable time ranging from 10 days to 3 weeks.

The operation by the clamp and cautery is quite an improvement on that by the ligature in that there is no ligature to slip or slough off and the cure is more quickly accomplished, but it is not a safe operation in the hands of a surgeon who only occasionally performs it, as the danger from ulceration is as great as by the ligature operation and there is also a great danger both from insufficient or excessive cauterization of the stumps. The proper estimation of the degree of heat required is of importance and should be well understood by the operator attempting it. Again, I have known of several surgeons, whose skill as general surgeons would hardly be questioned, who have applied the cautery to the skin stump as well as the mucous stump in the mixed variety, with the usual disagreeable result—retarded convalescence with subsequent contraction. Whitehead's and the American operations are as unnecessary as the removal of both legs when one of them is crushed.

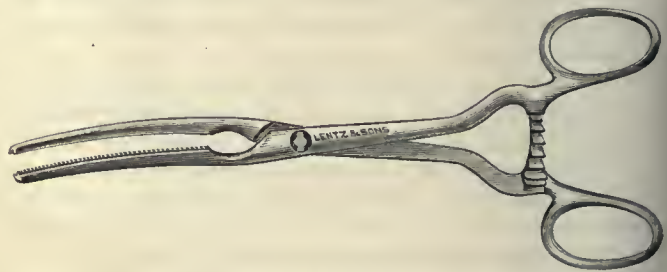
The treatment by injection will cure certain cases but

its scope of usefulness is limited; still, it should not be thrown aside. It has its dangers and they are not a few. Within the past 2 months I have seen several patients who possess fistulas directly traceable to this method. True, both were injected by quacks of the vilest order, but abscesses from the hypodermic syringe, though infrequent, are not entirely unknown to our most skilful surgeons and best trained nurses, notwithstanding careful asepsis. The injection method is not rapid, as I have met patients, from the hands of these gentlemen of great promises, who have been under treatment for more than a year and yet uncured.

During the past 9 years, which I have devoted to the study of pelvic diseases, I have tried all the operations, not once but numbers of times, in order to find the best operation for this most common disease. I have witnessed the operations of the leading men in this country and Europe and am now convinced that there is a better method of radical cure for piles. Neither the ligature nor clamp and cautery operation recommend themselves as a modern surgical operation. Why persist in using an antiquated operation in the treatment of piles only? The injection method is not to be considered as applicable to modern ideas.

My idea of the up-to-date operation is the one in which we approach the hemorrhoidal tumor in just the same manner as we would a tumor situated in any other location, using asepsis, hemostasis and suture.

With the hemostatic forceps or clamp shown in the accompanying cut, I have been enabled to operate



Hawkins' Pile and Pedicle Clamp.

quickly and with the minimum loss of blood. The patient either under the influence of a general or local anesthetic is placed in the dorsal position and the lower rectum cleansed with antiseptic soap and sterile water. If the tumors protrude the sphincter need not be divulsed, otherwise it may need some stretching. Each pile is now picked up with ordinary hemostatic forceps and its base well defined. The most posterior mass is taken up first and drawn into the jaws of the pile clamp and if an external pile is continuous with it, it also is drawn into the clamp. The jaws are now tightened and *the entire mass is cut off close to the clamp*. Now with a full curved needle armed with catgut take a stitch through the healthy mucous membrane above the end of the clamp. Fix the end of the suture with a hemostat so that the end will not be pulled through. Now pass the needle under the clamp and touching it and out at the other side of the clamp. Bring the needle over the clamp and insert it again on the same side and $\frac{2}{3}$ or $\frac{1}{2}$ of an inch below the first entrance. Bring it out opposite

and continue until the entire stump is sewn up. Now take one more stitch below the clamp and in the healthy skin and the sewing is completed. The sutures must *not* be drawn tight as they are introduced. The jaws of the clamp are now to be released and the clamp withdrawn and by gently but firmly pulling upon each end of the suture the stump is drawn up and its edges nicely approximated. A shot may be put on each end of the suture if thought necessary. There is no reason why the patient should be confined to his bed when he wishes to get up. I have performed this operation at my office and allowed the patient to return to his home immediately thereafter. There is no danger from hemorrhage; very little pain; a quick recovery and an absolute cure.

The ordinary preparatory and after treatment is used, the bowels being first moved in 36 or 48 hours and daily thereafter, each passage to be followed by a weak creolin or carbolic acid enema and evacuated at once.

The clamp I use was made for me by Charles Lentz & Sons of Philadelphia.

RIGIDITY OF THE SPINE. (SPONDYLOSE RHIZOMÉLIQUE).*

BY

MAX H. BOCHROCH, M.D.,

of Philadelphia.

Instructor in Electrotherapeutics and Chief Clinical Assistant in the Nervous Department of Jefferson Medical College Hospital; Neurologist to the Out-patient Department of St. Joseph's Hospital, Philadelphia.

H. G. C., aged 25, white, single; occupation, physician.

Family History.—Mother and father living. Patient is the youngest of 3 children. Mother had been a sufferer from "rheumatism" and headache as far back as he can remember; father, also, has had rheumatic pains for 10 years, but neither of them has ever been confined to bed with the disease. One brother is a great sufferer with headache. Maternal and paternal grandparents were not afflicted with any nervous disease.

Personal History.—Patient had the ordinary diseases of childhood, but was otherwise well up to the age of 15 years, when he had an attack of rheumatism involving the left shoulder and hip, but he was not confined to his bed. The attack lasted about a week.

He remained perfectly well for 5 years, during which time he enjoyed athletic sports, entered college, played football and tennis. At the end of this time he had another attack of severe pains in the shoulder and hip of the same side as before. In this attack he was confined to bed for about a week; the parts, however, were neither red nor swollen. Subsequently he took and completed a course of massage in the Orthopedic Hospital of this city, in 1894. He then entered upon his medical studies and during the following 4 years frequently gave massage.

In September, 1900, he had a third attack. It began with pain and stiffness in the left shoulder and a sense of numbness in the left arm. Gradually the right shoulder and hip became involved. Again there was no redness or swelling, and the salicylates proved of no avail.

It should be here stated that he has used alcohol and tobacco only in moderation. He had gonorrhoea 5 years ago. Sores are denied.

He came to Philadelphia the end of last February for change and rest, and on April 16 he came under my care at St. Joseph's Hospital.

Status Præsens.—Patient is spare, but shows signs of excellent muscular development. Says he has lost 20 pounds in the last 5 months. Rising in bed, or from a chair, gives him

* Read (and patient shown) before the Philadelphia Neurological Society.

considerable pain which is referred especially to the back and neck. All movements of the head are painful and limited in extent. He cannot touch his chest with his chin, or move the head backward. Lateral movements are decidedly interfered with and forcible rotation causes great pain.

On inspection the back presents a flat beard-like appearance, the spinal gutter being entirely obliterated.

On palpation along the vertebral column, the absence of the interspinous spaces becomes conspicuously noticeable. The lumbar and dorsal vertebrae especially give the impression of a continuous hard structure. Deep pressure causes intense pain, as does transmitted force down the spine; flexing the trunk forward, backward or laterally also produces considerable pain.

He can elevate his right arm at the shoulder normally, but the left can be raised only with difficulty and pain.

Flexing the legs on the abdomen is also painful, the pain being especially felt in the abductor muscles of both thighs. The hipjoints are mobile but painful. Fibrillary contraction of the muscles is not observable, even on mechanical irritation.

The left trapezius muscle is atrophied and he holds his head inclined toward the right. There is also atrophy of the supra and infraspinatus muscles of both sides, possibly more marked on the left than on the right side. The gastrocnemii seem flattened equally on both sides. The muscles respond normally both to a galvanic and faradic current.

The kneejerks are plus. There is no ankle clonus and the Babinski sign is not present.

Romberg's symptom is also absent. Bowels and bladder normal.

He complains of a belt-like sensation around the waist.

No anomalies of sensation can be detected.

This case evidently belongs to the affection, characterized as spinal rigidity, to which v. Bechterew, Sachs, Strümpell, Marie, Fraenkel and others have called attention. It is difficult to classify this case under the subdivision made by Sachs and Fraenkel. These authors divided the cases into the type of v. Bechterew and the type of Strümpell-Marie: The first, according to Sachs and Fraenkel, is characterized by chronic rigidity of the spine, often limited to the cervical region; other joints free. Root symptoms predominate. Anatomical findings: chronic leptomeningitis, with root and spinal cord changes; vertebral joints not affected. The second is characterized by chronic rigidity of the spine, with involvement of shoulder or hip joints. No root symptoms. Anatomical findings: ossification of ligaments, hypertrophy and ankylosis of joints.

At first sight this case would belong to the first subdivision, but, on the other hand, the undoubted involvement of the vertebral joints would refer it to the second subdivision. It is true that the patient here presented has no fixation of the shoulder and hip joints, and yet they are undoubtedly involved. It would seem to me better not to attempt a subdivision of these cases on clinical grounds, as the one before us cannot be fairly grouped with either; further, the erection of these cases into a separate clinical entity seems to me of doubtful value. The case before us can be readily explained by the theory that the affection is merely one of the forms of chronic rheumatoid arthritis. The wasting of the muscles and the exaggeration of the kneejerks do not necessitate the view that the cord is involved. Such wasting as is present can be readily understood on the ground of disuse or possibly because of root involvement. Such involvement would also explain the belt-like sensation from which the patient suffers. The

exaggeration of the kneejerks can be readily explained by the well-known fact that in rheumatism the tendon reactions are frequently exaggerated.

SOME NOTES ON A CASE OF CEREBRAL EMBOLISM.

BY

ANNA M. LITTLEFIELD, M.D.,

of New London, N. H.

The majority of cerebral emboli have their source in chronic endocarditis of the left heart. In this case there was a history of an attack of rheumatism which affected the heart some 10 or 12 years before, and left it weak afterward. For a number of days before the apoplectic seizure the patient felt a peculiar "quivering feeling" which seemed to be in the heart itself. She said it seemed "as if some little thing was fluttering inside," said it was "not at all like palpitation" for she "knew what that was."

Was not this caused by the loosened vegetation partly torn from the heart valve which soon after became separated and washed away in the blood stream? The sensation had never been noticed before this time nor was it afterward. It was not troublesome enough to cause complaint and was only described in answer to questions about the condition of the heart.

November 23, 1897. Mrs. S., an intelligent and energetic woman, 60 years old, and in ordinary health, rose and dressed as usual. On going to the kitchen, she suddenly "felt something in her head," became very dizzy and would have fallen if she had not been close to a chair. She thought she was unconscious a short time after she sat down but soon came to herself and called the family.

When first seen, half an hour later, she had not been moved from the chair. There was severe nausea, vertigo, and a "very bad feeling" in the head. The left pupil alternately dilated and contracted. After a short time it remained contracted. The left hand was numb and on the right side of the body and face there was complete thermo-anesthesia.

As soon as possible she was placed on a bed with her head raised on pillows. The nausea and vertigo were aggravated by any motion of the head, even turning it on the pillow. Her clothing had to be cut off to save disturbing her head in removing it. She could not bear to open the eyes because vision increased her discomfort. She saw everything tipping over toward her right. She said, "I don't see how you can stay on that chair when you lean over so much," to a person sitting upright at the foot of her bed. She also had the feeling that she was all the time rolling over toward the left, and was afraid that she would roll off the left side of the bed when she was really lying partly on her right side. She would hardly believe the testimony of all the bystanders that her head was looking to the right until in drinking some water, a little spilled on her face and ran down the right side. Then she said, "Why how strange; that water runs out of the right side of my mouth when I know my head is turned to the left."

There was some dysphagia. It was at first uncertain how much of this was due to the nausea. Probably there was some impairment of the muscles of the throat. For several days rectal feeding was used, as the stomach was very irritable. There was retention of urine for about 10 days.

November 26. Complained again of the head. Thought she had another attack "like the first." This time she saw everything straight, but vision caused so much nausea that she kept the eyes shut for days.

A constant feeling as if the head was falling off to the left made her draw the head so strongly to the right that the muscles of the back of the neck became very sore and painful, and

the head had to be gently turned back and confined in the right position to relieve the strain on the neck. The slightest motion produced severe nausea. For a week the head had to be kept as still as possible on the pillow.

November 28. Severe pain in "inside and back" of head. Very sensitive to noise and jar, or any one touching the bed. If even a fold of the nurse's dress rubbed against the bed, she felt it in her head. At this time the left pupil was dilated, and the patient said that when she opened that eye "the light shone in all the way to the back of the head." At one time had double vision, another time saw things upside down.

November 29. Extreme hyperacusis gave a great deal of trouble for a week, but gradually wore away. It was worse for low-pitched sounds than for high ones. She could see objects upright, but they looked very small.

December 10. A small spot in back of the head gave pain which was quite severe on the following day, and for several days gave some trouble. This spot was located about 1½ inches above the left mastoid process. Also the lobe of the left ear burned constantly. Ice applied to it gave some relief to the head.

After this time there was a continuous though very slow improvement. Dizziness kept her very quiet a long time. To be moved a little in bed would make it so bad as to produce nausea. In 1 month she began to be raised up on a bed rest; in 2 months she was moved to another bed; in 3 months sat up in a reclining chair. In 6 months sensation of heat and cold returned to the face; in 3 years it has partly returned to the rest of the body. At present time she is able to keep house; still complains of occasional slight vertigo.

The fact that the patient was conscious all the time and could accurately describe her feelings, was a help in the treatment. She could appreciate the effect of aconite in lowering pressure and relieving pain in the head. Aconite was given every 15 minutes till the pulse softened whenever discomfort in the head was accompanied by hard and wiry pulse. Belladonna was also given, and seemed to have decided effect on the hyperacusis and intracranial irritation. When pain was severe, it was controlled by ice and ethyl chlorid spray. It was thought that the free use of spray did much to limit the spread of inflammation beyond the region of the original lesion.

Constant attention was given to bowels and kidneys. Nutrition was promoted by careful feeding, bathing and massage. Absolute quiet and good nursing in a private house where everything was subordinated to the welfare of the patient, furnished favorable conditions for recovery.

Dr. Halle L. Ewing, of Hastings, Nebraska, has been elected assistant physician in the women's department of the State Hospital for the Insane.

Tuberculosis Sanitarium.—A sanitarium company, composed largely of medical men, is now being formed at Albuquerque. It will be incorporated under the laws of the Territory of New Mexico, and the stock and control of the company will ultimately be in the hands of the medical profession of the United States. The sanitarium will be conducted upon exclusive scientific lines. Nothing in the nature of "specific treatments" or "sure cures" will find a place in it. All reliance is to be placed upon climate, diet and baths, including a solarium for "sun baths," massage, mineral waters and everything of value in the science of modern hygiene will be impressed into service. A continuous life in the open air in this region has proved of the utmost value, hence this feature of the treatment will be a leading one. It is the purpose of the incorporators of this company to establish and operate a "chain" of sanitariums at various altitudes and latitudes within this territory, thus providing the proper point for each case. The company will be incorporated and capitalized at \$500,000 comprising 500,000 shares of stock at the par value of \$1 each. The incorporators especially desire that most, if not all the stock shall be held by members of the medical profession, and it is their conviction that such an enterprise can be made a complete success, both from a scientific and financial standpoint.

SPECIAL ARTICLE

REPORT OF THE GENERAL HOSPITAL FOR THE TREATMENT OF PULMONARY TUBERCULOSIS AT FORT BAYARD, N. M., FOR THE PERIOD ENDED DECEMBER 31, 1900.

BY

D. M. APPEL, M.D.,

Major and Surgeon U. S. Army, Commanding Hospital.

To the SURGEON-GENERAL, U. S. ARMY, WASHINGTON, D. C.

Sir:—I have the honor to submit the following report from October 3, 1899, on which date I arrived at Fort Bayard and established this hospital: In accordance with your instructions I first selected 3 company barracks and 7 sets of officers' quarters for the use of the hospital, in addition to the old post hospital and hospital steward's quarters, but soon found that more buildings would be required and on my recommendation an order was issued directing that Fort Bayard be discontinued as a garrisoned post, and that all the buildings pertaining thereto be transferred to the Surgeon-General.

As the abandonment of the post had been contemplated for some years, the buildings were very dilapidated and the water and sewer systems in a deplorable condition. Repairs were at once begun and although they



Officers' Hospital.

have progressed considerably, are still incomplete. The main system of sewerage has been entirely reconstructed and is now in excellent condition, and in a short time all the lavatories, bathrooms and waterclosets will be completed according to the most improved sanitary requirements. The water-supply has been increased by connection with another well and is now ample for all purposes. A new corrugated iron pump-house has been erected. In this has been installed a new and larger boiler, pump, sawmill and lathe, in addition to the old pump and boiler.

The ice plant has been repaired and renovated and now requires a new shelter, for which estimates are being prepared.

Building No. 9, formerly a double set of officers' quarters, has been repaired throughout and altered for use as an officers' hospital. It contains 6 bedrooms, a diningroom, kitchen, readingroom, sittingroom, billiardroom and 2 bathrooms. Building No. 17, formerly band quarters, is used for the mess of ambulant patients and contains a large diningroom, a pantry, kitchen, cook's room and storeroom. Building No. 16 furnishes 2 large recreation rooms, in which patients congregate after supper and during inclement weather. The old

post-hospital is being thoroughly repaired. The roof has been newly shingled; the porches, wards, office and dispensary will be newly floored; steel ceilings have been placed in all the rooms and the walls are being covered with soapstone finish. The north room on the



Old hospital, now used as infirmary.

second floor has been transformed into a very satisfactory operatingroom. The diningroom and kitchen, being too small to accommodate the patients on low diet, were refitted and are used for the preparation of special diets and for the nurses' mess. The outbuilding formerly used as a storeroom and laundry has been connected with the main building by a covered passageway and with slight alterations and necessary repairs makes an excellent diningroom and kitchen for patients on low diet. The old quarters of the hospital steward are occupied by the acting steward and 2 privates on duty in the infirmary, and 1 room has been reserved as a small ward for the hospital corps and civilian employees. The hospital steward, on duty as chief clerk, occupies the south half of Building No. 1. In Building No. 14 are the barracks for the hospital corps, with the mess for them and the civilian employees; and in the south annex, a ward for convalescents. The north half of the main building of Building No. 15 is used as a chapel; the south half and north annex are storerooms for medical supplies, and the south annex is a dormitory for ambulant patients. Building No. 13 is entirely occupied by ambulant patients, with the use of the lavatory and waterclosets in the north annex. The main building of Building No. 12 is used as a dormitory for civilian employes and both annexes as a laundry. In Building No. 10 (a large frame cottage), formerly a double set of officers' quarters, are the dormitories of ambulant patients with severe cough, there being but 2 beds in each room. Building No. 34 is used as an administration building, with an examination



Infirmary showing new covered way to dining-room.

room and laboratory in the rear. Building No. 21, the old administration building, contains the library, quartermaster's offices, postoffice and store. Building No. 8, formerly a double set of officers' quarters, is used as quarters for nurses.

The selection of Fort Bayard as a site for a sanatorium for the treatment of pulmonary tuberculosis has been amply justified by our results. Its location in the arid mountainous region of Southern New Mexico, at an altitude of 6,040 feet, affords a climate permitting comfortable outdoor life during the entire year. The mean maximum and minimum temperatures and the precipitation for the past decade are as follow :

MONTH.	MEAN MAX.	MEAN MIN.	PRECIPITATION.
January	52.77°+	23.15°	1891 19.30"
February	54.13°	25.83°+	1892 8.89"
March	60.52°+	30.92°+	1893 15.47"
April	68.43°	37.10°	1894 9.12"
May	77.33°	45.45°+	1895 15.09"
June	86.45°	52.68°	1896 18.85"
July	82.91°+	55.34°+	1897 18.00"
August	85.32°+	56.98°	1898 15.91"
September	81.97°	52.00°+	1899 10.43"
October	71.34°+	41.20°+	1900 12.66"
November	61.29°+	31.90°	
December	53.20°+	24.66°+	
General Average	69.56°	39.79°	

During the year 1900 only 52 cloudy days were noted.

From October 3, 1899, to December 31, 1900, 283 patients were admitted as follow :

Officers (including one retired)	6
Enlisted men, regular army,	196
of whom 114 remained after discharge from the service, as beneficiaries of the Soldiers' Home, and 1 after retirement.	
Discharged soldiers, as beneficiaries of the Soldiers' Home,	49
Enlisted men, volunteers,	23
Discharged volunteers, by special authority,	2
Acting Assistant-Surgeons, assigned to duty at hospital,	1
Civilian clerk, assigned to duty at hospital,	1
Civilian clerk, temporary admission authorized by Surgeon General,	1
Civilians residing at post,	1
Female nurses,	2

Total, 283

The following instructions to patients are conspicuously posted throughout the recreation rooms and dormitories :

INSTRUCTIONS TO PATIENTS.

Consumption is an infectious disease caused by a germ which is found in the spit, therefore, the spit together with everything coughed up by patients must be carefully destroyed. Should it be allowed to dry and in the form of dust float around in the air, millions of these germs would be set free and would endanger not only those who are well, but would often reinfect the sick, and thus undo the benefit derived from months of care.

Spit only in your spitcup or into the large spittoons provided for that purpose, never on the floor, in the bathtubs, sinks or closets, nor in your handkerchiefs.

Carry your own spitcup with you everywhere, spit into it carefully, to avoid having to wipe your lips, whiskers, or the edges or sides of your cup. Never swallow your spit.

The only safe method of disposing of the spit is by burning it, therefore the paper cups and spittoons must be burned when half filled and the frames washed frequently with carbolic solution. Should you by accident spit on the floor or bedclothes, or spill your cup, report it at once, to insure proper disinfection.

To be benefited by this most excellent climate, you must live outdoors as much as possible, and always when indoors keep the windows open.

Go to bed early, take moderate exercise, when not instructed to the contrary; eat your meals slowly and chew your food thoroughly.

Do not help yourself to food from any dish except your own plate with your own fork or spoon, but use those provided for that purpose. Try to refrain from coughing at meals, you can with slight effort do much to prevent it.

The use of stimulants and cigarettes is forbidden. Smoking and chewing tobacco in moderation is permitted. Whiskers and moustaches must be closely trimmed.

PATIENTS NOT BEDRIDDEN MUST OBSERVE THE FOLLOWING RULES :

1. They must occupy their quarters only from 7.30 p. m. until 8.00 a. m.
2. They must make their own beds and neatly arrange their personal belongings, none of which are to be left on the floors.
3. They must stay outdoors at least 8 hours daily.
4. They must not visit in quarters.
5. They must bathe at least once a week.

Each patient is provided with a spitcup of the pattern made by Seabury & Johnson, consisting of a tin frame with spring cover, in which is placed an impervious paper receptacle; and large covered spittoons with paper receptacles are scattered throughout the rooms and on the porches frequented by the patients. A shelf is fitted under each chair in the diningrooms, on which the spitcup is placed during meals. The spitcups and also the dejecta from patients with intestinal tuberculosis, are destroyed in crematories, two of which have now been in use for several months.

Abundant good and nutritious food is provided, and our dairy now furnishes an ample supply of milk. Patients are weighed every Friday, the weights are recorded and a report of the gains and losses affords a good index of their progress. On several occasions patients have gained over 10 pounds in one week. The following is a copy of the last weekly report :

REPORT OF GAINS AND LOSSES OF PATIENTS FOR THE WEEK ENDING DECEMBER 28, 1900.

NAME.	GAIN.	LOSS.	NAME.	GAIN.	LOSS.
Albert		1	King	4½	
Beliski		1	Knitter	1	
Benton	No change.		Knoll	½	
Berkenstock.	No change.		Layne	1	
Berrane	1		Leslie	No change.	
Bourgingnon	No change.		Loftus	No change.	
Brennon	1½		Lyons	No change.	
Bunn		4	Mack	2	
Caepepr	No change.		Maher	1½	
Cantwell		2	Marchessa'lt	1	
Carney	1		Marshall	No change.	
Carter	2		McCarthy	3	
Condon	No change.		McFarland		1½
Connell	No change.		McKenzie	½	
Connors	1		McKnight	1	
Cook	1		McLaughlin	1	
Czepla		3	McMahon	2	
Daly 1	2½		Miller	2	
Daly 2	3		Moore 1	½	
Davis		1	Moore 2	1	
Detlor	1½		Muller	2	
Dickerson	1		Mulqueeney		1
Doege		2	Neubel	1	
Drislin	2		Outen	1	
Dynes	1		Owens	2	
Edwards	1		Palmer		3
Faas	No change.		Perry	3	
Flowers		4	Power	1½	
Font	3		Prear		1
Fuhrmann	1		Purcell	No change.	
Gallagher	No change.		Reese	3	
Gambon	1½		Rock		2
Gardner		1½	Sayer	1½	
Gifford	No change.		Seannell	2	
Goens	No change.		Schlig	1	
Goodman		2	Sheehan		1
Gorman		1½	Silver	3	
Goyen		1	Smith	½	
Grafton		2½	Steele	No change.	
Gragson	No change.		Stevens 1	1½	
Graham		½	Stevens 2	No change.	
Harrington	No change.		Southworth	½	
Hennessey	4		Swan	1	
Hill	1		Tamme	No change.	
Hoggard		½	Trontla		1
Jack	1		Tydings	1	
Jacobson	1		Vetters	3½	
Karol	½		Weilock		1
Kautz	1½		Weinhart	2	
Kevin	1½		Whitehead	2	
Kilborn	2½		Writesman	½	
Killalee	2		Yerv	1	

The old post-hospital is occupied as an infirmary for bedridden cases, including not only those in which the disease is far advanced, but all febrile patients whose maximum daily temperature reaches 101° F. In a large majority of these cases, after a short period of absolute rest, the fever permanently subsides.

The treatment pursued here consists mainly of outdoor life, ample good food and rest. Regulated exercise

is permitted when advisable. The ambulant cases are daily instructed in breathing exercises. Cod-liver oil with guaiacol is extensively administered, and in the few cases in which the stomach does not tolerate it, guaiacol carbonate is prescribed in 1 gm. doses twice daily. The laryngeal lesions, as a rule, do well with a simple spray of 1% tricoresol in liquid vaselin, which apparently prevents pyogenic infection, and the tuberculous lesion improves with the general condition. Otherwise the treatment is symptomatic. Tuberculin is used only for diagnostic purposes.

On July 22 we began, with 5 patients, an experimental use of antitubercle serum made by the Biochemic Division of the Bureau of Animal Industry of the United States Department of Agriculture. It was necessarily discontinued September 3, because of the death of the horse from which the supply was derived. On October 14 a new supply was received and its use resumed, but on account of the permanent rise of temperature produced it was soon abandoned.

Since October 17 the antiphthisic serum TR. has been used in 21 cases, and in 8 it is continued. There is no doubt that this serum, as well as the one above mentioned, like the tuberculin, exerts a specific action which is frequently detrimental. In several cases it apparently caused permanent rise of temperature, which subsided when the serum was withdrawn. In one case it was followed by reappearance of tubercle bacilli in the sputum, fever and loss of weight, in a patient previously apparently convalescent. In 2 cases tubercle bacilli have disappeared from the sputum during its administration; this, however, frequently occurs under our ordinary treatment. In the cases still under treatment the results to date are apparently negative.

In the following study of our clinical histories and results, the statistics have been very carefully compiled by Acting Assistant Surgeon E. S. Bullock, Pathologist, and in Charge of Clinical Records.

Of the 283 patients admitted, 124 were discharged, 34 died and 125 remain under treatment.

To elucidate our results better the cases will be divided into 3 classes, viz.: (1) cases exhibiting permanent afebrility without tubercle bacilli in the sputum; (2) cases exhibiting permanent or approximately permanent afebrility with tubercle bacilli (pure tuberculosis or a minor degree of mixed infection); (3) cases exhibiting permanent febrility, with tubercle bacilli (mixed infection).

Certain features common to all these cases are worthy of emphasis. The first and most striking is the apparent permanency of the different types, at least as the disease is manifested in this climate and under our treatment; i.e., cases in which the maximum daily temperature does not drop below 100° F. shortly after admission usually remain permanently febrile. These are true cases of phthisis pulmonalis, and the results in this class are no better than in less favorable climates. Cases afebrile on admission or those where, following absolute rest, the temperature drops below the febrile point shortly after admission, also exhibit great permanency of type, and the same is true of the remaining class, viz.: febrile cases without tubercle bacilli. In these last 2 types favorable results may be anticipated, especially in the latter.

The next feature which merits attention is the relatively insignificant role of a tuberculous family history as an etiologic factor in pulmonary tuberculosis, when contrasted with the importance of the lessened resistance resulting from a preexisting disease. A prominent feature, and one which militates against the best results here, is the limited period that patients remain under treatment, the average being but 4.1 months, and in such a markedly chronic disease this must be considered in the interpretation of our statistics. Many were discharged at their own request, convalescent and improved, who after their discharge from the service were unwilling

to submit longer to the necessarily rigid rules and regulations of the hospital. Many also were unable to resist the pangs of nostalgia, due largely to the isolated location of the hospital and the aridity of the vicinity.

In 51% of all our cases there had been a history of pulmonary hemorrhages. When this is contrasted with the fact that they have occurred in but 15 cases here, it is



Barrack buildings, and frame cottage on the rise to the north.

evident that the prevalent opinion that residence in high altitude is contraindicated in such cases has no foundation in fact. In 78% of the cases the disease was contracted in the tropics.

Reinfections, diarrheas, nightsweats and intercurrent diseases, owing to the hygienic environment, play so unimportant a part in the course of the disease as manifested in this hospital that they are not deemed worthy of special tabulation. In 90% of our cases there was evidence of the pulmonary affection in the conformation of the chest.

In 5 cases the diagnosis of pulmonary tuberculosis was not confirmed, as follows: In 3 the physical signs gave evidence of "healed tuberculosis," and the tuberculin test was negative on admission. One patient had septic bronchitis and died of acute peritonitis of unknown origin, and the fifth had tuberculosis of the chest-walls and pleura, without involvement of the lungs. In this case the tuberculin test was also negative on admission, and death resulted from rupture of an aortic aneurysm. Of the remaining 153 patients who were discharged or died, 16 were under treatment less than 1 month and will not, therefore, be considered in this report of results, leaving 137 patients, of whom 24 or 17% died; 42 or 30% were unimproved; 33 or 23% were improved; 22 or 16% were convalescent; and 16 or 11% were clinically cured.

Patients are classed as convalescent when no tubercle bacilli are found after repeated examination, and, though active symptoms have almost disappeared, they still react to the tuberculin test. Those who, after all symptoms have disappeared, fail to react to the tuberculin test are recorded as clinically cured.

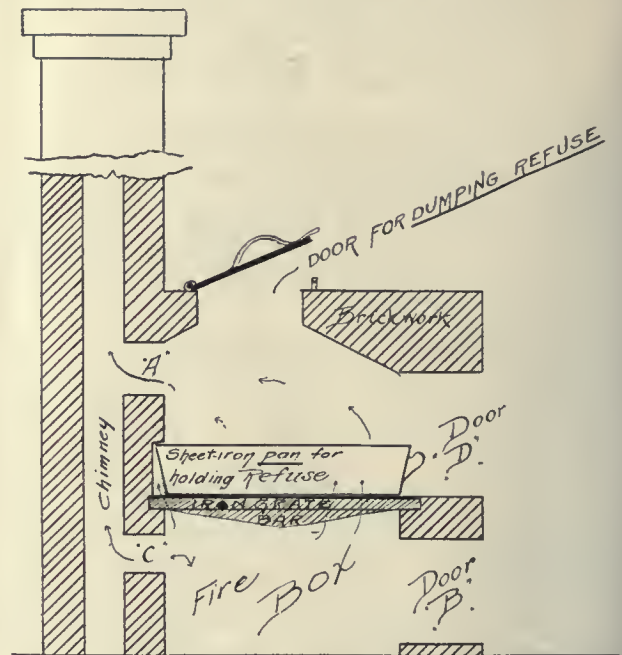
Of the 137 patients who died or were discharged, 30 or 22% exhibited *permanent afebrility*, and when admitted had *no tubercle bacilli in their sputum* (class 1). In these the following facts were elicited on admission: Family history was negative in 23 and positive in 7. In 9 the pulmonary tuberculosis was complicated by other diseases of the lungs or pleura, viz., emphysema, fibrosis, chronic bronchitis, and pleuritis with effusion. In 1 there was tuberculosis of the peritoneum in addition to the pulmonary lesion. Secondary anemia was present in 14; hyperleukocytosis in 3. In none did the blood show degeneration of red-cells or myelocytes. In all the presence of adventitious organisms in the sputum was a marked feature. These organisms, named in order of frequency of their occurrence, though several varieties are commonly found in one specimen, are: staphylococci, streptococci, Micrococcus pneumoniae crouposae, Friedlander's bacillus, Micrococcus tetragonus, Leptothrix buccalis, and Sarcinae. In 20 cases or 66% the tuberculosis was secondary to a preexisting disease: Malaria ranked first, being a factor in 10; pneumonia next, in 7;

dysentery in 2, and pleurisy in 1. In 22 patients or 73% the pulmonary disease was evidenced by the conformation of the chest, viz., retraction of tissues over apices, drooping of one shoulder, narrowing of intercostal spaces, and rigidity of ribs; only 4 of this class presented tuberculous facies when admitted. In 22 the lesion was infiltration and in the remainder infiltration plus consolidation. The diazo-reaction was absent in all. In 16 there was a history of pulmonary hemorrhage. In 22 the tuberculin test confirmed the diagnosis—in 2 cases at first negative, tubercle bacilli subsequently appeared.

In contrast to the above data which illustrate the condition on admission the following facts were noted at the time of discharge: 12 or 40% of these 30 patients were clinically cured, 13 or 43% convalescent, and 5 or 16% unimproved. In 10 there were complicating pulmonary affections—this is 1 more than on admission, 1 patient developing emphysema while under observation. Anemia was present in 4, which is 10 less than on admission. Hyperleukoeytosis was present in 2. In one patient tubercle bacilli did not appear in the sputum until 5 months after admission. Adventitious organisms were present in the sputa in 12, which includes all who had any expectoration on discharge. None had tuberculous facies at the time of discharge, but 18 presented evidence of disease in conformation of chest, which is 4 less than on admission; 12 presented the physical signs of a lesion best described by the term "healed tuberculosis"; 17 still presented the physical signs of infiltration, and 1, which is 6 less than on admission, had infiltration plus consolidation. Only 1 of this class had a hemorrhage while under observation, notwithstanding that over 50% presented a history of hemorrhage. In 9 of the 12 discharged as clinically cured, the tuberculin test was negative. The other 3 objected to the tuberculin test, but were entirely without symptoms of active disease, and it was therefore considered unnecessary to insist upon its administration. Four of this class had a relapse, in 3 tubercle bacilli were present for a short time, and they were found in but 1 at the time of discharge. The diazo reaction was still absent in all.

Conclusions in regard to afebrile patients without tubercle bacilli (Class 1).—This class presents a pure type of tuberculosis without mixed infection. Slight secondary anemia is often present but is never marked or constant. Degenerated red-corpuscles are never present, abnormal leukocytes are very rare and when found are apparently accidental and ephemeral, and the same is true of hyperleukoeytosis. Adventitious organisms in

occasionally associated with moisture over the affected area, even after the patients have passed the tuberculin test and are clinically cured, is uniformly present. A history of previous hemorrhage occurs in this class as often as in others but a hemorrhagic tendency is not ex-



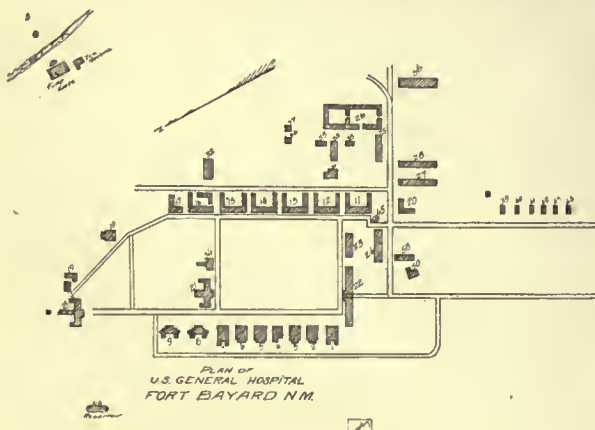
Section of crematory in use at United States General Hospital, Fort Bayard, N. M. Description: Built entirely of brick with fire-brick lining. If slow cremation is desired, partially close damper A and open C. For fast cremation, partially close damper C and open A and open door B. Door D permits removal of pan for cleaning.

hibited. The prognosis in this class is very good, as evidenced by 12 clinical cures and 13 discharged convalescent before complete arrest of the disease could be reasonably expected. In this class the diazo-reaction is never observed. The average daily maximum temperature is 98.9° F., which is evidence that pure uncomplicated tuberculosis is an afebrile affection.

In the 2 cases where the tuberculin test was negative on admission, tubercle bacilli subsequently appeared, possibly as the result of reinfection in a susceptible subject. In one case this is the most probable explanation, for the tubercle bacilli did not appear until 5 months after the test; this patient was the only one of this class discharged with tubercle bacilli in the sputum. In the other it is hardly so applicable, for the tubercle bacilli were found within a week after passing the test and apparently as a result of the action of the tuberculin; however, within a few weeks the bacilli disappeared, the patient again passed the test and was finally discharged clinically cured. In this case also the tuberculin test failed to demonstrate the existence of tuberculosis. In one patient in whom there was complicating fibrosis and arteriosclerosis the tuberculin reaction had an unfavorable influence upon the subsequent course of the disease, though in this case tubercle bacilli were never found, and the patient was discharged unimproved. In still another case a negative result of the tuberculin test was followed by an evening temperature slightly above 99° F. for several weeks, though it subsequently fell to normal.

Of the second class, afebrile cases with tubercle bacilli, 59 patients were discharged. In these the general course of the disease was afebrile and when fever occasionally occurred it was always amenable to rest-treatment.

The following facts were elicited from them on admission: In 45 the family history was negative, in 1 un-



PLAN OF U.S. GENERAL HOSPITAL FORT BAYARD N.M.

the sputum are a permanent feature while expectoration continues and they, therefore, bear no relation to the presence or absence of mixed infection, as there is no mixed infection in this class.

The typical lesion is a slight infiltration of one apex with or without signs of activity, though some consolidation is occasionally encountered. Increased density,

known and positive in the remaining 13. In 4 there were complicating affections of the lungs. In 3 there was chronic laryngitis. In 10 there were other complications, including malaria, cerebral syphilis, chronic nephritis, hernia, anal fistula, dementia, otitis media and hemiplegia. There was tuberculosis of other organs in 8, as follow: testicles 2, peritoneum 1, larynx 2, inguinal glands 1, and intestinal tuberculosis 2. In 42 there was secondary anemia. In 35 there was hyperleukocytosis. In 9 there was degeneration of red-cells, and myelocytes were present in 5. Adventitious organisms were present in the sputum of 12. The pulmonary tuberculosis was preceded by some other disease in 40, or 68%. As in the previous class, malaria led, being the inciting cause in 23, malaria and dysentery together in 4, chronic diarrhea in 3, influenza in 2, catarrhal jaundice in 1, peri-neal abscess in 1, tuberculosis of cervical glands in 1, and pneumonia in 5. Tuberculous facies was present in 15. In 52 there was evidence of the pulmonary disease in the conformation of the chest. In 30 there was a history of hemorrhage. The diazo-reaction was present in 8. The lesion in 24 was infiltration alone; in 25 there was infiltration plus consolidation, and in the 9 remaining there was infiltration, consolidation and cavities.

Their condition on discharge was as follows: None of these patients died, 18 or 29% were unimproved, 28 or 48% were improved, 9 or 16% were convalescent, and 4 or 6% were clinically cured. None of this class ever became permanently febrile. In 20 there was secondary anemia, or 15 less than on admission. Hyperleukocytosis was present in 22, or 15 less than on admission. Neither degeneration of red-cells nor myelocytes were present in any. Tubercle bacilli were absent from the sputum in 10. In 4 there was no expectoration. Adventitious organisms were present in 13, and were mostly confined to those patients in whom tubercle bacilli had disappeared. Tuberculous facies was present in 13. Evidence of disease in conformation of chest persisted in 45, or 7 less than on admission. At the time of discharge the lesion in 4 was "healed infiltration," infiltration alone in 30, consolidation plus infiltration in 17, and cavities still persisted in 8. There was, therefore, a marked improvement in the character of the lesion in this class, particularly in the resolution of consolidated areas. The least change occurred in the cavity cases, and they, of course, present the most unfavorable type. In 6, hemorrhages occurred while under observation. The tuberculin test was negative in 2 at the time of discharge; the other 2 discharged clinically cured, objected to the tuberculin test, and it was not considered necessary to insist upon its administration. The diazo-reaction persisted in but 1 case, although this patient improved. There was no relapse in this class. The average maximum daily temperature was 99.5° F.

Conclusions in regard to afebrile patients with tubercle bacilli.—This class presents either a pure type of pulmonary tuberculosis or minor degrees of mixed infection. The latter is readily and accurately estimated by the degree of hyperleukocytosis which, as has been seen, was present in the majority of these cases on admission. That mixed infection in a minor degree, as in this class, is amenable to treatment is illustrated by the smaller number presenting hyperleukocytosis at the time of discharge, and by the following results: 4 clinically cured, 9 convalescent, and 28 improved, out of a total of 59. This is preeminently the type of the disease in which time is required to effect cure or arrest, and in which it is so difficult to impress the fact upon the patients, owing to the absence of pain or other distressing symptoms. The influence of other tuberculous lesions was apparently slight, even in the few cases where such complications occurred. Of 7 that presented tuberculosis of other organs, only 3 were discharged unimproved; in one case with laryngeal ulceration, and in another with genitourinary involvement, the improvement was remarkable.

Secondary anemia, a marked feature of these cases, disappeared in 50% of those who exhibited it on admission. Adventitious organisms in the sputum were confined mostly to the most favorable cases, and became a constant feature when the tubercle bacilli disappeared.

The tendency of this type is toward recovery, as evidenced by the fact that none died, and but 17 out of 59 were discharged unimproved. The diazo-reaction occurs rarely, and only in the least favorable cases.

Of the third class, cases exhibiting permanent febrility with tubercle bacilli, 48 were discharged, or died. In them the facts elicited on admission were as follows: The family history was negative in 35 and positive in the remaining 13. In 6 there were complicating diseases other than tuberculosis. In 12 there was tuberculous involvement of other organs, of the larynx in 9. Secondary anemia was present in all; hyperleukocytosis in all; degeneration of red-cells in 15; myelocytes in 6, and adventitious organisms in the sputum of 14. In 28 the tuberculosis followed some other disease. Again malaria led, being a solitary factor in 10 cases, malaria with dysentery or chronic diarrhea in 3, dysentery in 4, pleuritis in 3, pneumonia in 2, typhoid fever in 2, chronic diarrhea in 2, measles in 1, and appendicitis in 1. All of these cases presented tuberculous facies and all gave evidence of the disease in the conformation of the chest. There was a history of pulmonary hemorrhage in 20. The diazo reaction was present in 23.

Of the 48 in this class, 24 or 50% died; 20 or 42% were discharged unimproved, and 4 or 8% improved in general condition. None was cured or discharged convalescent, and 13 had tuberculosis of other organs, one more than on admission,—this patient developed intestinal tuberculosis while under observation. None ever became afebrile. All those discharged presented anemia and hyperleukocytosis, 19 had degeneration of red-cells, and in 6 there were myelocytes. In 1 tubercle bacilli were absent from the sputum, but were found in pus withdrawn from the pleural cavity. Adventitious organisms were still present in 10. In 4, all of whom died, hemorrhages occurred while the patients were under observation. The diazo-reaction was present before death or discharge, in 30. Consolidation, infiltration, and cavity or cavities, were present in 38 cases; 9 had consolidation and infiltration, and but one infiltration alone. The average maximum daily temperature in this class was 101.5° F., which is much lower than is commonly observed among similar cases in lower altitudes.

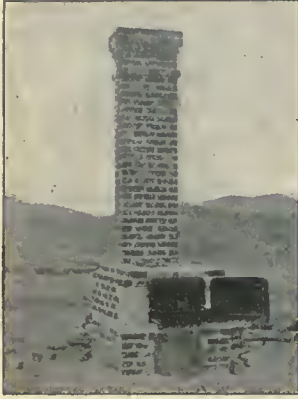
Conclusions.—The family history does not assume a more important place in this than in other types of the disease. Tuberculosis of other organs is more frequently present, particularly laryngeal tuberculosis, and though the latter is not directly a cause of death it contributes to the fatal termination. Hyperleukocytosis and more or less severe anemia are constant features. As might be foreseen, degeneration of red-cells as a manifestation of advanced secondary anemia, is present more frequently than in any other class, but its absence cannot be interpreted as indicating a favorable prognosis; this is likewise true of the presence of myelocytes in the blood and the diazo reaction in the urine. Another fact readily anticipated from the nature of the cases in this class is the constant evidence of disease in the conformation of the chest, and the tuberculous facies.

Adventitious organisms in the sputum, if they bear any relation to mixed infection, would certainly be a feature of this class, which is undoubtedly one of mixed infection, and yet they are absent in the large majority of the cases, and when present are apparently accidental and without relation to the type. With a death record of 50% and a hopeless prognosis in the remainder, the futility of climatic treatment for this class is unquestionable.

Of the 125 patients still under treatment, in 2 the

diagnosis was not confirmed, as the tuberculin test was negative on admission, and they are apparently cases of "healed tuberculosis." Twenty-three have been under treatment less than 1 month, leaving 100 cases for consideration, with results as follow: 26 unimproved, 48 improved, and 26 convalescent.

Of the first class, afebrile cases without tubercle bacilli, there are 23 patients. In these the following facts



were elicited on admission: In 20 the family history was negative, and positive in 3. Complicating pulmonary affections existed in 7, and other complicating diseases in 4. There was tuberculosis of other organs (inguinal glands) in but 1; 13 presented varying degrees of secondary anemia; there was hyperleukocytosis in 3; degeneration of red-cells, or myelocytes, were not observed in this class. Adventitious organisms were present in the sputa of 19, the other 4 having no expectoration. In 18, or 78%, the tuberculosis was preceded by another disease, malaria in 7, dysentery in 5, pleuritis in 2, pneumonia in 1, yellow fever in 1, chronic diarrhea in 1, and inflammatory rheumatism in 1. Tuberculous facies was absent in all. In 17 there was evidence of the disease in the conformation of the chest. The lesion was infiltration alone in 21; in 2 infiltration plus consolidation. In 7 there was a history of pulmonary hemorrhage. The tuberculin test was positive in 22—the one case in which it was negative on admission gave a characteristic reaction later. The diazo-reaction was absent in all.

Condition at present: 4 or 17% are unimproved, 19 or 83% are convalescent; complicating pulmonary affections persist in 6. The tuberculous inguinal glands have been removed by operation. Anemia persists in 6, 7 less than on admission; hyper-leukocytosis in 2, 1 less than on admission. Tubercle bacilli appeared in 6 and are still present in 3 of these. In 6 expectoration has ceased. In 13 adventitious organisms persist. The lesion remains unchanged in all but 2, in which consolidation heralded the appearance of tubercle bacilli in the sputum. In no case has a hemorrhage occurred since the patients have been under observation.

Of the second class, afebrile patients with tubercle bacilli, there are 63 under treatment. The following facts were elicited on admission: The family history was negative in 49 and positive in 14. In 4 there were complicating pulmonary diseases; in 21 there were other complications. In 5 there were tuberculous lesions of other organs—the intestines, tonsil, lower jaw, testicle, and larynx. Secondary anemia was present in 40, hyperleukocytosis in 39, degeneration of red-cells in 3, and myelocytes in 1. Adventitious organisms were present in 19. In 41 or 83% the tuberculosis followed some other disease—malaria in 24, dysentery in 5, chronic diarrhea in 3, pneumonia in 2, pleuritis in 2, chronic bronchitis in 1, influenza in 2, typhoid fever in 1, and syphilis in 1; 24 patients presented tuberculous facies. In 60 there was evidence of the disease in the conformation of the chest. The lesion in 31 was infiltration, in 27 there was infiltration plus consolidation, and in the remaining 5, cavities were present. Thirty-six presented a history of hemorrhage. The diazo-reaction was present in 5.

Their present condition is as follows: 13 or 20% are unimproved, 44 or 69% are improved, and 6 or 9% are convalescent. Complicating diseases of the lungs persist in 4. In 13, 8 less than on admission, other complications remain. In 4, 1 less than on admission, there are

still other tuberculous complications—the lesion of the lower jaw having completely healed. Twenty-five, 15 less than on admission, are anemic, and 31, 8 less, have hyperleukocytosis. Two have degeneration of red-cells and myelocytes. In 6 the tubercle bacilli have disappeared from the sputum. In 19 there are adventitious organisms in the sputum. Nineteen, 6 less than on admission, have tuberculous facies. Nearly all give evidence of the disease in the conformation of the chest. In 28 there is infiltration alone, in 26 infiltration plus consolidation, and in the remaining 9, cavities—practically the same as on admission. Four had pulmonary hemorrhage while under observation. Six presented the diazo-reaction—1 more than on admission. One patient relapsed after having become convalescent.

Of the third class, presenting permanent febrility and tubercle bacilli, 14 are still under treatment. The following facts were elicited on admission: The family history was negative in 12 and positive in 2. Five presented complications other than tuberculosis. There was tuberculosis of the larynx in 2, and in 1 there was tuberculous pyopneumothorax. Anemia and hyperleukocytosis were present in all, degeneration of red-cells in 2, myelocytes in 1, and adventitious organisms in but 5. In 9, or 64%, there was a history of preceding disease;—malaria in 7, pneumonia in 1, and pleuritis in 1. Tuberculous facies was present in all but 1, and evidence of the disease in the conformation of the chest in all. In 6 the lesion was consolidation and cavity, in the remainder consolidation plus infiltration. In 8 there was a history of pulmonary hemorrhage. The diazo-reaction was present in 6.

Their present condition is as follows: 9 or 64% are unimproved, 4 or 28% improved in general condition, and 1 is convalescent. Three present other complications—2 less than on admission, in which malaria and dysentery have disappeared. Three still present complicating tuberculosis; 1 became afebrile; 10 continued anemic—4 less than on admission; 11, or 3 less, have hyperleukocytosis; 1 has degeneration of red-cells, and 1 presents myelocytes. Tubercle bacilli have disappeared from the sputum in 1; adventitious organisms are present in all but 2; 12 have tuberculous facies, and the entire number have evidence of the disease in the conformation of the chest. In each one the lesion is the same as on admission. Two have had pulmonary hemorrhage while under observation, and 7 have the diazo-reaction.

In general it may be said that the prognosis of these patients is a trifle better than for those of the same type discharged, owing to a process of selection, only the most favorable remaining; but even in these there is little prospect of ultimate cure.

The case of the patient who became convalescent and in whom the tubercle bacilli disappeared, is worthy of note. Here there was pyopneumothorax of the left chest. For months the patient was bedridden, expectorating from $\frac{1}{2}$ to 1 liter of offensive pus daily. At one time his weight was reduced to 89 lbs., the evening temperature was constantly from 101° to 103° F., but his appetite, though capricious, remained. Expectoration suddenly ceased almost entirely, the patient improved and now weighs 136 lbs., and except for a badly injured left lung is practically well.

The combined results of 236 patients, who have been under treatment for 1 month or over, are as follow: 24 or 10% died, 68 or 28% are unimproved, 80 or 33% are improved, 48 or 20% are convalescent, and 16 or 6% are clinically cured.

Some interesting features were found in postmortem examinations. In one case both lungs were on the right side, the partially collapsed left lung having been crowded over by an enormous tuberculous infiltration of the chest-walls and pleura, and an aortic aneurysm. In another, which had presented typical symptoms of appendicitis, a tuberculous infiltration of the appendix was found. In

2 cases which succumbed to the pulmonary involvement, and in which on admission there was extensive laryngeal disease with absolute aphonia, the larynx was found completely cicatrized. In 3 instances when death followed a very rapid and malignant form of pulmonary tuberculosis, a peculiar amyloid degeneration of a solidified lung was observed:

To determine whether there is, as alleged, a congenitally small heart in those susceptible to pulmonary tuberculosis, we now carefully weigh that organ in all postmortem examinations. In 19 the average weight was 300 grams, which, in view of the general atrophy of all tissues characteristic of the later stages of tuberculosis, may be considered normal.

An Excellent Charity.—According to the rules of the Board of Education of Chicago, the floors of schoolrooms must be scrubbed twice a year, but the Bureau of Associated Charities has hired poor women to scrub weekly, during the muddy season, the schoolrooms in the central and stock yards' districts. The plan subserves a double good, for the schools are thus kept clean, and needy women secure work. The work will probably extend to other parts of the city.

Lefthandedness.—Chicago in connection with the public schools, maintains a department of child study, and in the seventh annual congress of the Society for Child Study held there recently, the question of righthandedness and lefthandedness was discussed, bringing out statistics from extended observations to show that 93% of the bright children were righthanded, and that a large number of the children whose speech was defective were lefthanded, about 40%. Conclusions were drawn disapproving of the interference with lefthandedness, though on the question of the advisability of teaching ambidexterity there was a division.

Consumption of Fluids.—*The American Grocer* has been collecting statistics concerning the home consumption of beverages, excepting water and sodafountain products, for the year 1900. According to this authority the amount spent was \$1,228,674,925, in the following proportions:

Alcoholic drinks	\$1,059,563,787
Coffee	125,798,530
Tea	37,312,608
Cocoa	6,000,000

Total \$1,228,674,925

Thus the percentage was, for alcoholics, 86%; Beer 50%, whisky and other spirits 30%, and wine and other alcoholic stimulants 6%. Being more costly the alcoholic drinks led; thus the \$125,798,530 for coffee represents 1,257,985,296 gallons, while the more than \$500,000,000 worth of beer measured but 1,221,500,160 gallons. The consumption of spirits per capita fell from 1.43 gallons in 1891 to 1.27 in 1900, wine from .45 to .40, and beer increased from 15.31 to 16.01. This proves that drinking is not on the increase, and the amount spent per capita is less than 4½ cents a day. It is surprising that in spite of an increasing output of good domestic wine, that wine-drinking is declining, while the consumption of beer seems to be on the increase.

The Massachusetts General Hospital had its origin in a circular letter bearing date August 20, 1810, from Drs. James Jackson and John C. Warren asking subscriptions "for a hospital for the reception of lunatics and other sick persons." January 1, 1900, the value of the hospital plant and income producing investments aggregated about \$1,500,000, of which less than \$100,000 was derived from State grants; the remainder had been given in sums varying from 25 cents from "a poor black" prior to 1844 to almost \$1,000,000 given by the Honorable Henry L. Pierce in 1898. Besides the General Hospital in Boston the hospital plant comprises the McLean Hospital and the Convalescent Home in Waverly, a town 8 miles distant. The General Hospital has 261 beds for medical and surgical house patients; an out-patient, and an accident department. During the year 1899, 5,086 house patients, 31,003 out-patients (new cases) and 3,877 patients in the accident rooms were treated. The hospital maintains a training school for nurses and affords annually facilities for the instruction of several hundred students from the Medical School of Harvard University. The history of the General Hospital records the first production of complete anesthesia in connection with a capital surgical operation, October 16, 1846, when W. T. G. Morton made a successful application of sulphuric ether for the prevention of pain to a patient undergoing a serious operation. Of its medical and surgical contributions may be mentioned the method of reducing hip dislocation and the operation of litholapaxy by Dr. Henry Jacob Bigelow, visiting surgeon from 1846 to 1886; also, an investigation of the inflammations in the region of the cecum, published June 18, 1886, by Dr. Reginald H. Fitz, visiting physician, which drew attention to the disease appendicitis, and led to its surgical treatment.

PRACTICAL THERAPEUTICS

Under the charge of
A. A. STEVENS,
Assisted by
L. F. APPLEMAN.

The Treatment of Malaria.—Patrick Manson (*Practitioner*, March, 1901) writes that quinin is the only reliable remedy. Necessary conditions for success are that it be given in such a way that it is absorbed and that the dose be adequate. Equinin is at present on trial. It appears to be equally efficient, and has the further merit of being tasteless. Its greatest drawback is its expense. For an ordinary intermittent fever the dose of quinin may be 10 grains, given when the sweating stage commences, followed by 5 grains every 6 or 8 hours for a week, and with the view of preventing relapse, 5 grains 3 times every fifth, sixth or seventh day for 2 or 3 months. For bilious remittent, the same treatment applies. It is good practice to give a dose of calomel, followed by a saline at the outset of treatment of this type of malarial fever. Quinin is said to be most effective when given about an hour before the paroxysm, that is, when the spores are free in the plasma; but to give the drug at this time in ordinary intermittent is to aggravate the headache, and in the case of bilious remittents and of pernicious malaria, it would be a grave error to await doubtful occurrence of a remission. In serious cases quinin should not be given in pill, capsule or tabloid form. It should be given in solution by the stomach or rectum, or better, hypodermically. For intramuscular injection the best salt is the hydrochlorate. Intramuscular injection is not only less painful than subcutaneous injection, but less liable to induce abscess. It may be safely asserted that any intermittent fever which resists quinin for 3 or 4 days is not malarial. Arsenic, though of value as a blood restorer after an attack, has no power over the parasite. Methylene blue, in 3 or 4 grain doses, appears to have some virtue, and may be of service when, owing to an idiosyncrasy, quinin cannot be taken. As a prophylactic remedy, the author recommends euechinin, 5 to 10 grains, once or twice a week, or even daily.

The Treatment of Apoplexy.—J. J. G. Brown (*Scottish Medical and Surgical Journal*, April, 1901) writes that no unnecessary movement of the patient should take place. He should be gently conveyed to the nearest bed and allowed to lie there in such a position and with his clothing so arranged as to allow of the free return of venous blood from the head and neck. If the diagnosis is certain, and if there are signs of a continuing hemorrhage, and if the site of the lesion is the usual one, it may be advisable to compress the carotid artery. It may even be advisable to ligature that vessel in special cases, as in one recorded by Derenn and Keen. The power of clotting of the blood may be increased by the administration of calcium chlorid, and as the conditions are urgent the remedy should be given hypodermically. The blood tension can be considerably lowered by free purgation. For this purpose croton oil or calomel may be employed, and the lower bowel may be emptied by means of an enema. The quickest way of lowering intracranial tension is by bloodletting. But before venturing to abstract blood, either by opening a vein or by the less objectionable method of applying leeches to the neck, the diagnosis of cerebral hemorrhage must be clear, for such a practice as bloodletting in the case of embolism or thrombosis would be very harmful. The cases in which venesection is likely to do good are those in which the face is darkly flushed, the pulse slow and full, and the coma profound.

Treatment of the Night Sweats of Tuberculosis.—J. Strassburger (*Therapeutische Monatshefte*, March, 1901) notes that external applications of formalin and alcohol give good results, but that the vapor of formalin when thus applied is very irritating to the eye and respiratory tract. Various devices may be adopted to confine the vapor to the body, but the method is convenient. As a substitute for formalin the author has lately used with great success tannoform. It is perfectly harmless, it does not irritate the skin, the patient can apply it him-

self, and it is just as efficacious as pure formalin. The author uses it as a dusting powder in the strength of 1 to 3, applied by means of wad of cotton. [Tannoform is a combination of tannic acid and formaldehyd. Hesse and Adler speak very favorably of its use in excessive sweating of the feet. Hesse recommends a mixture of tannoform, 1 part, and Venetian tale, 2 parts. This remedy will be found especially useful when the condition is associated with more or less maceration of the tissues.]

Treatment of Erysipelas.—Keirle (*Philadelphia Medical Journal*, VII, No. 7) has treated 30 cases of erysipelas by the following method with uniform success: The affected area is first enclosed in a ring of tincture of iodine painted from 2 to 3 inches from the edge of the reddened area. A sufficient number of coats should be applied to cause a slight desquamation of the upper layers of the skin. At the same time the whole surface enclosed in the ring is covered with an ointment of ichthyol 1 dram, vaselin 1 or 2 ounces. This is covered with a piece of gauze, a hot stupe applied and renewed every 4 hours. At the end of 12 hours the ichthyol ointment is washed off and a fresh coat applied; if the iodine has not had sufficient effect its application is repeated once or more. Internal treatment may or may not be instituted as the result is the same in either case.

Silver Nitrate in the Treatment of Inflammations of the Upper Respiratory Tract.—Gleason (*Therapeutic Gazette*, March 15, 1901) states that fetor of the breath in atrophic rhinitis may be fairly well corrected by directing the patient to cleanse the nose once or twice a day with Dobell's solution and sniff into it every 3 or 4 hours a little powdered starch containing 1 or 2 grains of silver nitrate to the ounce. Stearate of zinc may be substituted for the starch with advantage. This acts as an irritant and provokes a watery discharge which washes away and prevents the accumulation of semi-inspissated and decomposing secretions. Because of their irritating effects, solutions of silver nitrate are rarely employed inside the nose. Organic salts of silver are as a rule unirritating to the nasal mucous membrane and may be employed as astringents and antiseptics in solutions of 20 to 30 grains to the ounce. As an astringent to the nasal mucous membrane, the extract of suprarenal capsule or its newly discovered alkaloid, adrenalin, is the most powerful known. The alkaloid is active in the strength of 1 to 10,000 parts of water, and in the strength of 1 to 5,000 furnishes the best local treatment for hay fever and nasal hydrorrhea. In these conditions it may be applied every 2 hours, either as a spray or by means of pledgets of absorbent cotton saturated with the solution and placed within the nose. Silver nitrate solution 60 grains to the ounce painted on the lateral walls of the pharynx 2 or 3 times a day is one of the best methods of aborting acute pharyngitis or tonsillitis. By using this strength the irritant effects, as compared to the weaker solutions, are scarcely perceptible. The posterior wall of the pharynx should then be painted with a 20 grain solution of protargol. This treatment, if repeated twice or thrice a day, for 2 or 3 days, will abort phlegmonous tonsillitis in a large proportion of cases. In follicular tonsillitis a 60 grain to the ounce solution of silver nitrate is equally effective in aborting the attack when applied to the tonsillar crypts after the removal of the pseudomembrane.

Thioocol in Catarrhs and Tuberculosis.—Goldman (*Canadian Journal of Medicine and Surgery*, January, 1901) has used thioocol with satisfactory results in 24 cases of chronic bronchial catarrh complicated with recurrent febrile attacks, severe cough-irritation and difficult expectoration. The fever subsided in all cases within 5 days, expectoration was greatly facilitated, cough-irritation lessened and respiration became free. Convalescence was well established in from 4 to 7 weeks. The drug was used in 10% syrupy solution, of which 1 dessert-spoonful was given to adults 3 times a day after meals; children received 1 teaspoonful thrice daily, with milk or coffee diluted with water. No disagreeable after-effects were produced by the drug. In every case the condition of the patient improved, and an increase of from 4½ to 10 pounds in weight was noted within a period of scarcely 2 months. Equally satisfactory results

were obtained with thioocol in 8 cases of acute and chronic pulmonary catarrhs in various stages; special care being directed by the writer to the unmistakable antiseptic action of the preparation, evidenced by the rapid reduction of fever. Constant reduction was observed after the first few doses of the solution; and in cases in which the fever had, with other remedies, always recurred, it disappeared completely after a 6 days' treatment with thioocol, and remained absent. The general symptoms of the disease were much relieved in a short time, and later physical examination showed evidence of complete cure. The syrupy thioocol solution was also employed in 9 cases of tuberculosis, three of these were young persons 14 to 23 years old, and 6 were patients ranging from 34 to 59 years of age. Among the latter there were 2 of the most severe form, with cavity formation and repeated hemoptysis. In the milder cases the remedy afforded complete cures in from 4 to 6 months; in moderately severe cases complete cures resulted in from 6 to 11 months. In 2 very severe cases in the third stage the night-sweats were lessened; the fever was reduced, the appetite improved, and the severe and annoying cough-irritation lessened to a certain extent by the administration of thioocol, which results are all that can be expected in such cases.

The Uses of Arsenic.—Rolleston (*Treatment*, April, 1901) writes, for the curious condition known as geographical tongue; arsenic may save us further trouble in knowing what to do. As an appetizer or pick-me-up, a dose before meals of a minim of Fowler's solution, with 10 grains of bicarbonate of sodium and infusion of gentian, is a useful and popular prescription. It is also recommended in small doses in other forms of dyspepsia, and especially in irritative dyspepsia and alcoholic vomiting. Curious as it may seem, it produces a good effect if given before meals. In the annoying form of morning diarrhea, in which a large evacuation is passed with but little warning half an hour or so after breakfast, a minim of Fowler's solution frequently acts like a charm. It has also been recommended for mucous colitis, that troublesome form of disease manifesting itself by the passage of casts of the bowel formed of coagulated mucus. When arsenic given by the mouth disagrees, it may be given hypodermically, and may be more conveniently injected into the substance of the muscles than into the subcutaneous tissues. Large doses can thus be often borne without any bad effects. Rolleston cites a case in which arsenate of sodium (1 in 500 of eucain B. solution) was given hypodermically for 271 days, 105 grains of the drug having been thus administered without toxic symptoms. The solution should be injected at blood-heat. The author has tried the new preparation known as sodium cacodylate, both by the mouth and hypodermically, and has never seen any toxic symptoms from its use. On the whole, he regards sodium cacodylate as less powerful, both for good and for evil, than ordinary arsenic.

Rules for Paracentesis in Acute Pleurisy.—J. Mitchell Bruce (*Treatment in Practical Medicine*, 1900) says there are 2 great clinical guides to the performance of paracentesis. First, lapse of time, or duration of the effusion, second, urgency. First, no considerable effusion should, under any circumstances, be kept for more than 3 weeks, unless signs of ebb have commenced and are progressive. Fourteen days would probably be a wiser limit, and, indeed, cases have done well which were not permitted to pass the tenth day, although there was no urgency and fever was still present. If flint be allowed to remain indefinitely in the chest, the lung and the chest wall both become steadily more impaired in function, and the difficulty of spontaneous absorption increases with thickening of the pleura. Only harm can result from leaving it longer. Second, urgency of symptoms demands immediate operation, however long or however short the duration of the case. Urgency is recognized by (a) universal dullness of the affected side. This evidence is otherwise described as disappearance of skodiac resonance at the apex. Some authorities do not wait for complete collapse of the lung but operate when the fluid signs reach the level of the second rib in front. (b) Signs of pleurisy on the opposite side. (c) Development of rales in the opposite lung. (d) Signs of bronchitis or of pneumonia. (e) Signs and

symptoms of serious embarrassment of the heart, whether by simple dislocation or by associated endopericarditis or by previous valvular disease, or adherent pericardium, pallor, faintness, coldness of extremities, palpitation, great anxiety, and failing pulse. (f) signs and symptoms of grave involvement of other organs, subdiaphragmatic abscess, acute or chronic Bright's disease with severe symptoms, etc. (g) Urgent symptoms of intrathoracic pressure, whatever their cause, persistent dyspnea, even in bed, with cough, frothy serous expectoration, lividity and sweats. (h) Signs and symptoms of increase of effusion after previous arrest or decline.

Treatment of Seasickness.—T. Lauder Brunton ("Lectures on the Action of Medicines") says if you put the head absolutely flat down it tends to prevent seasickness to a great extent. You can also greatly lessen the tendency to seasickness by giving drugs which will quiet the medullary center; bromid of potassium is exceedingly useful for this purpose. The way in which I use it is this: I take with me in a little paper parcel about $\frac{1}{2}$ a dram or a dram of bromid of potassium. When on board I go to the steward and say, "I want a bottle of soda-water and a large tumbler;" I throw in the bromid of potassium, shake it up and drink it. You need not be at all afraid of bromid of potassium, and you can keep up its action during a long voyage across the Atlantic; and you can push it so far that the patient becomes quite drowsy without doing him any harm whatever. Another drug that seems to be very useful is chloral. There is one point to be remembered about seasickness, and that is that there is often a good deal of bile in the stomach, and if you clear the bile out the patient is eased considerably. This is done by simply giving the patient a large draught of hot water; this he vomits, and thus the bile is well cleared out; afterward you can give your remedies with some chance of success. In using the bromid of potassium you must remember that it is a salt and just like chlorid of sodium, which is a powerful emetic, bromid is an emetic in itself if taken in too concentrated a form. If it is given at all, it must be given freely diluted.

Mercuriol in Syphilis.—Ayres (*Philadelphia Medical Journal*, 1900, No. 19) after a thorough and extensive test of mercuriol in the treatment of syphilis, finds (1) that it causes less disturbance of the gastrointestinal tract than any other preparation of mercury used internally; (2) it controls the skin manifestations and the pains much better than any other preparation, while on the mucous membrane eruptions it has as good an effect as any other, and has equally as good an effect upon the chancre. The author advises $\frac{1}{2}$ to 1 grain as a beginning dose. Salivation has been produced by 2 grains, while in other cases as much as 6 grains have been taken without any disagreeable effects.

Euphthalm.—This is derivation of amygdalic acid, a radical involving mydriatic properties. Chemically, it is closely related to B-eucin. It appears as a white crystalline powder, freely soluble in water. According to Cipriani (*Wiener Med. Woch.*, No. 46, 1900), it causes mydriasis by paralyzing the terminations of the oculomotor. Dilation of the pupil commences after 20 to 30 minutes, and disappears in from 3 to 6 hours. The corneal epithelium is affected by a 10% solution, but not by weaker solutions. It does not increase intraocular tension, disturb accommodation, nor produce disagreeable after-effects. Without being toxic or irritating it may be used in all cases requiring simple mydriasis. In iritis often better results are obtained from a 2% solution of euphthalm than from repeated installations of atropin. The author concludes that euphthalm in from 2 to 5% solutions is perfectly harmless; and that it meets the need of long continued mydriasis, which is so important for ophthalmoscopic examinations and observations.

Cocainization of the Spinal Cord.—At a recent meeting of the Academie de Médecine (*Medical Press and Circular*, April 3, 1901) Tuffler stated that out of 1300 cases of medullary anesthesia, there was only 1 fatal case, and that was a person who had disease of the heart. In 80% of the cases there was malaise nausea, vomiting and fever. Almost any operation could be done under cocain analgesia, but it was not suitable to children or hysteric subjects, nor for operations on the intra-

abdominal organs, as the nausea might trouble the surgeon. Guéniol stated that the injection of $\frac{1}{4}$ of a grain of cocain produced anesthesia in obstetrical cases; that instead of impeding uterine contractions it rather favored them, and that it rarely gave rise to any troublesome accident. Porak, on the other hand, confessed that in the 10 times he had practised the method he had failed 4 times. He considered that the injections were not necessary in normal cases, and should be reserved for obstetrical operations. Laborde said that the injection of the smallest quantity of cocain into the arachnoid cavity exposed the patient to the gravest dangers; one inherent to the local action of the poison, the other to its absorption. By reason of its absorption and diffusion in the cephalo r'achidian fluid, it affects the bulb, hence the troubles of respiration and circulation so frequently observed—the syncope (sometimes fatal), the vomiting and headache. Consequently this method of inducing anesthesia should be proscribed as dangerous, and should not be regarded as a substitute for chloroform and ether.

Treatment of Uterine Hemorrhage.—Davenport (*Annals of Gynecology and Pediatrics*, April, 1901) states that uterine hemorrhage occurring in the years immediately after puberty and before marriage, is usually due to some general cause, and local examination and treatment is usually unnecessary. Between the ages of 20 and 40, endometritis is the most common cause, with fibroids next, and when hemorrhage occurs during this period an examination should always be made. After 40, uterine hemorrhage is more serious, as cancer more often starts at this time, and local examination should be insisted upon in all cases of hemorrhage. The author considers ergot the drug par excellence for arresting hemorrhage where muscular contraction is indicated, as in uterine fibroids. Hydrastis has failed in these cases, but acted well in endometritis. In mild forms of menorrhagia the fluid extract of hydrastis, given in half to teaspoonful doses 3 or 4 times a day for 2 or 3 months, has materially checked the flow. After that length of time, it may be used for 7 to 10 days preceding the menstrual period. Capsules containing 5 grains of gallic acid, given 3 to 5 times a day, seem to act more promptly in arresting hemorrhage than other agents. In cases of severe hemorrhage the vagina should be firmly packed with cotton after being thoroughly freed from clots. This should be repeated as soon as blood shows through the cotton and if followed up continuously will usually control the flow in a short time. Some obstinate cases of metrorrhagia occur in young girls shortly after puberty, due to lack of exercise, overstudy and general debility, associated with anemia. Tonics—especially iron—are indicated, together with outdoor exercise, forced feeding and regular hours. Local treatment should be avoided, if possible. In uterine hemorrhage occurring late in life, local examination should always be made and suitable operative measures employed, if indicated. Curetment will often effect a cure if endometritis is the cause of the hemorrhage. In uterine fibroids the same procedure will temporarily check the hemorrhage, thus giving the patient time to recuperate and be in better condition for a more serious operation if this be deemed necessary.

Antidiphtheric Serum in Pneumonia.—Raynaud (*La Médecine Moderne*, March 27, 1901), reports the case of a woman, aged 67 years, attacked with severe double pneumonia which began with a violent chill followed by prolonged coma and associated with very marked congestive phenomena. Two injections of 20 cc. each of antidiphtheric serum were given in the morning and evening of the day on which the diagnosis was established. The day following the injections defervescence began, and the author considered her out of danger on the second day following the injections. The injection of 40 cc. of antidiphtheric serum in 1 day produced no untoward effect.

The Removal of Hardened Cerumen.—Savage (*Medicine*, February, 1901) uses hydrogen peroxid with excellent results to aid in the softening and removal of hardened wax from the ears. The peroxid is warmed and allowed to remain in the auditory canal for 5 or 10 minutes, which is usually sufficient to soften the hardest wax so that it can be readily removed with a stream of water. If the accumulation of wax is of recent origin it will be dissolved by the peroxid.

Rhus Glabra in Enuresis.—Cassidy (*Merek's Archives*, April, 1901), reports 3 cases of enuresis cured by the administration of rhus glabra in the following manner:

℞
Fluid extract of rhus glabra 6 drams
Syrup to make 2 ounces
A teaspoonful at bedtime.

The bowels were regulated by a laxative consisting of:

℞
Ferric citrate 100 grains
Syrup of calcium lactophosphate.
Aromatic syrup of easeara of each 2 ounces
A teaspoonful after the noon meal.

This treatment was continued every day for 4 months. The author emphasizes the necessity for continued and long treatment.

Benzin in Seborrhea.—Leftwich (*British Medical Journal*, No. 2,088), recommends benzin applied once in 5 days for the removal of dry seborrhal crusts. As the benzin leaves the hair and scalp very dry the following inunction should be used every morning:

℞
Bay rum of each 1½ ounces
Tincture of cantharides 2 drams
Cologne water 4 drams.

The effect of benzin on the baldness following seborrhea is very satisfactory. To conceal the odor, the author advises the addition of 10 minims of oil of geranium to each ounce of benzin. In mild cases of seborrhea the benzin is mixed with equal parts of alcohol.

Ichthyol in Erythema Nodosum.—Brownlie (*British Medical Journal*, January 5, 1901) reports a case of erythema nodosum which he treated by local applications of the following solution:

℞
Ichthyol 2 drams
Alcohol
Ether of each 3 drams.

Relief was immediate. The burning pain diminished after the first application, and disappeared entirely in 2 days, the temperature at the same time becoming normal. Salophen in 15-grain doses was used internally. In preparing this solution the alcohol and ether should first be mixed, then the ichthyol added. If the ichthyol is put into the bottle first, and then the other ingredients added, an insoluble sediment is formed.

Neuralgia.—

℞
Tincture of aconite
Tincture of colchicum seed
Tincture of eimicifuga
Tincture of belladonna of each 1 dram
Six drops every hour until relieved.

Bleeding and Tender Gums.—

℞
Gelatin 30 grains
Sodium chlorid 8 grains
Carbolic acid 2 grains
Beta-eucain hydrochlorate 8 grains
Cocain hydrochlorate 2 grains
Distilled water 3½ ounces
Use as a mouth wash.

Effect of Atropin on the Intestines.—According to the *Therapeutic Gazette*, April 15, 1901, Ostermaier has used hypodermic injections of atropin to overcome intestinal inactivity associated with hepatic or renal colic, movable kidney, and other conditions where laxatives have failed. He found that atropin produced copious fecal evacuation in from 12 to 36 hours, and that if it failed to act in this manner a very small dose of castor oil, or some other purgative, was efficacious. It is also suggested that atropin be used hypodermically to overcome the intestinal feebleness or inactivity following severe abdominal operations.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

May 11, 1901. [No. 2106.]

1. An Address on Pancreatitis. A. W. MAYO ROBSON.
2. Notes on a Mild Type of Smallpox (*Variola Ambulans?*). F. MONTIZAMBERT.
3. Note on the Probable Relationship of Vaccinia to the Inoculated Form of Smallpox in Man. S. MONCKTON COPEMAN.
4. Note on a Case of Enormous Dilation of the First Part of the Duodenum. GILBERT BARLING.
5. A Case of Gastrojejunostomy for Complete Rupture of the Intestine at the Duodenojejunal Flexure. B. G. A. MOYNIHAN.
6. Case of Sarcoma of Stomach. A. CHRISTY WILSON.
7. Perforated Gastric Ulcer: Operation 28 Hours After Perforation: Recovery. H. WYNTER SNIETTEL.
8. A Case of Tuberculous Disease of the Cerebrum. Lieut.-Col. J. MAITLAND.
9. The Spontaneous Cure of Hydatid Cysts. W. M. STEVENS.
10. Experiments Upon the New Specific Test for Blood. G. H. F. NUTTALL and E. M. DINKELSPIEL.
11. Responsibility and Crime. ALEXANDER ROBERTSON.

1.—See AMERICAN MEDICINE, Vol. I, No. 8.

2.—Montizambert, in notes on a mild form of smallpox, refers to "a very ordinary form of international courtesy"—the threatening of Canada with, and in some places her invasion by, smallpox from her neighbor, the United States. He points out that in the United States during the 3 months from December 28, 1900, to March 29, 1901, there occurred, according to the official reports, 11,964 cases of smallpox with but 157 deaths, a mortality-rate of but 1.31%. Commenting upon the mildness of the disease he suggests the designation *variola ambulans*. He believes that the disease is not chickenpox, as has been suggested, and that on account of the mildness of the disease and the vaccinations that its presence induces, a large proportion of the people of Canada should be rendered immune to the smallpox, and so for some years the Dominion may be safe from any severe epidemic of the disease. [A.O.J.K.]

3.—Copeman, in a note on the probable relationship of vaccinia to the inoculated form of smallpox in man, states that for some time past it has been borne in upon his mind more and more convincingly that it was not improbable that much of the cowpox, in the prevaccination era, was derived from the inoculated variety of smallpox rather than from the ordinary variety. Determining to investigate the subject, in default of inoculated smallpox in the human subject, he made trial of the monkey. Human smallpox lymph or pulp was first inoculated directly on calves with altogether negative results in every instance. But with monkeys success was invariably obtained, and, when after one or more passages through this animal, the contents of the local inoculation vesicles were employed for insertion on the calf, an effect was produced which, after one or more removes in that animal, was indistinguishable from typical vaccinia. Moreover, from the contents of the vesicle raised in this manner on the calf, children were vaccinated, with the result that such vaccination "took" normally. Details are promised in a subsequent communication. [A.O.J.K.]

4.—Barling reports a case of dilation of the first portion of the duodenum in a young man who for 4 years had suffered from pain and sickness after taking food; later frequent vomiting occurred, sometimes of food which had been eaten 24 or 36 hours before. The patient was greatly emaciated and physical examination showed dilation of the stomach. This was verified on operation. There was no pyloric obstruction but extensive adhesions between the pylorus and the parietal peritoneum and liver existed. A gastrojejunostomy was performed by Halsted's method. Death occurred on the fifth day. Necropsy revealed a general peritonitis, resulting in a tear in the duodenum, the first portion of which was enormously dilated and the walls very thin. The anastomosis was firmly united. [J.W.M.]

5.—Moynihan reports a case of complete rupture of the intestine for which a gastrojejunostomy was performed.

The patient was a boy of 6, who sustained an abdominal injury which was followed by collapse and evidence of fluid in the peritoneal cavity. On opening the abdomen free blood was found, and a complete rupture of the intestine at the duodeno-jejunal flexure. The duodenum was closed and an anastomosis between the jejunum and the anterior wall of the stomach performed by means of Murphy's button. The patient did well for 104 days when collapse occurred suddenly and death an hour later. Necropsy showed that the Murphy's button had perforated the lower portion of the duodenum. The case is of interest in that it shows that the function of the stomach is not interfered with by the passing into it of the bile and pancreatic juice, nor does it favor the idea that it causes regurgitant vomiting. [J.W.M.]

6.—Wilson reports a case of **gastric sarcoma**. For 10 years the patient had suffered from dyspepsia, and for 8 months before operation, from almost constant pain. There was much loss of weight, and a mass was palpable under the right rectus. Operation was performed, and the mass which involved the greater curvature of the stomach and the duodenum, removed with a portion of the pancreas and 3 enlarged glands. The duodenum and stomach were united by means of Allingham's bobbin, and the parietal wound closed. Complete recovery followed. Microscopic examination showed the growth to be sarcoma. [J.W.M.]

7.—Shettle reports a **successful operation for perforated gastric ulcer**. The patient was a girl of 17, who had suffered from anemia and had some dyspeptic symptoms for some time. The typical symptoms of gastric ulcer were wanting. After eating, she was seized with a sudden and severe pain in the epigastric region, followed by general abdominal pain and vomiting. The abdomen became distended and tender; temperature, 99.4°; pulse, 110. On operation the abdomen was found to contain a turbid fluid, and the intestines were glued together with recent lymph. A perforation was found in the anterior wall of the stomach, which was closed with silk sutures. After sponging the abdomen clean, the abdominal wound was closed with gauze wick drainage. An uninterrupted and complete recovery followed. [J.W.M.]

8.—Maitland reports a case of **resection of the cecum for tuberculous disease**. The patient was a man of 44, of tubercular tendency, who for 8 years suffered from occasional attacks of pain in the appendicular region where a mass could be distinctly outlined. These attacks became more frequent, and there was obstinate constipation and marked emaciation. Operation was performed, and extensive tuberculous disease involving the ileum, cecum and a portion of the ascending colon found and removed. The lower end of the colon was closed, and the end of the small intestine united to it by a lateral anastomosis. The subsequent progress of the case was uneventful. The case is of interest in that it had been diagnosed appendicitis, and also in the absence of diarrhea and hemorrhage, which are usual in intestinal ulceration. [J.W.M.]

9.—Stevens reports an instance of **spontaneous cure of a hydatid cyst of the liver**, and refers to the various explanations offered to account for such occurrence. The chief features of the case were that there were 2 cysts in different stages of degeneration; in the smaller one there was a quantity of laminated hydatid membrane, but in the other not a trace of this remained and, indeed, nothing to indicate its nature except a few hooklets that were found only after repeated examinations; both cysts were situated in the peripheral parts of the liver and projected considerably beyond its surface; there was no evidence of pus in the contents of either cyst; the capsules of the cysts were globular and tense and there were no signs of puckering or contraction; neither contained bile; there was a general fibrous condition of the liver. With regard to the cause of spontaneous cure in hydatid cyst, he mentions the following explanation: The natural death of the parasite; the toxic action of the bile from its entrance into the cavity of the cyst; absorption of the hydatid fluid; inordinate multiplication of the internal brood; and changes in the ectocyst. The last named is believed to be the correct explanation of the phenomenon. [A.O.J.K.]

10.—See editorial.

11.—Robertson in a note on **responsibility and crime**, cites several cases from his own experience that he believes fully bear out the statement that epileptics are not infrequently really unconscious of doing apparently purposive acts of a criminal nature, though such acts may appear to be done consciously with evil intent. [A.O.J.K.]

The Lancet.

May 11, 1901. [No. 4054.]

1. Pathology and Diseases of the Thyroid Gland. WALTER EDMUNDS.
2. The Importance of the Teaching of Insanity to the Medical Student and Practitioner in Relation to the Prevention of Insanity. ROBERT JONES.
3. Local vs. General Anesthesia in Certain Cases of Abdominal Surgery. THOMAS H. MORSE.
4. The Etiology and Treatment of Convergent Squint. CLAUD WORTH.
5. Diseases of the Maxillary Antrum, their Symptoms, Causes, and Treatment. ADOLPH BRONNER.
6. Mental Fatigue in School-children. Dr. JOSEPH BELLEI.
7. Three Cases of Myxedema of Varied Type. WILLIAM WYLLYS.
8. Medical Notes on the Life of Edward Gibbon, the Historian. WILLIAM H. HORROCKS.

1.—Edmunds, in his first lecture on the **pathology and diseases of the thyroid gland**, states that the gland consists of closed vesicles lined with epithelial cells, which secrete colloid. In addition to the thyroid proper he describes parathyroid glands which consist exclusively of cells, are developed earlier than the thyroid and number 4 for each thyroid lobe. Experiments show that the thyroid is intimately concerned in the nutrition of the central nervous system, and in the regulation of the cerebral circulation. The symptoms which follow the complete removal of the thyroid and parathyroid glands in the dog are: convulsive seizures, high temperature, hurried respiration, and later, paralysis of the hind legs followed by death on about the fifth day. This result is but slightly improved by the administration of thyroid extract or by grafting a thyroid lobe. On removal of 1 lobe the other undergoes hypertrophy. The removal of all but 2 parathyroid glands gives rise in time in rabbits to failing health, loss of hair and a myxedematous swelling of the lower portion of the face. [J.W.M.]

2.—Jones, in an address on the **importance of the teaching of insanity to the medical student in relation to the prevention of insanity**, points out that there is in Great Britain and Ireland 1 insane person to 300 of the population, or 5 certificates of insanity to each member of the medical profession. He strongly urges the teaching of insanity to medical students, not only because of the responsibility pertaining to certifying to insanity, but also because of intimate relations the medical man bears to the family in general, and because he should be the first to determine the forebodings of insanity and by instituting appropriate treatment in the early stages, cure, if possible, the condition. He emphasizes the importance of a proper study of physiologic chemistry in an effort to solve many of the problems connected with the etiology of insanity, and he suggests that every public asylum should become a school for postgraduate study of alienation. [A.O.J.K.]

3.—Morse, in discussing **general versus local anesthesia in special cases of abdominal surgery**, expresses his belief that the 2 causes of surgical shock are the anesthetic and the injury to nerve structures, and advocates the use of local anesthesia in cases of acute peritonitis, internal hemorrhage, and intestinal obstruction. He mentions 6 cases in which the method was employed with gratifying results. [J.W.M.]

4.—Worth discusses the **cause and treatment of convergent strabismus**. Binocular vision is the blending in the brain of the 2 impressions received from the eyes; this is called the fusion faculty. In a convergent squint in addition to the deformity, there is a defective development of the fusion faculty, usually a suppression of the vision of the deviating eye, with more or less amblyopia of it and a refractive error. In 74% observed by the writer the deviation appeared before the end of the fourth year. The essential cause of squint is defective development of the fusion faculty usually associated with

other developmental defects, as hypermetropia and congenital amblyopia. A sudden fright, a blow on the head, or the straining of whooping cough, may be exciting causes in a child with an abnormal fusion faculty. The treatment consists in correcting the refractive error and astigmatism by glasses, and to exercise the deviating eye so as to prevent the loss of its fixation power. This is done by instilling atropin in the straight eye, and by the use of the "amblyoscope." Should these methods fail after the age of 9 years the deformity should be corrected by tenotomy or advancement. [J.W.M.]

5.—Bronner discusses the causes, symptoms and treatment of diseases of the maxillary antrum. The diseases mentioned are acute and chronic empyema, both of which are usually of nasal origin. The latter is very rarely of dental origin. Chronic empyema, except in syphilitic or tubercular conditions, as a rule occasions but little discomfort. The most common symptoms are neuralgia, a blocking of one nostril, with a nasal discharge and an unpleasant odor in the nose. Cysts of the antrum are rare and mostly of dental origin. When large it causes distension of the cheek, and on pressure over it a crackling noise is heard. Carcinoma is the most common antral tumor. Empyema of the antrum may arise by direct extension of disease of the nasal mucosa, or by the blowing through the ostia of infective material. The treatment of chronic empyema consists in the establishment of free drainage by opening the antrum through the middle or lower meatus, the canine fossa or the alveolar process, preferably the latter. Care must be exercised to avoid puncturing the nose or orbit. A tube should be inserted and the cavity irrigated with a hot antiseptic solution, followed by the insufflation of aristol and boric acid. Should the discharge continue more than 5 weeks the presence of a polypus or disease of the bone may be suspected. Acute empyema usually gets well without surgical interference. [J.W.M.]

6.—Bellei, discussing mental fatigue in children, mentions methods of determining such fatigue, details the results of his personal experiments, and concludes: (1) No conclusion could be drawn as to the influence of the single subjects of teaching; (2) the first hour of lessons is a useful mental exercise, because the children are able during that time to overcome the state of inattention in which they were at the time of coming to school; (3) the morning lessons do not produce great mental fatigue; (4) the midday rest is of great use to the children because it does not destroy the good effects of the mental exercise in the morning and enables them to do work of better quality than that which they produce after a long rest, as one observes at the beginning of the morning lessons; and (5) though immediately after the midday rest the children are in the best conditions of mind, an hour or so of application in the afternoon is sufficient to produce such a mental fatigue as to lead at the end of the afternoon lesson to the worst work of the day. Therefore, if the morning application does not fatigue, it consumes the mental energy of the children in such a manner that they cannot undertake light work in the afternoon without falling into great mental fatigue. [A.O.J.K.]

7.—Wylley's reports 3 cases of myxedema of varied type. The first case was that of a woman, of 60, who exhibited myxedema, suffered with delusions and hallucinations, became maniacal, and died in a few weeks. The second case was that of a woman, of 45, whose manifestations of myxedema were insidious and poorly developed, but nevertheless correctly interpreted, and improved by the administration of thyroidin. The third case was that of a woman, of 53, whose manifestations resembled those of Bright's disease, and who presented evidences of brain disease, and atheroma of the aorta. She improved under the administration of thyroidin. [A.O.J.K.]

Journal of the American Medical Association.

May 25, 1901. [Vol. XXXVI, No. 21.]

1. The Pathology of Active Tuberculosis of the Pericardium. H. GIDEON WELLS.
2. Tuberculosis of Fascia. J. CLARK STEWART.
3. Sarcoma of the Pancreas. GEORGE A. BOYD.
4. A Case of Epithelioma Developed on the Basis of a Healed Lupus Vulgaris Treated by X-rays. DAVID LIEBERTHAL.

5. Ureteral Implantation Into the Bowel for Diversion of the Urine: An Experimental Research. JACOB FRANK.
6. An Overlooked Nasal Factor in Ear Disease. CHEVALIER JACKSON.
7. Compound Fracture of Olecranon with Dislocation of Both Bones of the Forearm. B. N. TORREY.
8. Tubercular Disease of the Kneejoint and Hipjoint in Children: Diagnosis and Treatment. EDWARD A. TRACY.
9. Cough Due to Reflex Irritation in the Upper Air Passages. FRANK S. MILBURY.

1.—In 1,048 autopsies, 10 cases of tuberculous pericarditis were found. These are reported and with other statistics show it is not a rare lesion. There may be an acute miliary eruption with serous or bloody extravasation mixed with fibrin; or the eruption may be accompanied by synechia; or caseous masses may be found; or there may be an acute inflammation without tubercular lesions by extension; or as one of the manifestations of terminal bacteremia. Fibrous tubercular pericarditis is the commonest. Infection may be hematogenous, lymphogenous, or by extension. In the first form the lesions are generally acute. The second form is more common and occurs from a reversal of the flow in the lymphatics, due to obstruction in the glands. There may be direct extension from the pleura, and direct extension from contiguous and adherent glands has been assumed, but it is probable infection is more often via the lymphatics even when the glands are united to the sac. Healing often occurs, but possibly only after the form due to the diffusion of sclerogenous toxins. Calcification is possible, but no authentic case is reported. With massive exudation there are symptoms of pressure on the heart. Synechia are less malignant than those of rheumatism and a differential diagnosis is possible. Cardiotuberculous cirrhosis of the liver is described, also the forms of secondary myocarditis with the beginning of general miliary tuberculosis by this route. Death generally results from associated tubercular disease. [H.M.]

2.—There are 2 types of tuberculosis of the fascia, the cold abscess type from acute infection, followed by cheesy degeneration, liquefaction and a detritus-filled cavity; and another in which the onset is more chronic, resulting in connective tissue overgrowth with or without disseminated cheesy foci. The latter form is often overlooked. In the majority of cases it is secondary to other tuberculous lesions. In the first type, scraping with a sharp spoon leaves a healthy, smooth surface. The second can be relieved only by knife and scissors, and all the new fibrous tissue must be removed to prevent nonrecurrence. The operation must often be most extensive, as it regularly involves intermuscular septa, sheaths of tendons and muscles, and passes easily to the joints. In the first type there has probably been rapid and simultaneous infection of wide fascial planes; in the second, infection has arisen at one point and spread gradually. Cuts of sections are presented. [H.M.]

3.—The literature of primary sarcoma of the pancreas is reviewed and a case reported with a description of the autopsy and microscopic examination. [H.M.]

5.—The operation should not be one of choice but necessity. Its history is briefly reviewed and the author's experimental operations on dogs described. A 2-inch longitudinal incision is made through the peritoneal coat of the bowel which is then loosened and retracted. A $\frac{3}{4}$ inch incision is next made through the remaining coats. The ureters are severed from the bladder and held together by a silk suture. A suture is passed into the intestine $\frac{1}{2}$ inch below the lower angle of the inner wound, brought out through the wound, passed through the cut ends of the ureters, then back through the incision, emerging near the point where it was first inserted. The ends are now tightly tied, thus drawing the ureters into position and firmly holding them. The incision in the muscularis and mucosa is sutured transversely, and that in the peritoneum longitudinally. By this means sutures which have entered the bowel are covered by peritoneum and risk of infection obviated. From the results of the experiments which are recorded, it is concluded that the technic is satisfactory, that simultaneous bilateral implantation is extremely dangerous, that unilateral implantation is justifiable when other means fail.

notwithstanding the inflammatory reaction invariably present; that the rectum will tolerate the presence of urine. No strictures resulted but might possibly have done so after months or years. [H.M.]

6.—It consists in hypertrophies on usually both sides of the vomer which deflect the intruding, dustladen, dry, cold air against the Eustachian eminences resulting in perpetual irritation. When ear disease exists these, however small, should be removed. Afterwards, not before, take off enough of the posterior turbinal hypertrophy to relieve stenosis and prevent reproduction of vomerine growths, but not enough to expose the Eustachian eminence to direct blasts. This factor has been present in 25% of the writer's ear cases. [H.M.]

7.—Skiagraphs show the line of fracture and healing, and statistics revealing the unfavorable results of the usual treatment are given together with the mechanical reasons for the infrequency of the accident. Other treatment proving unsatisfactory the patient was anesthetized, the opening in the soft parts enlarged, holes drilled in both fragments which were united by means of a common wood screw $1\frac{1}{2}$ inches long with a ferule slipped over it to keep the head outside of the soft parts. Flexion to more than a right angle, extension almost to normal, with prospects of still further improvement are the result. [H.M.]

8.—The general practitioner should be able to diagnose and treat these joint diseases. The proximate cause is often a slight injury, causing a destructive localization of germs, and therefore the history is important in making a diagnosis. The usual symptoms are enumerated. Fixation is best obtained by molded splints of wood—plastic material, and protection by a high shoe combined with the use of crutches or a Thomas knee-splint. Gradual extension when the kneejoint is flexed can be accomplished by means of newly molded splints every 10 days, and in the case of the hip by this combined with traction by weight and pulley. The technic of applying the splints is described and constitutional treatment considered. [H.M.]

9.—Milbury believes all coughs are reflex, and quotes various authorities. The majority are caused by some abnormality of nose, throat or ear. The various reflex causes in these localities are enumerated with special consideration of those in the glossoepiglottic spaces. [H.M.]

Boston Medical and Surgical Journal.

May 23, 1901. [Vol. CXLIV, No. 21.]

1. Municipal Care of the Consumptive Poor. S. A. KNOPF.
2. Echinococcus of Liver with Perforation Into the Lungs and Bronchi. WILLIAM F. GAY.

1.—In connection with the movement for the establishment of a city sanatorium for poor consumptives in Boston, Knopf shows by statistics the much higher mortality of the disease in that class and states that in the early stages there are from 60% to 80% of chances of cure. Death is most frequent between 17 and 35, and the economic loss is pointed out. The essentials for treatment are plenty of pure air, sunshine, food and medical supervision. Tuberculosis is a costly disease, and everything that is needed is lacking in the tenements of the poor. By means of sanatoriums, not only are breadwinners saved and further spread of the disease limited, but the actual cost to the taxpayer is \$4.00 less per week per capita than for the care of the incurable consumptive in the general hospital, the length of residence averaging the same, and in the latter it requires more care to prevent harm to fellow-patients than can be given. In the sanatorium the patient is taught to be religiously clean and careful, how not to take cold, the dangers of intemperance, etc., and he goes out as an educator to the community. In German villages where these have been established, voluntary imitation of the clean habits of the institution has reduced mortality from tuberculosis to one-third. In connection with the city institution should be a dispensary and reception hospital for the selection of cases, and a seaside sanatorium for scrofulous children, and a commission for examination of candidates, medically and pecuniarily, for reporting on the sanitary condition of dwellings and distributing literature and information on the prophylaxis of the disease. [H.M.]

2.—Gay reports a case of perforation into the bronchi of an echinococcus cyst of the liver. The patient was a man of 25, whose health was poor until his fourteenth year, then fair until his twenty-third, since which time he suffered from attacks of hemoptysis. When he came under observation he presented evidence of acute pneumonia superimposed upon a preexistent pulmonary tuberculosis. The pneumonia ran the usual course. At this time an enlargement of the liver was observed, and after a short period of improvement hemoptysis recurred; the liver continued to enlarge uniformly; there was tympanitis and constipation with clay-colored and fetid stools. Temperature was 101°; pulse 120; respirations 32. These symptoms continued for several days, when he vomited a quantity of orange-colored matter, and continued to expectorate the same copiously for a few days. The temperature declined, the breathing improved, the liver decreased in size and general improvement followed. By examination of a piece of membrane found in the sputum the diagnosis of hydatid of the liver with rupture into the lungs and bronchi was made. Entire cysts of varying size were expectorated for some time. The diagnosis previous to the rupture of the cysts was obscured by the intercurrent disease to which the patient will succumb. [J.W.M.]

Medical Record.

May 25, 1901. [Vol. 59, No. 21.]

1. Orchitis and Epididymitis in Typhoid Fever. FRANCIS P. KINNICUTT.
2. The Operative Treatment of Umbilical Hernia in Adults. JOSEPH A. BLAKE.
3. The Borderland of Insanity: Where and What Is It? HENRY WALDO COE.
4. Recurrent Oculomotor Palsy: Report of a Case, with Remarks. WILLIAM M. LESZYNSKI.

1.—Kinnicutt discusses epididymitis and orchitis as sequels of typhoid fever and reports 2 cases each of which followed a mild typhoid infection. The infection reaches the point of origin by the blood, or from the urethra by way of the vas deferens. The following conclusions are deduced from a study of cases reported: (1) Epididymitis or orchitis occurring in the course or during the convalescence of typhoid fever is a rare lesion and is of typhoidal origin. (2) Only very exceptionally is it due to secondary microbial infection. (3) It develops at a late period in the disease or during convalescence. (4) The lesion, although as a rule unilateral, may be bilateral; and involves either the epididymis or testicle or both, and not infrequently the cord. (5) Effusion into the tunica vaginalis is rare. (6) Termination most often is by resolution. (7) Suppuration occurs in 25% of all cases. (8) Localized necrosis and extrusion of testicular tissue is not uncommon. (9) Exceptionally there is destruction of the entire testicular structures. (10) Atrophy of the testicle occurs, but is a rare sequence. (11) The lesion gives rise to little constitutional disturbance. (12) Death as a direct result of the lesion has not been noted. [J.W.M.]

2.—Blake in discussing the operative treatment of umbilical hernia in adults, states that this is the most common form of hernia in women over 40 years of age. They are divided into those in which separation of the recti does and does not occur, the former presenting the greatest difficulty. The symptoms to which a large hernia give rise are pain and gastric disturbance. Ulceration of the overlying skin, obstruction, and strangulation may occur as complications. When the hernia is small and an effective truss can be worn operation is not indicated. According to some operators recurrence occurs in about 30% of large and 15% of moderate sized hernias. The method of operation which the writer considers most applicable to those cases in which stretching of the linea alba and separation of the recti exists, consists in dividing the linea alba in the median line above and below the sac, excising the ring if necessary, and divesting the front of one rectus of fat it is overlapped by the other, the overlapping being greatest at the hernial site. Both edges are secured by means of mattress sutures of chromicized catgut. [J.W.M.]

3.—The most reasonable gauge of mental health is in a comparison of past and present. Insomnia is the most common prodrome of insanity. With borderland insomnia, restlessness is generally present, with either mental distress or superlative pleasure. A change of temperament is always suggestive. Anger is another symptom. It is an evidence of nerve-cell instability, and like epilepsy it tends to its own repetition. Constantly dwelling upon one theme, especially if the problem be intricate, will lead to insanity. Imperative ideas are commoner than is ordinarily believed, from the fact that the subject is generally sane and uses concealment to avoid suspicion of insanity. These are based on loss of will power due to defect in residual nervous energy in the cortical central cells. Every user of opium and cocain and of alcohol in excess is on the borderland. Masturbation leads oftener to insanity in women than in men, owing to the more depressing mental effect growing out of different ethical standards. Prolonged excessive sexual indulgences, no matter how normally accomplished, sends multitudes into the borderland. The erroneous belief, in and out of the profession, that sexual expenditure is necessary for good health, has much to do with sexual excesses. It is doubtful if one such case ever existed. The treatment must be hygienic, dietetic and reconstructive. Work must be given up or changed, complacency encouraged, and new currents of thought suggested. Under these methods the result may be full mental vigor. [H.M.]

4.—The cardinal symptoms are unilateral headache, limitation of paralysis to the same side, the involvement of the same nerve in all attacks and intervals of complete freedom. Some cases have resulted in complete recovery, others in permanent paralysis. There is great diversity of opinion as to causation. Two cases have been studied post mortem, showing tumor at the base, which probably pressed on the nerve-trunk during the increased vascularity accompanying the attacks of migraine. [H.M.]

New York Medical Journal.

May 18, 1901. [Vol. LXXIII, No. 20.]

1. The Pathology and Bacteriology of Ureterointestinal Anastomosis. F. ROBERT ZEIT.
2. Air, a Factor in Digestion. EDWIN W. MOORE.
3. The Proper Administration of the Schott Exercises. VICTOR NEESEN.
4. The Use of the Suprarenal Capsule in Diseases of the Heart. Second Paper, with a Report of Cases. SAMUEL FLOERSHEIM.
5. Relations of Vascular Disease to Heart Disease. WILLIAM H. THOMSON.

1.—Zeit, in his second paper on the pathology and bacteriology of ureterointestinal anastomosis, sums up his investigations as follows: (1) Ureteral implantation into the rectum is always followed by ascending infection. The resulting pyelonephritis is caused by *Bacillus coli communis*; (2) The primary mortality is very large, 84%, no matter which operation is done; (3) of 120 dogs operated upon, 90% died of peritonitis due to leakage of urine or general sepsis and pyelonephritis during the first 10 days; (4) dogs living a longer time died of pyelonephrosis and pyemia; (5) dogs which had fully recovered from the operation and the resulting pyelonephritis, and were, to all appearances, in perfect health and vigor again, all had granular contracted kidneys, due to induration and cicatrization of diseased areas. The rectum acts as a fair substitute for the bladder in such cases; (6) dogs which had fully recovered after unilateral implantation were living by the other kidney. The kidney of the side operated on was atrophic and granular, the result of an early pyelonephritis. The functionally active kidney was 2 to 8 times the size of the atrophic one; (7) a review of the literature on ureterointestinal anastomosis in man shows that no better results can be expected in man than in animal experiments; (8) the ureters are frequently dilated, but show very little or no disease, no matter how extensive a pyelitis or pyelonephritis is present; (9) the bladder is always infected by way of the urethra, whether it is emptied at the time of operation or not. A purulent cystitis was found in every case, caused by *Staphylococcus albus* and *Bacillus coli communis*; (10) artificial immunity to infection by the so-called colon

group of bacteria is the only hope of making ureterointestinal anastomosis a feasible operation. [H.H.C.]

2.—Moore, in his article on air as a factor in digestion, states that the oxygenation of the venous blood in the lungs, which contains the food elements gathered up by the lacteals and veins, is a most important factor in digestion and should be considered as such. These food elements are not absorbed by the body tissues until exposed to the air in the lungs, and hence the importance of the atmosphere as a digestive factor. [H.H.C.]

3.—For the proper administration of the Schott exercises Neesen gives the following rules: (1) Each movement is to be performed slowly and evenly, without jerking or trembling. (2) Each movement is to be followed by an interval of rest (sitting); (3) Arm movements should alternate with leg or body movements. (4) No part of the body is to be held so as to compress the bloodvessels or interfere with the breathing. (5) The patient should be instructed to breathe naturally and regularly. (6) The patient should be watched closely for (a) irregular breathing, (b) straining, (c) trembling, (d) flushing or pallor of face and lips, (e) dilation of nostrils, (f) yawning, and (g) drawing down of the corners of the mouth. The primary object of the exercises is, not to develop the muscles, but (a) to relieve the overburdened heart by (1) drawing the blood away from it into the extremities and muscular structures; (2) accelerating the circulation (contraction of the muscles upon the bloodvessels); and (3) soothing the nervous mechanism of the heart by acting upon the motor nerves through the slow movements of the muscles; and (b) to strengthen the heart muscle. Contraindications to the exercises are advanced atheroma, aneurysm, and acute inflammatory carditis. [H.H.C.]

4.—Floersheim, in his second paper on the use of suprarenal capsule in diseases of the heart, states that after the administration of the suprarenal powder, the following was observed: (1) A weak and irregular-acting heart became stronger and more regular; (2) a dilated heart was contracted; (3) a diffused apex beat became localized; (4) a diffused, loud, and rough mitral regurgitant murmur became localized, smoother, and lessened in intensity, while in some cases the murmur disappeared; (5) a murmur which, owing to the extreme weakness of the heart, could scarcely be heard, became more distinct, thus aiding in the diagnosis; (6) the normal cardiac sounds, when indistinct, became clearer and more easily distinguished; (7) in some cases a rapid pulse became less rapid; in other cases a slow pulse became faster; (8) patients who were very weak, with organic heart disease, were improved; (9) no effect was observed in organic heart disease when the pulse was strong and regular. [H.H.C.]

5.—In his article on the relation of vascular disease to heart disease, Thomson states that "the development of atheroma in the pulmonary artery in mitral stenosis, as well as in the portal system in cirrhosis of the liver, shows that the primary seat of the obstruction is beyond the vessels and in the area of the capillaries. This is further demonstrated by the fact that the most widely diffused and most serious sclerotic changes are to be found in the arterioles, just those vessels which have relatively the largest supply of the actively living muscular tissue whose one function is to produce movement. To find them most affected has but one meaning, and that is, that they have had the most work to do in the struggle against an obstruction beyond them. It cannot be too clearly recognized that the arteries are but conduits to the capillary area. That no appreciable processes take place in them, but that it is in the capillary area that everything goes on. It is there that all the nutritive and all the chemical changes take place which make up the processes of life. According as the interchange is natural between the extracapillary and intracapillary fluids will the physical conditions of the coming current of blood in the arteries be normal. But let chemical or vital changes occur in the capillary area that interfere with the normal interchange through the walls of the capillaries, and the arterial flow must be correspondingly affected. The arteries become very palpable to touch because overful with blood from obstruction further on, and the pulse rises in tension. Hypertrophy of the muscular coat of the arterioles follows, on account of increased work; but

hypertrophy in a muscle is always at the expense of its reserve stock of vitality. All hypertrophied muscles degenerate sooner than normal muscles, and arterioles illustrate this law very fully. We are thus brought to the remote, or ultimate, causes of this leading form of vascular disease, and they may be conveniently summed up under the term of *tissue poisons*. The coexistence of vascular disease may alter the conditions of the problems of heart disease, whether in a pathologic, a clinical, or a therapeutic sense. For while it is true that primary disorders of the heart affect the circulation in most patients after 40, we often find the converse equally true—that primary disorders of the circulation affect the heart, and that physical examination of the arteries may afford as important indications of the nature of cardiac disease as physical examination of the heart itself; and the same may be said of signs observable in the venous, lymphatic, and capillary systems." [H.H.C.]

Medical News.

May 25, 1901. [Vol. LXXVIII, No. 21.]

1. Some Notes on Medical Diagnosis. WILLIAM N. BERKELEY.
2. The Mineral Waters of Mt. Clemens, Michigan, as Viewed and Compared with Those of European Watering Places. RICHARD LEUSCHNER.
3. The Treatment of Chronic Purulent Otitis Media. JAMES F. MCKERNON.
4. Tuberculosis of the Iris. WILLIAM F. MITTENDORF.

1.—Under the practical methods of diagnosis to be employed are considered the use of instrumental and chemical aids and the general mode of procedure at the bedside. The laryngeal mirror, ear speculum and ophthalmoscope should be familiarly in the hands of every general practitioner. About the stethoscope there is no dispute. The phonendoscope deserves more attention. The pleximeter sometimes gives more accurate results than the finger. The sphygmomanometer and the sphygmograph are more valuable scientifically than clinically. Every physician should be familiar with the microscope. Under bedside procedure are considered in detail history taking, general inspection, inspection of head, chest and abdomen; palpation, percussion and auscultation. Having ascertained the facts, the diagnosis is to be made according to the "Law of Parsimony." Causes are not to be multiplied beyond necessity, yet the rule must not be too rigidly interpreted. [H.M.]

2.—The careful physical examination and strict regimen of patients at the various famous springs of Europe, is described in a general way and contrasted with the lack of it at many American resorts. The mineral ingredients of the various wells of Mt. Clemens are given and the high percentage noted, special attention being called to the contained sulphur, iodine and bromine. The subject of absorption through the skin by means of baths is discussed. That such absorption takes place, especially with highly concentrated mineral waters, is confirmed at the latter resort by the fact that a salty taste in the mouth and traces of bromine and iodine in the urine invariably follow bathing with massage. [H.M.]

3.—McKernon says in treating a case of chronic purulent otitis media we should have 3 objects in view, the cure of the otorrhea, the improvement of the hearing, and the relief of the distressing subjective symptoms. Cleanliness is a prime object in treating the discharge. This is accomplished by first mopping the canal with sterilized cotton and then applying some antiseptic solution. But if the discharge be profuse syringing must be resorted to, and in doing this care should be used to see that the canal is made straight by drawing the auricle upward, backward and a little outward. But little force should be used in irrigating, and this procedure should be practised only sufficiently often to keep the canal clean, as more than this irritates the diseased tissue. If irrigation produces disagreeable symptoms, as vertigo, nausea, pain, etc., it must be discontinued and the cleansing accomplished by means of mopping with cotton. Every case should be examined early for abnormal condition of the upper respiratory tract. In case there is a large amount of granulation tissue in the diseased ear it must be removed. The best agents for this are silver nitrate, chromic acid and the curet. If, after the above outlined treat-

ment has been carried out for some 2 weeks, there is still a discharge and tendency to the formation of granulation tissue then the strong probability is that there is dead bone present. If in any case drainage is insufficient a free incision should be made for that purpose. To improve the hearing after the discharge is under control divide the adhesions. This will give relief in a very large majority of cases. Inflation and vaporizing the middle ear will tend to prevent adhesions. To relieve the distressing after-symptoms, such as tinnitus, give potassium iodid, beginning with 5 grain doses, and ascending until relief is secured. [A.B.C.]

4.—Tuberculosis of the iris is sometimes primary, but usually secondary. There are solitary and multiple forms, and the latter may be either acute or chronic. But one eye is generally affected. When following tubercular disease of the general system it takes an acute form, characterized by one or more grayish nodules becoming later larger and reddish-brown, with broken down matter in the anterior chamber. This may cause ulceration of the cornea, or the whole eyeball and orbit may be involved, or after perforation of the cornea, shrinking may occur. A less violent form may be associated with the early stages of pulmonary tuberculosis. There may be multiple deposits, yellowish, and rarely coalescing. Synechia may form, but some absorption takes place after the use of atropin and general treatment. A more serious form is a single deposit at the bottom of the anterior chamber, involving the ciliary body with adhesions to the lense and injury to the cornea. Even this may yield to treatment. Creosote and cod-liver oil or Koch's tuberculin are indicated, also atropin, hot compresses, leeches in acute or rapidly progressing cases, and morphin for great pain. Iridectomy may be done if the deposit is confined to a small area. If there is debris in the anterior chamber, and the disease does not respond to medical treatment, it is safer to enucleate. [H.M.]

Philadelphia Medical Journal.

May 25, 1901. [Vol. 7, No. 21.]

1. The Surgical Treatment of Chronic Ulcer of the Stomach. A. W. MAYO ROBSON.
2. Late Results of the Treatment of Inoperable Sarcoma with the Mixed Toxins of Erysipelas and Bacillus Prodigiosus. WILLIAM B. COLEY.
3. Trauma as an Exciting Cause of Paralysis Agitans. SAVARY PEARCE.
4. Two Cases of Lobar Pneumonia Following Ether Anesthesia, with Unusual Course. W. S. SCHLEY.

1.—See AMERICAN MEDICINE, Vol. I, No. 8, page 335.

2.—See AMERICAN MEDICINE, Vol. 1, No. 7, page 292.

3.—Pearce, in his paper on trauma as an exciting cause of paralysis agitans, gives his clinical experience with the disease and cites several especially marked cases, the majority of which he believes are the direct result of concussion. As a treatment, he considers nerve stretching to be the most rational procedure. [H.H.C.]

4.—Schley cites 2 cases of of lobar pneumonia following ether anesthesia, developing respectively on the first and third days after operation. In each case only the right lower lobe was involved. Sixteen hours after the initial rise of temperature 1 patient was given 25 grains and the other 20 grains of calomel, whereupon the temperature immediately began to fall and resolution commenced within 2 days. They were the only cases of pneumonia following anesthesia occurring in his experience of several thousand cases covering a period of about 24 years. [H.H.C.]

Wiener klinische Wochenschrift.

March 28, 1901. [14 Jahrg., No. 13.]

1. The Pathology and Theory of Migraine. M. SHILE.
2. Three Cases of Cataract After a Flash of Lightning. JOSEF PREINDLSBERGER.
3. Primitive Organs of Vision. THEO. BEER.

1.—As the result of a personal observation, Shile has come to the conclusion that the aura and other focal symptoms

of migraine and the pain are crossed; and that the pain cannot be considered a localizing symptom. The symptoms, exclusive of the pain, are due to a nutritional disturbance of certain cell territories of the cortex, and are probably connected with a special predisposition on the part of the affected cells. The subjective symptoms are referable to the sense of sight. When the disturbances are in parts of the brain that produce no localizing symptoms, such as the prefrontal lobes, the only symptom is pain. The hemieric cell disturbances may be located in several parts of the cerebral cortex at the same time. The exciting cause of the migraine is probably a toxic substance; and Sihle refers to the observations of Ratchford on the presence of paraxanthin in the urine in migraine. The pain in migraine, the author believes, is due to the irritation of the pia overlying the affected parts of the cortex; hence, it is on the side opposite to that of the other symptoms. As the hemieric foci may be located in various parts of the brain, they may also manifest themselves in those areas in which vasomotor centers are situated, and give rise to the vasomotor spasm or paralysis that at times precedes migraine. There is some relation between **epilepsy and migraine**; but in epilepsy aura and spasm are on the same side, while in migraine aura and pain are crossed. The uric acid diathesis, tuberculosis, anemia, and other chronic nutritional disturbances, are the foundation upon which the hemieric tendency develops. [D.R.]

2.—Preindlsberger reports 3 cases of **cataract** in patients of 11, 13 and 21 years respectively, due to the effects of lighting. [H.H.C.]

April 4, 1901. [14 Jahrg., No. 14.]

1. Etiologic-bacteriologic Diagnosis. EDMUND NEUSSER.
2. The Question of a Special Excitant of Disease in the So-called Botryomycosis of Man. R. V. BARACZ.
3. Intestinal Hemorrhage Following Reposition of Incarcerated Hernia. JOS. PREINDLSBERGER.

1.—An interesting address, in which Neusser, whose mastery of bacteriologic data, so far as they illumine clinical medicine, is phenomenal, shows the important **debt that clinical medicine owes to bacteriology**, and how necessary a knowledge of the latter is in making correct diagnoses of obscure conditions. As an illustration the following case may be quoted: A woman of 50 entered the hospital with obstructive jaundice. Three days later there was a chill, with a sudden rise of temperature, an increase of the fibrin in the blood, marked polynuclear leukocytosis, and a diminution of the chlorids in the urine. Physical examination showed the absence of pneumonia; but 2 days afterward a diastolic murmur developed at the aortic cartilage. Subsequently symptoms of meningitis manifested themselves and the patient died in coma. As the blood picture corresponded to that of pneumonia, the author concluded that the pneumococcus was responsible for the objective findings at the aortic cartilage and the meningeal symptoms, and made a diagnosis of cholelithiasis, cholangitis, pneumococcal endocarditis and meningitis. The autopsy and the bacteriologic examination completely corroborated this diagnosis. Another case is cited, in which, however, an erroneous diagnosis was made through overlooking one minute point. The patient presented, together with pulmonary and pleural symptoms, and splenic tumor, choroidal nodules surrounded by a pigmented arcola. A diagnosis of military tuberculosis was made, but the autopsy showed a **miliary actinomycosis**, originating in the vermiform appendix. Pigmentation does not occur in choroidal tubercles; its existence in the case should, the author thinks, have made him suspicious of the diagnosis. [D.R.]

2.—Poncet and Der claim to have found in certain small, pediculated tumors of the fingers and hands, a peculiar bacterium resembling the staphylococcus, which they consider as identical with the **botryomyces** or **botryococcus**, found by Bollinger in the so-called castration fungus of horses. In a tumor of this kind observed by Baracz, no botryococcus was found; instead, streptococci and staphylococci were present. The histologic picture was that of a myxomatous fibroid. [D.R.]

3.—Preindlsberger reports 2 cases of **intestinal hemorrhage** following reposition of incarcerated hernia, and discusses the possible causal factors involved. [H.H.C.]

April 11, 1901. [14 Jahrg., No. 15.]

1. The Toxic Action of Alcohol in Certain Nervous and Mental Diseases. WAGNER V. JAUREGG.
2. Alcohol and Mental Aberration. JOSEF A. HIRSCHL.
3. The Local Application of Carbonic Acid in Menstrual Disturbance. GUSTAV LOIMANN.

1.—**Acute alcoholic intoxication** is by no means clearly understood. It is not known whether the state of drunkenness is due to the direct action of alcohol on the brain, or to an indirect action upon the bloodvessels or upon the blood. Regarding **delirium tremens**, von Jauregg is of the opinion that it is not due to the alcohol, but to a poison developed in the body under the influence of alcohol—an **alcohologenic poison**. To this poison, alcohol is, in reality, an antidote; hence, delirium tremens, according to the author, develops chiefly after the sudden withdrawal of alcohol, and is, therefore, an abstinence symptom. On this basis the author employs alcohol in the treatment of grave cases of delirium tremens. There is some analogy between delirium tremens and infectious diseases; thus there is a leukocytosis as well as a disturbance in the relation of the leukocytic elements; likewise, a transient albuminuria and alimentary glycosuria. Alcoholic multiple neuritis and the psychosis accompanying it (Korsakow's psychosis) are likewise due to the hypothetic poison. Gastrointestinal intoxication is a factor in the production of the multiple neuritis. The hepatic changes resulting from alcoholic abuse may also be due to the action of poisons which are produced by the alcohol in the gastrointestinal tract, and which then pass through the liver. [D.R.]

2.—Hirschl gives some statistics of the frequency of **alcoholism** in patients admitted to Krafft-Ebing's psychiatric clinic. Thirty percent of the men, and 4.4% of the women were alcoholics. Among **epileptics** and **paralytic demented**, 18.9% had used alcohol. Of 3,579 alcoholic patients, 28.1% became insane. [D.R.]

3.—The **therapeutic value of carbonic acid** was known only in comparatively recent times—the latter half of the eighteenth century. Its existence in many mineral springs led to its use at one time for a long catalogue of diseases in many of which it failed and fell into disuse. But Loimann considers it very effective for many **menstrual anomalies**. Baths are frequently recommended, but he thinks its local application as a douche is much more effectual and he has devised an instrument by which the pressure of the gas stream can be known from the sound produced and regulated by a valve in the tube. A vaginal gas douche causes a reddening of the portio and an increase of the secretions so that after its use the menses often occur earlier and are more copious. Hence its therapeutic value in cases of oligomenorrhea or amenorrhea in cases not due to anatomic changes but to nervous or metabolic disturbances, also in cases of failing or spare menses from obesity. But the carbonic acid douche should never be used when there is a possibility of pregnancy as it tends to loosen the placenta and produce abortion. [W.K.]

April 18, 1901. [14 Jahrg., No. 16.]

1. Renal Calculi, Especially Their Gastrointestinal Phenomena. M. STERNBERG.
2. Otitic Encephalic Abscess Cured by Operation. OTTO PIFFL.

1.—Sternberg, of Vienna, reports several cases of **nephrolithiasis** which presented prominent gastrointestinal symptoms. He summarizes his observations as follows: Besides the ordinary symptoms of renal colic, there were present gastric and intestinal disturbances which consisted principally of painful constipation and meteorism. These attacks were best treated with opium. Such attacks were accompanied by increased arterial tension. There are cases of renal colic in which the gastrointestinal symptoms assume such a prominent role that the clinical picture changes sufficiently to warrant the term "gastrointestinal form of renal colic." Of diagnostic importance in such cases are the facts that, first, the involved ureter may give rise to pain on pressure in the region of Mac Burney's point (simulating appendicitis), and second, changes in the urine are often entirely lacking for a considerable length of time. An important diagnostic aid consists in the fact that

the raising of the lower portion of the trunk (Trendelenburg's position) results in an easing of the pain. [H.H.C.]

Berliner klinische Wochenschrift.

April 29, 1901. [38 Jahrg. No. 17.]

1. The Energy-Balance in Sucklings. O. HEUBNER.
2. Nervous Tachypnea. RECKZEH.
3. Diseases of the Larynx Incident to Influenza. LUBLINSKI.
4. Conservative Treatment of Purulent Adnextumors (Pyosalpinx, Pyoovarium), and the Results of Vaginal Incision. A. D'HIRSSEN.

2.—In the first installment of his article on nervous tachypnea, Reckzeh gives as material for the comparison of the 4 cases coming under his own observation a review of 36 cases of the disease treated in the second division of the University Hospital at Berlin. [H.H.C.]

3.—Lublinski takes up the subject of the laryngitic affections incident to influenza, and describes among others what he terms laryngitis subglottica, a condition characterized by inflammation and swelling even to the point of edema in the subglottic space. Another lesion observed by him consists of white spots (fibrinous infiltrations, Fränkel; superficial epithelial necrosis, Lublinski, Schmidt) on the inflamed vocal cords and arytenoepiglottic folds. He also refers to the unusually intense hyperemia and swelling of the larynx mucosa and true vocal cords in cases of laryngitis influenza, and to the frequency of laryngitis hæmorrhagica accompanying this disease. [H.H.C.]

4.—See Editorial.

May 6, 1901. [38 Jahrg., No. 18.]

1. Pernicious Anemia. TH. RUMPF.
2. New Experimental Investigations Into the Curative Action of Anthrax Serums. A. SCHLAVO.
3. Why Does Cerebral Syphilis Appear Almost Incurable? O. ZIEMSEN.
4. Resection of the Lower Turbinate Bone. J. FEIN.
5. Nervous Tachypnea. RECKZEH.

1.—After careful chemical analysis of the blood and important organs in a number of cases of pernicious anemia, Rumpf arrives at the following facts: (1) The abnormally great quantity of water contained in the blood; (2) the small quantity of solid substances; (3) the large quantity of chlorin; (4) the poverty of the blood and tissues with respect to potassium, iron and (5) fat. Acting upon these data, Rumpf recommends a "potassium therapy," basing his advice on the theory that the high percentage of NaCl present in the blood and tissues is in itself injurious and has a detrimental effect on the formation and preservation of the blood, while the lack of potassium in organic combination also presents an obstacle to hematogenesis. Again, free exhibition of potassium in some form results in its combination with the excessive quantity of chlorin (in the NaCl) present, thus not only freeing the body from superfluous NaCl, but also feeding the "potassium-hungry" tissues with the very element which they need. [H.H.C.]

3.—In discussing the apparent difficulty encountered in curing syphilitic lesions of the central nervous system, Ziemssen, of Wiesbaden, states that the real reasons are: (1) The fear which many physicians seem to have that the routine mercurial treatment itself may give rise to neuritic affections; (2) The relative misproportion between the often mild initial symptoms of the disease and the grave cerebral complications following; (3) the difficulties in the way of early diagnosis; (4) the course of the cure itself. A general opinion seems to prevail that lesions of the central nervous system not responding to a 3 to 4 weeks' specific treatment must be due to some other cause than syphilis. As to therapy, Ziemssen insists that thorough, energetic and long-continued mixed treatment carried to the furthest extent compatible with safety is the only condition under which good and permanent results may be looked for. This procedure applies to all conditions, no matter how apparently insignificant, and should be continued long after every vestige of constitutional symptoms has disappeared. [H.H.C.]

Deutsche medicinische Wochenschrift.

April 11, 1901. [27. Jahrg. No. 15.]

1. Diffuse Peritonitis with Appendicitis. E. SONNENBURG.
2. Rare Extraperitoneal Stratified Cystic Abdominal Tumors. C. HELBING.
3. Two Cases of Urogenital Colibacillosis. W. KARO.
4. Asepsis in Cervical Operations. O. V. BÜNGNER.
5. The Casuistics of Total Extirpation of the Stomach (esophagoenterostomy). A. V. BARDELEBEN.

1.—The difficulties attending a correct diagnosis of the different varieties of peritonitis following appendicitis are discussed by Sonnenburg, who reaches the conclusion that, (1) differential recognition of the various forms of diffuse peritonitis due to bacterial action is almost impossible; (2) the bacterial forms are scarcely to be differentiated from the so-called "chemical" forms; (3) the indications for operative treatment in cases of beginning peritonitis are not clearly defined from those in cases of appendicitis during the attack; (4) often the diagnosis is made but very little easier by an explorative abdominal incision. Sonnenburg does not believe in irrigation of the abdominal cavity except in extreme cases, but prefers an extensive tamponade of the peritoneal cavity from a lateral incision. In support of this method of treatment he inserts a table of statistics showing the mortality percentage in cases operated upon by him. [H.H.C.]

2.—Helbing reports 3 rare cases of extraperitoneal cystic tumors of doubtful classification and obscure origin. [H.H.C.]

3.—After reference to the nonspecific infections of the genitourinary tract with particular mention of the forms of orchitis and epididymitis reported by various authors as due to the presence of staphylococci, Bacillus pyocyaneus, Talamon-Fränkel's pneumococcus, Friedländer's diplobacilli, Diplococcus lanceolatus of Fränkel-Weichselbaum, etc., Karo reports 2 cases of orchitis and epididymitis in which Bacillus coli was the exciting cause. In both cases a history of recent enteritis was elicited. In the first case unilateral castration and internal treatment with urotropin resulted in complete cure, while in the second, puncture of the abscess cavity and internal treatment with urotropin were sufficient. In both cases repeated bacterial examination revealed almost pure cultures of Bacillus coli. [H.H.C.]

4.—Von Büngner describes what he calls a "chin stirrup," intended to prevent sepsis in operations upon the cervical region. The apparatus consists of a loop of wire upon which is stretched a piece of sterile gauze, and the 2 limbs of which are so bent that they fit around the ears of the patient, thus forming a small upright screen completely separating the scene of etherization from the region of operation. [H.H.C.]

5.—Von Bardeleben reports a successful total extirpation of the stomach with subsequent esophagojejunostomy in the case of a woman of 52, suffering from carcinoma of the stomach. [H.H.C.]

April 25, 1901. [27 Jahrg., No. 17.]

1. The Aims of Functional Diagnosis, with Remarks on the Blood as an Organ and the Regulatory Function of the Kidneys. O. ROSENBACH.
2. The Technique and Adaptability of Subcutaneous Injection of Quinin. BLÜMCHEN.
3. The Identification of Human Blood. UHLENHUTH.
4. Funck's "Sporidium Vaccinale." W. PODWYSZOZKI and A. MAKOWSKI.
5. Imperfect Sugar Oxidation in Organisms. P. MAYER.

2.—Blümchen, after experimenting with subcutaneous injections of quinin in malarial cases, finds that 0.5 gram of chinin hydrochlorate dissolved in 1 cc. of hot water and injected under aseptic precautions beneath freely movable skin causes no pain and seldom produces infiltration of the neighboring tissue—or if it does, such infiltration never results in necrosis. His method presents the following advantages: (1) The simple aqueous solution in hot water is aseptic; (2) the process is painless; (3) the solution is easily prepared under all circumstances; (4) the results are certain; (5) the cost is trifling; (6) in using

great quantities of the drug, this method affords a rapid mode of assimilation. [H.H.C.]

3.—In continuing his experiments on human blood, Uhlenhuth finds that in spite of exposing several specimens of blood to the effects of decomposition for several months, none had lost their power of reacting to his test. [H.H.C.]

4.—Podwyssozki and Manowski, in the attempt to corroborate the investigations of Funck on the existence of a "Sporidium vaccinale" in the contents of vaccine pustules, reach the conclusion that at least one of the alleged protozoan organisms described is in reality nothing but an epithelial cell undergoing fatty degeneration. [H.H.C.]

May 2, 1901. [27 Jahrg., No. 18.]

1. Serum: Diagnosis of Tuberculosis. E. ROMBERG.
2. The Bacillus Pathogenic for Rats Found by Danysz. J. KISTER and P. KÖTTGEN.
3. A Recovered Case of Otogenous Meningitis. BERTELSMANN.
4. The Aims of Functional Diagnosis, with Remarks on Blood as an Organ and the Regulatory Function of the Kidneys. ROSENBACH.
5. Changes in the Malaria Parasite During Treatment with Methylene-blue. A. IWANOFF.

1.—In the first part of an article on the serum diagnosis of tuberculosis, Romberg, after giving the results obtained by various investigators with the Arloing-Courmont method, gives it as his opinion that the importance of a trustworthy serum reaction for tuberculosis cannot be overestimated, but that the prospects looking to the general introduction of the Arloing-Courmont method are small, since the difficulties in the way of procuring proper culture-material and hence a uniform test-object are too great. [H.H.C.]

2.—Kister and Köttgen give the results of their experiments on the virulence of the bacilli found by Danysz to be pathogenic in the case of rats and mice. They find that after having made the passage of the animal's body for the tenth time, cultures of the bacilli were no longer infectious. [H.H.C.]

Centralblatt für Gynäkologie.

April 6, 1901. [No. 14.]

1. Four Cesarean Sections in Transverse Fundal Incision. L. HEIDENHAIM.
2. The Therapy of Retroflexion. A. SCHUCKING.

1.—Heidenhaim adds 2 more to the 2 Cesarean sections previously reported. He is of the opinion that to-day the conservative Cesarean section is less dangerous to the patient than many forcible deliveries per vias naturales which involve severe lacerations and other extensive injuries, too often causing sepsis and death. In 3 cases the uterine contraction was marked and the bleeding was immediately checked, and in the fourth, it soon yielded to compression and tampons. He uses fine silk sutures for the uterus, with the best results. [w.k.]

2.—Schucking refers to the importance of preserving the mobility of the uterus, and, for this reason, disapproves of both ventral fixation and shortening the round ligaments as interfering with this mobility, and describes a method of his own which he thinks is very much to be preferred, although he admits that time has not yet been sufficient to show its effect upon pregnancy. [w.k.]

April 13, 1901. [No. 15.]

1. Upon the Remedial Results in Cancer of the Uterus. I. PFANNENSTIEL.
2. Upon Removal of the Placenta by External Manuever. W. ZANGEMEISTER.

1.—Pffannenstiel gives an extended review of 3 methods of operating for uterine cancer—high amputation of the cervix, vaginal total extirpation of the uterus and abdominal. He points out the indications for each and gives statistics showing percentage of cure and of mortality under varying conditions and changes of technic. In conclusion, he expresses the opinion that it is not to the further advance in operative technic that we are to look for the cure of cancer, in the future, but to the earlier diagnosis of the disease. Physicians must be taught to

give earlier and greater consideration to the initial symptoms of cancer. This will increase the cases relieved by operation, as Winter has shown that in the course of years in great cities like Berlin, the operability of cancer has increased from 28% to 46%. It is also important to know that uterine cancer is not a disease of the aged. Most cases are found between the ages of 40 and 50 years, and in not a few, especially of the portio, before the age of 30. He also affirms that in the choice of operation one must consider not only the condition of the parametrium, but also the kind of cancer. While the soft and recent forms give a more favorable prognosis, they must be operated upon only when entirely local; but the older and harder forms, on the other hand, permit operation when much more extended. [w.k.]

2.—Because of the great danger attending the manual loosening of adherent placenta, Zangemeister thinks all available external measures should first be used, and thus the percentage of cases in which the introduction of the hand is required, becomes very small. Expression is difficult from without only when the placenta lies in the body of the uterus either free or adherent. In the former, it can usually, under narcosis, be delivered by expression; but in the latter, if expression fails, then he recommends massage of the uterus. In the intervals of labor pains the uterus should be pressed inward on both sides alternately, and forward and backward with the fingers so that surface depressions are present. This kneading will more and more loosen the adherent placenta from its fixed place, until after 1 or 2 repetitions at intervals it can be delivered by expression. Inversion is prevented by this procedure, as the pressure is never from above but sideways, forward, and backward. [w.k.]

April 20, 1901. [No. 16.]

1. Criticism Upon Atmokausis and Zestokausis. LUDWIG PINCUS.

1.—Pincus refers to the rapid extension of atmokausis and zestokausis into most European and American countries, but asserts that the procedure belongs exclusively to the gynecologist and surgeon, not being adapted to general practice since it requires exact diagnosis and considerable apparatus. No gynecologist is justified in resorting to extirpation of the uterus for elimaetic hemorrhage unless he has tried atmokausis curretage having failed. In time he thinks it will be as valuable to the gynecologist as curretage. The curet, without after-treatment, is scarcely a means of healing, whereas atmokausis is, especially if it is used after the mucosa has been carefully cleansed. He recommends it in cases of abortion only, when the hemorrhage continuing after the uterus has been emptied, is due to endometritis. It is of service in septic puerperal endometritis and myomatous hemorrhages. In chronic gonorrhoea of the endometrium atmokausis is approved and zestokausis for the cervix. In such cases if pain accompanies atmokausis, the stream of hot vapor should be immediately interrupted, as this is an indication that the adnexa are involved. Zestokausis in general is inferior in efficiency to atmokausis, though valuable in some forms of dysmenorrhoea [w.k.]

April 27, 1901. [No. 17.]

1. Sterile Permanent Yeast and Its Value in Gynecology. WALTER ALBERT.
2. The Influence of Steam Upon the Uterine Mucous Membrane. M. KOLENSKO.

1.—In 1899 Landau first described the treatment of leucorrhoea with yeast, spraying the vagina with a 1/2 ccm. of a solution of yeast in beerwort. R. Albert, of Berlin, devised a process of making a dry powder from beerwort without destroying the peculiar characteristics of the yeast cells, which powder is known as sterile permanent yeast. This substance has sufficient bactericidal force to weaken or destroy the virulence of the bacteria, causing little or no inflammation of the mucosa as compared with other disinfectants. Albert describes the technic of the procedure in the use of this yeast, 4 g. (about 1 ccm.) being mixed with 20 ccm. of 20% solution of sugar. It is introduced by the proper apparatus into the vagina and allowed to remain 12 to 14 hours, the patient retaining a recu

bent position. After its removal there should be a vaginal irrigation with warm water, and in the 2 following days with salt water; the procedure being repeated on the third day. The results are thus stated: (1) The diminution of the virulence of the vaginal bacteria; (2) changes in the vaginal secretions; (3) rapid healing of any erosions of the portio. Walter thinks that thus a healthy vagina is secured which is a *sine qua non* in the treatment of genital catarrh; also that this sterile yeast may prove to be of great service in preparing for vaginal operations, as the use of it some hours or the evening previous to the operation is a much better preparation than irrigation with severe disinfectants immediately before the operation. [w.k.]

2.—Kolensko describes with illustrations the effects of *atmokansis* upon the mucous membrane of the uterus and thus states the result; first day, the destruction of the mucosa to a known limit; third day, limiting of the necrosed parts; sixth day, sloughing off of the same, and finally after the ninth day the regeneration of the mucosa, with restoration of its normal functions. He thinks that the undoubted healing influence of vaporization upon the uterine mucosa will lead to its beneficial application in puerperal sickness when the infection has not become general. [w.k.]

Sundry French.

1. Treatment of Arteriosclerosis by Subcutaneous Injections of Inorganic Serum. C. TRUNECEK (La Semaine Médicale, April 24, 1901).
2. On the Vasomotor Role of Iodids. GUMPRECHT (La Semaine Médicale, April 24, 1901).
3. On a Lipoptyc Gastric Ferment. VOLHARD (La Semaine Médicale, April 24, 1901).
4. Eosinophilia as a Sign of Appendicitis. LAIGNEL-LAVASTINE (La Semaine Médicale, April 24, 1901).
5. The Camphorates of Pyramidon in the Treatment of Pulmonary Tuberculosis. BERTHERAND (La Semaine Médicale, May 1, 1901).
6. Iron in Human Milk and its Importance for the Nursing Infant. FRIEDJUNG (La Semaine Médicale, May 1, 1901).

1.—Trunecek, of Prague, points out the coincidence of the fact that phosphate of lime, which is insoluble in distilled water though soluble in alkaline solutions, and which is kept in solution in the body so long as the blood-serum is rich in sodium chlorid, with the observation that cases of arteriosclerosis usually occur at an age when sodium chlorid exists in the blood in diminished quantities. He therefore recommends the subcutaneous injection of a solution of alkaline salts, in the relative proportions in which they normally exist in the blood-serum. The formula of this "inorganic serum" is as follows:

Sodium sulfate	0 gr. 44 centigr.
Sodium chlorid	4 gr. 92 centigr.
Sodium phosphate	0 gr. 15 centigr.
Sodium carbonate	0 gr. 21 centigr.
Potassium sulfate	0 gr. 40 centigr.
Distilled water	q. s. to 100 gr.

The author concludes that in increasing the measure of alkaline salts in the blood and in augmenting the alkalinity of the fluid, a solution of the phosphate of lime which incrusts the arterial walls is effected, organic combustion is rendered more active, intercellular exchanges are raised to a normal rate, and as a consequence the functions of the various organs, especially of the heart and bloodvessels, are regulated. [c.s.d.]

2.—Gumprecht, of Weimar, draws the conclusion from recent researches that iodids have no action on arterial tension. [c.s.d.]

3.—Volhard, of Giessen, announces the extraction by means of glycerin of a ferment which actively transforms emulsified fats from the mucous of the stomach. [c.s.d.]

4.—Laignel-Lavastine points out the fact that there is an augmentation in the proportion of the polynuclear eosinophiles of the blood in cases of acute appendicitis. [c.s.d.]

5.—Bertherand has experimented with soluble camphorates of pyramidon in cases of pulmonary tuberculosis and finds preferable to antipyrin or pyramidon; the dose is 1 gram daily. [c.s.d.]

6.—Friedjung concludes from his investigations on the importance of iron in mother's milk that it holds a direct relation to the casein present, and that when the iron falls below a normal average of 5.09 mg. to the liter, the nursing infant presents chronic disturbances of nutrition. [c.s.d.]

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 24, 1901:

SMALLPOX—UNITED STATES AND INSULAR.

		Cases	Deaths
Alaska:	Iloonaah.....May 11.....		15
	Killlance.....May 11.....	4	
California:	Los Angeles.....Apr. 27-May 11....	12	
	San Francisco.....May 4-11.....	6	
Illinois:	Chicago.....May 11-18.....	6	
Indian Territory:	Coalgate.....May 11.....	65	
Kansas:	Wichita.....May 4-18.....	37	
Kentucky:	Lexington.....May 11-18.....	4	
Louisiana:	Baton Rouge.....May 5-12.....	2	1
	New Orleans.....May 11-18.....	9	2
Massachusetts:	Boston.....May 11-18.....	10	
	New Bedford.....May 16-18.....	5	
Michigan:	Detroit.....May 11-18.....	58	
Minnesota:	Minneapolis.....May 4-11.....	23	
Nebraska:	Nebraska City.....Mar. 30-Apr. 6.....	2	
	" ".....Apr. 20-27.....	3	
	South Omaha.....Apr. 23-May 21....	36	
New Hampshire:	Manchester.....May 11-18.....	4	
New Jersey:	Jersey City.....May 5-19.....	15	
	Newark.....May 11-18.....	4	1
New York:	New York.....May 11-18.....	105	13
Ohio:	Cincinnati.....May 10-17.....	9	1
	Cleveland.....May 11-18.....	54	
	Youngstown.....May 4-18.....	2	
Pennsylvania:	Lebanon.....May 11-18.....	4	
	Philadelphia.....May 11-18.....	3	1
	Pittsburg.....May 11-18.....	2	
	Steelton.....May 11-18.....	2	
	Williamsport.....May 11-18.....	1	
Tennessee:	Memphis.....May 11-18.....	12	
	Nashville.....May 11-18.....	3	
Utah:	Salt Lake City.....May 4-11.....	7	
Washington:	Tacoma.....May 1.....	1	
			from Vashon Island.
West Virginia:	Wheeling.....May 11-18.....	8	
Wisconsin:	Fond Du Lac.....May 11-18.....	1	
Hawaii:	Kauai, Lihue.....Apr. 23.....	1	
	Waimea.....May 6.....	1	
Porto Rico:	Ponce.....May 6-13.....	3	
	San Juan.....May 4.....	2	

SMALLPOX—FOREIGN.

Austria:	Prague.....Apr. 20-27.....	4	
Belgium:	Antwerp.....Apr. 20-27.....	5	
France:	Rheims.....Apr. 8-15.....	2	
India:	Bombay.....Apr. 16-23.....		6
	Calcutta.....Apr. 13-20.....		93
	Karachi.....Apr. 14-21.....	4	3
	Madras.....Apr. 13-19.....		11
Malta:	.....Apr. 14-20.....	1	
Russia:	Moscow.....Apr. 14-21.....	6	2
	Odessa.....Apr. 20-27.....	5	3
	Warsaw.....Apr. 13-20.....		4
Spain:	Malaga.....Apr. 16-30.....		1

YELLOW FEVER.

Cuba:	Havana.....May 6-11.....	2	
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CHOLERA.

India:	Bombay.....Apr. 16-23.....	4	
	Calcutta.....Apr. 13-20.....	96	
	Madras.....Apr. 13-19.....	1	

PLAGUE.

Africa:	Cape Town.....To Apr. 14.....	291	118
China:	Hongkong.....Mar. 29-Apr. 6.....	31	28
India:	Bombay.....Apr. 16-23.....		459
	Calcutta.....Apr. 13-20.....		389
	Karachi.....Apr. 14-21.....	270	238
Japan:	Nagasaki.....Apr. 17.....		1

Changes in the U. S. Marine-Hospital Service for the 7 days ended May 23, 1901:

PECKHAM, C. T., surgeon. Granted leave of absence for 30 days from April 19, on account of sickness—May 16, 1901. Granted 30 days' extension of leave of absence, on account of sickness from May 20—May 21, 1901.

GLENNAN, A. H., surgeon. To rejoin station at Havana—May 21, 1901.

WERTENBAKER, C. P., passed assistant surgeon. To proceed to Meridian, Miss., for special temporary duty—May 18, 1901.

GREENE, J. B., passed assistant surgeon. Granted 5 days' extension of leave of absence—May 19, 1901.

DECKER, C. E., assistant surgeon. Granted leave of absence for 10 days from May 11, on account of sickness—May 20, 1901.

CLARK, TALIAFERRO, assistant surgeon. Granted leave of absence for 30 days from May 22—May 23, 1901.

CORPUS, G. M., assistant surgeon. To proceed to South Atlantic Quarantine—May 16, 1901. Granted leave of absence for 1 month—May 16, 1901.

RODMAN, J. C., acting assistant surgeon. Granted leave of absence for 4 days—May 18, 1901.

SLAUGHTER, A. W., acting assistant surgeon. Granted leave of absence for 4 days from June 4—May 22, 1901.

Board Convened.

Board convened to meet at Washington, D. C. May 29, 1901, for the purpose of making physical examination of applicants for eadship in the Revenue Cutter Service. Detail for the Board: Surgeon L. L. Williams, chairman; Assistant Surgeon B. S. Warren, recorder.

Changes in the Medical Corps of the U. S. Army for the week ended May 25, 1901:

WASHBURN, Major FREDERIC A. Jr., surgeon, is granted leave for one month, from about May 13.

HADRA, Major FREDERICK, surgeon, having reported from leave, will proceed to the Presidio for temporary duty.

CALKINS, GEORGE H., acting assistant surgeon, will proceed to his home, Tonawanda, N. Y., for annulment of contract.

WILLIAMS, First Lieutenant ALLIE W., assistant surgeon, is relieved from duty at Fort Columbus, and will proceed to Fort Logan, for duty.

JERAULD, FREDERICK N. C., contract surgeon, will proceed from Buffalo, N. Y., via Seattle, Wash., to Fort St. Michael, Alaska, and report to the commanding general, department of Alaska, for assignment to duty.

PEED, Captain GEORGE P., assistant surgeon, leave granted is extended one month.

WATTS, G. GRAHAM, contract surgeon, is granted leave for 10 days.

WINTER, Captain FRANCIS A., assistant surgeon, having reported by telegraph his arrival at San Francisco, Cal., will proceed to Fort Sheridan, for duty.

BACHE, Colonel DALLAS, leave on surgeon's certificate granted A. S. G., February 19, is extended three months on surgeon's certificate.

WASHBURN, Major FREDERIC A. Jr., surgeon, recently appointed now at New Bedford, Mass., upon the expiration of the leave granted him May 7, will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

The following changes in the stations and duties of officers are ordered: First Lieutenant RICHARD P. STRONG, assistant surgeon, is relieved from further duty in the division of the Philippines and will proceed to Hot Springs, Ark., and report at the Army and Navy General Hospital for duty, to relieve Captain JOSEPH J. CURRY, assistant surgeon, Captain CURRY upon being thus relieved will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty as a member of the board of officers appointed by par. 22, S. O. 13, January 16, 1900, this office, for the purpose of studying tropical diseases as they occur in the Philippine Islands.

BARNEY, CHARLES N., contract surgeon, is relieved from duty at Fort Monroe, and will proceed to Key West Barracks, and relieve Contract Surgeon Robert C. Eve, who will proceed to Fort Monroe for duty.

GRANDY, Major LUTHER B., surgeon, leave granted May 1, is extended 15 days.

BRECHEMIN, Major LOUIS, surgeon, is relieved from further duty as a member of the board of officers appointed by par. 6, S. O. 102, May 2, 1901, this office, and will proceed to Fort Bayard for temporary duty in charge of the U. S. General Hospital at that place during the illness of Major Daniel M. Appel, surgeon. Upon completion of the temporary duty herein ordered Major Brechemin will comply with the requirements of so much of par. 18, S. O. 49, February 28, 1901, this office, as relates to him.

AGRAMONTE, ARISTIDES, contract surgeon, is relieved from further duty as a member of the board of medical officers appointed May 24, 1900, for the purpose of pursuing scientific investigations with reference to the infectious diseases prevalent in the Island of Cuba, and will report to the commanding general, department of Cuba, for assignment to duty.

WHINNERY, JEAN C., contract dental surgeon, will proceed from Washington, D. C., to San Francisco, Cal., and report for transportation to the Philippine Islands, where he will report for assignment to duty.

The following changes in the stations and duties of officers are ordered: Colonel William H. Forwood, assistant surgeon general, upon being relieved from duty as chief surgeon, department of California, will repair to Washington, D. C., and report to the surgeon general of the Army for duty in his office; Colonel Dallas Bache, assistant surgeon general, is relieved from further duty in the office of the surgeon general of the Army.

METZGER, Major JOHN A., surgeon, leave granted April 29, is extended 1 month.

BRECHEMIN, Major LOUIS, surgeon, orders of May 21, which direct to proceed to Fort Bayard, for temporary duty in charge of the U. S. General Hospital at that place, are revoked.

SWIFT, Captain EUGENE L., assistant surgeon, will report to Lieutenant Colonel Calvin De Witt, D. S. G., president of the examining board at the Army Medical Museum Building, District of Columbia, for examination for promotion.

Orders of February 16, which relate to Captain Charles M. Gandy, assistant surgeon, are so amended as to direct him upon his relief from duty at Fort Slocum, to proceed on the transport Ingalls, via the Suez Canal to Manila, P. I., and on arrival to report to the commanding general, division of the Philippines, for assignment to duty.

FELDER, LAWRENCE A., contract surgeon, leave for 7 days granted May 16, is extended 7 days.

Changes in the Medical Corps of the U. S. Navy, for week ended May 25, 1901:

KENNEDY, R. M., passed assistant surgeon, ordered home from the Bennington via public conveyance.

STONE, M. V., assistant surgeon, detached from the Buffalo, May 31, and ordered home and to wait orders.

DELANCY, C. H., assistant surgeon, detached from the Bancroft, when put out of commission, and ordered to the Buffalo, as relief of Assistant Surgeon M. V. Stone.

FURLONG, F. M., assistant surgeon, ordered home from the Brutus, via public conveyance.

KERR, D. B., assistant surgeon, ordered home from the Marietta, via public conveyance.

GROW, E. J., assistant surgeon, ordered home from the Isla de Luzon, via public conveyance.

GRUNWELL, A. G., assistant surgeon, ordered home from the Brooklyn, via public conveyance.

BEEBE, D. G., assistant surgeon, ordered home from the Marietta and from duty with marines at Port Isabella, P. I., via public conveyance.

LANGHORNE, C. D., assistant surgeon, ordered home from the Princeton and from duty with marines at the Cavite Naval Station, via public conveyance.

STEPP, J., assistant surgeon, detached from the Castine and ordered to the Isla de Luzon.

GROW, E. J., assistant surgeon, detached from the Isla de Luzon and ordered to the Castine.

THOMPSON, E., assistant surgeon, detached from the Solace and ordered to the Petrel.

PLUMMER, R. W., assistant surgeon, detached from the Petrel and from the Cavite Naval Station and ordered to the Nashville.

FURLONG, F. M., assistant surgeon, order detaching from the Brutus and ordering him forwarded to Guam, I. I.

AMERICAN MEDICINE

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The Presidential Address of Dr. Charles A. L. Reed, printed in the foregoing number of AMERICAN MEDICINE, should be carefully read by every American physician. From beginning to end, regardless of unimportant details about which one may differ, it is charged with the spirit of true professionalism, and inspired by the religion of scientific medicine. There is one thing urged by Dr. Reed which we earnestly hope may be accepted by the Association, and become its settled policy. We allude to grants and commissions by the Association to encourage scientific investigation and promote professional progress. Nothing should henceforth be allowed to interfere with or crowd out this most beneficent work, nor can there be a better policy, viewed solely as a method of increasing the power and membership of the Association. In the eyes of the intelligent and educated public such work really gives us our *raison d'être*, beyond a mere trades-union, and the allegiance and cooperation of the best part of the lay world are precisely what we as a profession need to hold the nation back from the abyss of quackery and commercialism run mad. And it is by such investigation-work in the common interest that we can secure the attention of legislatures and the passage of laws in the interests of both community and profession, which is the most important of all our duties. As to the other recommendations of Dr. Reed we are in general in hearty accord. Professional unity!—that is the motto under which we must henceforth make war upon disease, and upon the slaves of disease—ignorance, humbug and greed.

A Useful Disposition of Wealth.—John D. Rockefeller has by a large gift established the Rockefeller Institute for Medical Research, to furnish facilities for original investigation, particularly in such problems in medicine and hygiene as have a practical bearing upon the prevention and treatment of disease. He has placed \$200,000 at the disposal of the Board to begin the work. This is not for an endowment, but may be used in a series of years for current expenses. The home of the Institute will be in New York, although medical men from other cities will share in its management. The Board of Directors is at present constituted as follows: William H. Welch, M.D., Baltimore, president; T. Mitchell Prudden, M.D., New York, vice-president; L. Emmett Holt, M.D., New York, secretary; C. A. Herter, M.D., New York, treasurer; Theobald Smith, M.D., Boston; Simon Flexner, M.D., Philadelphia;

H. M. Biggs, M.D., New York. It is not intended to build at once; but with the funds placed at the disposal of the Board, work will be begun under its direction immediately in the leading pathologic laboratories in the country, notably Johns Hopkins, Harvard, McGill, the University of Michigan, the University of Pennsylvania, the University of Chicago, and the several laboratories connected with medical schools and the Board of Health of New York. When the permanent home of the institution has been built, it is planned so that those doing research work in connection with it shall receive pay sufficient to command their entire time, releasing them from any necessity either to practise or teach. The Board will at first devote its energies to shaping the lines of the work along which the Institute may wisely develop, both in contributions to knowledge and in the application of existing knowledge to humane ends. When this is done it is felt that such local habitation as the future of the Institute shall require can be more wisely planned.

The potential value of an institution of this kind, founded under such auspices in medical science, and in the interests of humanity, can hardly be overestimated. If plans are conceived with intelligence and carried out with executive ability, the work must inevitably produce beneficent results. The only possible weak point would be in the complexities naturally attendant upon the initial carrying out of the work at so many different places. The sooner centralization is attained and a recognized head chosen for the scientific direction of the work, the more immediately successful it will be. Under such unified labor alone can the best results be expected, and all effort should be directed toward its establishment.

The Function of the Laboratory in Surgical Practice is admirably epitomized in the masterly address of Dr. Wyeth, printed in our present issue. One is struck by the noteworthy fact that but a few decades ago the surgeon was almost utterly oblivious of the conditions set forth, conditions which have wholly revolutionized surgery and in a hundred ways have linked it with general medicine and science. Surgery then seemed to be almost wholly an art; now that art is subordinated to and almost entirely dependent upon preliminary studies in the laboratory of which the older surgeons had almost no knowledge. The lesson stands out clear that in no department or specialization of our work may there be any closing of the mind to new ideas and revolutionizing

methods. Expertness in operative technic, however marvelous, the greatest or longest experience, the most complete knowledge of anatomy—all such will not avail unless there is also to guide and govern all art and knowledge the illuminating help of clinical microscopy, of bacteriology, and of chemistry. Hereafter there can be no rushing into the glory and profit of surgical fame except through the painstaking and profound science of the laboratory. Henceforth the art of surgery, as Dr. Wyeth says, is inseparable from the science of surgery.

Progress in Hygiene and Sanitary Science.—Medicine is such a progressive and forward-looking science that the young practitioner is very likely to know little of the history of the long struggle that has preceded our present attainment. This warrants and makes interesting the occasional glances backward or the summarizations of advance by the orators and presidents of our larger medical societies, and the one who is so absorbed in practical medicine that he fails to hear or read these addresses misses a great deal of edification, and that broad overlook which gives the mind poise and balance, even in the much-prized practical way. Moreover, in reference to Dr. Kober's capital address printed in the present issue of AMERICAN MEDICINE by the courtesy of the Editor of the *Journal of the American Medical Association*, one has emphasized the great truth that all our work, however practical, must more or less resolve itself at last into the prevention rather than the cure of disease. In this most excellent summary we see the beginnings of sanitary progress in olden and medieval times sweeping on to the modern victories over disease with which we are familiar, and looking onward to a yet greater lessening of the death-rate, and of the burden of suffering and expense which illness causes. To have extended the average length of human life in a few hundred years from 20 to 40 years is the noblest work of science and civilization.

The Action of the Mucus of the Respiratory Tract Upon the Organism.—Charrin and Moussu (*La Semaine Medicale*, January 23, 1901) have recently made some interesting studies on this subject. On injecting into the veins of a rabbit .05 to 10 cgr. per kilogram of the weight of the animal, a fresh mucus obtained from the respiratory tract of other animals and diluted with 30 or 40 times its weight of normal saline solution, death followed at the end of a few minutes. Immediate necropsy showed the presence of newly-formed clots in the right ventricle, and the coagulation of the blood was very rapid. Moreover, when a few drops of mucus were added to the freshly drawn blood of a horse, coagulation followed within 3 minutes, while under normal circumstances from 18 to 22 minutes are required for coagulation of horse's blood outside the body. They believe that they have discovered a new direct coagulant of remarkable power. The large quantities of mucus and its diffusion throughout the entire body permit us to conceive the possibility of its action in the etiology of thrombosis and phlebitis, and in the arrest of hemorrhage.

We are not aware that any studies have been pre-

viously made with regard to the action of the mucus of the respiratory tract on the coagulation of the blood. No mention is made by Charrin and Moussu of the possible influence of bacteria or bacterial products which may be contained in the mucus of the coagulation of the blood. Their report is very incomplete, and the subject seems to be an interesting one, deserving of further study.

Urine Examination During Gestation is very important and must be thorough in order to appreciate impending disaster. Marx in reviewing the toxemias of pregnancy has urged the importance of urea estimation in the investigation. The old time-honored examination for sugar and albumin is not sufficient; for in many desperate and malignant cases of toxemia during pregnancy, there is found neither albumin nor tubercasts, while the urea is always found markedly diminished in the so-called toxemias or urinemias of pregnancy. Upon this progressive diminution of urea-secretion, with or without albuminuria, will depend the indications for induction of premature labor.

A College Course as a Preparation for Medical Study.—The manifold recent advances in medical science, with the necessity for longer courses of medical study and increased demands on the student of medicine, have led many young men to seriously consider whether they would not better begin the study of medicine without a full college course. Besides the time and expense, many have urged that the college courses as now arranged are of comparatively little value to the medical student; that Latin, Greek and the higher mathematics are likely to be of little help to a man who expects later to engage in purely scientific study and work. For a number of years many of our leading colleges and universities have offered courses or electives such as may be considered the best preparation for future medical study. And of late a number of these colleges and universities have arranged so that by doing a little extra work each year the regular four years' course of study may be completed in three years, as is frequently done at Harvard, or that the last year of a four years' course for the academic degree shall count for the medical degree as well. The latter arrangement can be made at Pennsylvania, Columbia, Chicago, Michigan and a number of other colleges and universities. The recent action of Yale and Princeton, two of the most conservative of our larger universities, shows how great has been the demand for scientific studies in place of classic studies. At Princeton, President Patton has suggested offering courses in physiology and human anatomy so that students may begin their medical studies in the senior year, and he has suggested offering suitable electives for the junior and sophomore years. At Yale, Latin and Greek are still required through the freshman year, but not afterwards. Cornell admits students to its B. A. degree without Latin; Harvard requires no Latin at the University; Columbia requires Latin only in the freshman year. At Michigan, Minnesota and Leland Stanford students taking almost purely scientific courses receive the A. B.

Many will deplore this tendency to do away with the courses which were supposed to be the liberal training of

every cultured gentleman, but progressive men see that these courses are needed and demanded in the present state of scientific progress in medicine, and that for mental discipline more depends upon the thoroughness of the course of study than upon the studies taken. By shortening the college course and making it more practical many young men who would otherwise feel that they could not afford the time and expense of a liberal education will now be encouraged to take the college degree, and will bring to the medical profession the benefit of a better mental training and of a broader general culture.

Remuneration and Employment of Patients in Public Institutions is the subject of two instructive papers by Dr. A. C. Rogers and Dr. J. T. Searcy in the *Bulletin of Iowa State Institutions* of January, 1901. Dr. Rogers gathers the results of inquiries of seventy-two hospitals for the insane; sixty-seven did not pay; thirty-five disapproved; five approved, and twenty-seven expressed no opinion. Dr. Rogers gives no definite opinion concerning the matter. Dr. Searcy does not approve of paying patients for work but he is most plainly in favor of industrialism, and for the sound, general reason that regular employment is healthful, beneficial and profitable to the man who works. Laziness is a crime only equaled by that of forcing it upon people. We quote a few illuminating sentences from Dr. Searcy's admirable paper:

"While the rest-cure is good for a few of the insane, the employment-cure is good for the large majority."

"The employment feature in insane hospital management is a growing one, and a modern one—it is an up-to-date measure. Attention is being drawn to it as an excellent remedial agent more and more. Employment is the best generally beneficial agent yet invented for insanity—a general rule which is best 'proven by its exceptions.'

"An idle brain is the devil's work shop' is never better illustrated than in an insane hospital. A few days of idle confinement, because of bad weather or other causes, create disorder and dissatisfaction that can be seen all through the institution. Whether their work is profitable or not, to keep the patients occupied leads to their much more easy control and management. The satisfaction obtained by employment is evidenced in both the patients and the attendants. There is much less need of seclusion and of sedatives in an industrious hospital. The pleasure and the quietude are both enhanced by it."

"The wheel-barrow squad' that used to be considered the most worthless class of patients now proves very valuable with us; we do all our grading and road making with them."

"On both sides of the institution, most of the work that relates to the care and keeping of the wards, bed-rooms, dining rooms, yards, etc., should be done by the patients on their respective wings. On the women's side all or the greater part of the clothing should be made; sewing, knitting, darning, quilting, embroidery, and even drawing, painting and music should go on through all the wards. Some may, if able, be allowed literary work. To have something for the patient to do should be the rule of the institution; and from the supervisors down this should be part of the duties of all. If any single patient shows an aptitude for any particular kind of work she ought to be encouraged to do it."

"In hundreds of ways inside industries can be devised. Because she was pleased at it, one woman was engaged for months 'making a dictionary.' Some of her definitions were very unique. Another wrote 'novels.' All, however, should be encouraged to do some of the profitable and necessary industries."

Suitable Nourishment for the Poor in Combating Alcoholism and Disease.—In discussing the best means of preventing alcoholism at the recent Anti-Alcohol Congress at Vienna, Dr. Burtseher, of Bern, laid great stress on the importance of an abundant, inexpensive food-supply for the poorer classes. He stated that the consumption of liquors is most prevalent and the effect worst among the most poorly nourished peoples of Europe. The excessive use of alcohol is not so frequently the cause of poorly developed and nourished bodies, as is imperfect nourishment the cause of an abnormal craving for liquors. The effects of alcohol are also decidedly worse among the badly nourished. Drunkenness, delirium tremens and mental diseases are uncommon among the well-nourished peoples of Germany as compared with the condition among the badly nourished Poles and Irish. Temperance societies, tracts, cures and institutions for the treatment of drunkenness will all prove of little avail as long as the poor are unable to obtain food to nourish themselves sufficiently well to prevent abnormal craving for stimulants. The shortsighted policy of the Agrarian party in striving to prevent the importation of less expensive meats from America and other countries was emphatically condemned.

Proper nourishment is certainly as important in preventing disease as in preventing alcoholism. This is specially true as regards the prevention of tuberculosis. In our own country no difficulty exists as to the possibility of procuring an abundance of nourishing food for so great are our resources of food supply that even our poorest classes eat at least twice as much meat as the most fortunate people of the same standing in most foreign countries. There is no lack of badly-nourished people among us, however, and they are not found among the poor alone. With us the fault lies more in the preparation than in the quality and abundance of food. Sloppy soups, greasy, indigestible fried meats, fried eggs, fried fish, fried potatoes, in fact every food possible fried and greasy; soggy hot bread and cakes, and unwholesome pastry lacking in food value are the common foods of not only the poor but many of the better classes. Cooking is now taught in many of our public schools and institutions as well as in private classes. Let us hope that this will promote much-needed reform and by teaching how digestible and appetizing food may be prepared, help to improve the physical condition of the people and thus lessen the frequency of disease.

The Dreary Monotony of Hotel and Restaurant Cooking.—There is no country in which the menus of hotels, dining cars, and restaurants, contain so many items, and yet there is none in which there is such a monotonous and tiresome sameness. From Maine to California, from Florida to Wisconsin, the same choice of foods is offered, all cooked and served in the same way. But a few years ago one found some variety the "spice of life" and of cookery, in the old-fashioned dishes of New England, the baked beans and brown bread, the hulled corn, the baked Indian pudding, etc., but now these things are not to be had anywhere, or if the names greet one, the things themselves are disap-

pointing travesties of the olden toothsome delights. It is the same with the indigenous dishes of all other parts of the country. The refrigerator car makes possible the dull uniformity of the menu, and fashion stupidly demands that the palatable things of one part of the country shall be perhaps ignored where they are fresh, and transported 1,000 or 2,000 miles where they are out of season and stale. It has been said that whether one smoke good or bad tobacco, or indeed whether one's cigar be lit or not, is a matter of indifference to the smoker sitting in darkness. To the blind man it must be "all one" wherever he dines. Is it useless to appeal to chefs, cooks and caterers for the native dishes of the country, cooked as the natives cook them? Individualism is as good for health in the culinary as in the sociologic art.

The American Medical Association has great possibilities of progress through the adoption of the report of the Committee upon Organization. The changes recommended as necessary and advisable in the Constitution and By-laws have been given in a former issue of this journal. Through the broad position taken, the revised Constitution affords every opportunity for development, lifting the Association above hampering local influences, and giving opportunity for that increase in numerical strength so desirable in the representative organization of the American profession. The work of the Committee has been excellent, the seconding of their efforts by President Reed, the representative medical press, and other men of influence, has given the movement great impetus, and the action of the Association in seizing the opportunity launches the modernized Constitution on the flood tide. The meeting is reported as well attended, harmonious and enthusiastic, and the election of Dr. John Allan Wyeth, of New York, as the next president, was received with great satisfaction as the logical unfolding of the progressive ideas advanced and adopted. The next step is following out of the recommendations of the Committee by the various State and territorial medical societies in the interests of complete organization of the profession. This will come more slowly, but it is inevitable.

City or Country Practice.—Many of the thousands of young doctors of medicine who have recently graduated or will soon graduate from our numerous medical colleges have already decided where they will settle and what the character of their work will be. For the others who have as yet no definite plans the decision must be influenced by many individual considerations, but a glance over the comparative advantages and disadvantages of country and city practice may be of some help. The prizes of honor, influence and wealth which come to the leaders of the profession in large cities are very alluring, but unfortunately not one in a hundred can hope to win them. Without money and family or political influence the prospects of rising rapidly or of even making a living in the better class of practice in our large cities is not very encouraging. In a large city the young doctor is one of 500 others among many men of other professions and the individual counts for little.

It is true that many men soon get large practices and even accumulate considerable wealth in practice among the poorer classes. Some of these men are well-read, thoroughly competent practitioners who do an immense deal in sanitary and benevolent work along with their busy practice, and such men always have the respect and support of the best members of the profession. But a busy practice among the lower classes does not leave time for study, hospital or laboratory work, which often tempt men to stay in the city. For the man with health, good ability, enough to live upon comfortably for several years and a desire to learn and to progress, there can be little question that the city offers far the greatest inducements. In our country the great hospitals, laboratories and libraries are all in cities. Without these advantages and without the stimulus of association with the progressive men who are grouped about our large teaching centers, few advance far beyond the limits of what they have learned in the medical school. Besides the advantages for professional development, life in a large city offers many opportunities for general culture which cannot be left out of account.

The prospects of reaching a prominent position in the medical profession or of accumulating a fortune are not great for the man who chooses country practice. Many young graduates have visions of starting in the country and earning enough to set up in the city, but few ever do this. The long, hard rides in country practice, the frequent night calls, the great responsibility, the small fees, must all be considered. But there are many compensations: a good practice and fair income are almost certain from the start; a physician of character and ability soon becomes a respected and influential member of the community, and the out-of-door life of the country is conducive to health, and to a person with a love for nature, in many ways pleasanter than city life. While few of those who start in small towns later go to large cities and become famous, there are numerous brilliant exceptions, among whom may be mentioned Sims and Gross, and several of the world's most famous physicians and surgeons, have been country doctors all their lives; McDowell, the father of ovariectomy, and Jenner, who discovered vaccination, are examples.

In both city and country, competent, conscientious practitioners of medicine are needed. True success is not necessarily associated with fame or wealth, and a fair degree of success is almost certain to come to those who work faithfully to deserve it.

Carelessness in the Interdiction of Staple Foods.—Of all the advice which the physician has to give his patient, in many cases, the most valuable is his advice as to diet. Instances not infrequently occur, however, of specialists, who in their endeavor to "reconstitute" their patients, as the elder Jackson of Dansville fame was wont to put it, broadly condemn in a most unwarranted way some one or more of the most healthful of foods.

Sweeping generalizations as to the harmfulness of widely used foods and beverages, such as wheat flour, milk, and coffee, are too often made by physicians and as a result there have arisen numberless attempts to

replace these great staples with substitutes more or less inferior to the article condemned, and in many cases actually harmful through active ingredients, or from the omission of valuable constituents found in the natural product.

The time is nigh when the fad for substitutes and modifications of natural foods will pass, and the effort of the physician will be largely confined to the securing of purity and conformity to standard. The harmfulness of the great universal food stuffs lies rather in the methods of use than in constitution.

Notwithstanding the astounding increase in the consumption of wheat among the nations of the earth, and in face of the fact that the dominant races are wheat eaters, we constantly find persons of more than ordinary intelligence in most things who have been needlessly frightened into the disuse of this prince of foods. To account for the taboo placed upon wheat, the most specious and contradictory reasons are given.

In a recent case a specialist of prominence, in one of our great medical centers, forbade his patient the use of wheaten bread on the ground "that wheat contains such a large amount of silica that it hardens the arterial walls." There are many cases in which the use of wheat or other starchy foods might be wisely forbidden and for valid reasons intelligible to anyone conversant with the rudiments of the physiology and chemistry of digestion; but, if reasons must be given the patient for such interdiction, what excuse can there be for an attempt to satisfy his inquiring mind with this sort of twaddle. In the case noted, the sand was surely in the possession of the learned exponent of well-living rather than in the wheat flour. Silicic acid, the soluble colloid form of silica, though present in minute proportions in wheat, is not likely to be absorbed to the extent of warranting any fear of silicious arterial sclerosis. Adverse opinions regarding common articles of food soon become widespread and serve as the basis for foisting upon the confiding public all sorts of "green-gourd substitutes" for those foods which most nearly represent the staff of life. There is room for the dietist, but he should handle the taboo with discretion and with reference to the individual case, and beware how he imposes upon the public misleading notions as to the general injurious nature of common food stuffs.

EDITORIAL ECHOES

Confectionery Ornamented with Glass Splinters according to the *Lancet* is a danger to which we, or at least, the French people, are liable. The *Lancet* has analyzed samples of "sweets" and has demonstrated that the sparkling ornaments sprinkled over the surface were really glass splinters.

The Support of Hospitals.—Viewed from the standpoint of science, the hospitals that are training the best physicians and nurses that the city can supply, are doing something more than caring for the individual sick man. They are combating the disease of a nation; and the few thousands given as charity are the best investment for the city's present and future health that can be made. In these days of luxuriously appointed steam yachts, enormous country houses and elaborate

entertainments, it would be niggardly to deny to science and philanthropy any detail of perfection in the matter of plumbing, lighting, heating apparatus, service and food, that the wealthy insist on having for their own comfort.—[*Medical News.*]

Arsenic in the Dyes of Stockings, Etc.—There would appear to be now, in the light of recent inquiry, a recrudescence of the employment of arsenic in the dyes used, at any rate in stockings. This fact only shows what a sharp watch must be perpetually kept up in order to check an objectionable practice. There can be little doubt that in the cases cited the arsenic in the stockings was introduced through the dye. It would seem that the employment of arsenic and its compounds, or of substances contaminated with arsenic, will inevitably have to be placed under special regulations, for apparently the presence of arsenic is unavoidable in a very great number of materials. The Royal Commission on arsenic should include in their inquiry the question of the danger arising not only from arsenic food products but from arsenic clothing also, and should decide upon the limitations of the amounts of arsenic in any case.—[*The Lancet.*]

Alcoholic Gastritis and Caffeinism.—The symptoms of digestive and nervous disturbance incidental to chronic coffee-poisoning are liable to cause errors in diagnosis, from the fact that the results of alcoholic excess produce effects which singularly resemble the signs of dyspepsia arising from the ingestion of coffee in toxic amounts. In some cases the distaste for solid food is great. Palpitation is not often noted, but a diminution of the pulse is a matter of ordinary observation. There is insomnia, and the patient gradually becomes extremely emaciated. In well-marked instances painful cramps of the thighs are complained of. The abstention from coffee is followed by immediate amelioration of the more distressing symptoms of the disorder, and in this rapidity of recovery the affection differs in a marked respect from the results noticed in alcoholic gastritis following the disuse of alcohol. The trembling of the limbs and the twitching of the lips noticed in both conditions are generally described as being the first symptoms to show improvement when the case is one due to poisoning from coffee. In the opinion of some of the Continental observers chronic coffee-poisoning may be induced not only from the poor quality of the article consumed, but also from improper methods of preparing the beverage.—[*The Medical Press.*]

The Clinical Picture not always Sufficient for Diagnosis.—One conclusion that may be drawn is that, strictly speaking, the recognition of the clinical picture of an infectious disease is not always sufficient for its diagnosis. The clinical picture owes its existence to the infecting agent. The clinical examinations as ordinarily done cannot possibly reveal with certainty the cause of the clinical and anatomic disturbances, and it must be accepted that bacteriologic examination is essential for the scientific diagnosis of an infectious disease. In order to emphasize this aspect of diagnosis Petruschky urges the introduction of an etiologic nomenclature. An exact nomenclature would spur to renewed study and to bacteriologic examination in order to establish exact etiologic diagnosis. Streptosis, staphylosis, spirillois, plasmoidiosis, bacillois are some of the terms he suggests, which may be modified in various ways to meet the special indications. It is a well-known fact that our nomenclature cannot be changed through the spasmodic efforts of any one reformer, be the reasons ever so just. And yet we believe that all thoughtful physicians are in hearty sympathy with all effort that tends to make diagnosis more definite, and out of this feeling there may in time spring a more precise terminology than the present.—[*Journal American Medical Association.*]

AMERICAN NEWS AND NOTES

GENERAL.

The American Gastroenterological Association will hold its next annual meeting in Washington, D. C., May 1, 1902.

Mosquitos.—A campaign against mosquitos by means of kerosene sprinkled on the ponds and marshes is being waged by the Hartford, Conn., Board of Health and like measures are urged in Minnesota and Texas.

The consumption of coffee in the United States is stated to exceed that of any other country in the world. During the 9 months ended March last the importations of coffee amounted to 617,344,000 pounds, valued at \$45,218,000, an increase of nearly \$5,000,000 compared with the same months in the preceding year.

Ratio of Doctors.—The census shows that there is 1 registered physician to every 655 people in the United States, while in Germany, in 1898, there was but 1 doctor to each 2,114 of population. Some States, however, have proportionately more practitioners than others. In California, for instance, the ratio is as 1 to 416, while in North Carolina it is as 1 to 1,189. This disparity is particularly pointed sometimes in States similarly situated—Michigan's ratio is as 1 to 570, Wisconsin's proportion but 1 to 936, and Minnesota has but 1 doctor to each 1,004 people.

American Hospital in Turkey.—A Board of Trustees, to have its chief office in New York City, was incorporated on May 14, for the purpose of establishing and maintaining a hospital in Talas, Cesarea, Asia Minor. This has been done to perpetuate the work of William S. Dodd, M.D., who began in 1886 with a small dispensary over a stable; this has widened its dimensions to a stone hospital building of 3 stories with capacity for 70 beds. Since Dr. Dodd began he has performed more than 2,000 operations and has had 61,000 patients. The consequent expenses up to this date have been defrayed by his personal friends.

Yellow Fever Vaccine.—Dr. Angel Bellinzaghi, whose experiments with yellow fever serum obtained last year the official recognition of the Mexican Government, announces that he has found an active vaccine, which he believes will insure absolute and permanent immunity from the disease. Immunity by means of his serum was only temporary. A quantity of the serum and the vaccine is being prepared for use in Cuba, where he proposes to demonstrate their value. He delicately suggests that some medical institution, or even the United States Government, might supply the means for these tests, and he is careful to invite reporters to watch them.

Obituary.—ALLEN M. SUMNER, of Boston, May 25, aged 57.—GEORGE S. OSBORNE, of Salem, May 25.—G. B. QUIGLEY, of Rocky Hill Station, Ky., May 29.—HERBERT J. HOUGH, of Midland, Canada, May 16, aged 27.—GEORGE B. NOYES, of Waupaca, Wis., May 25, aged 54.—JAMES R. BAYLEY, of Newport, Oregon, May 24, aged 82.—A. RACHAEL, of Alexandria, La., May 26, aged 60.—J. R. BOYD, of Waukesha, Wis., May 17, aged 45.—MEYER SCHWAB, of Savannah, Ga., and Saratoga, N. Y., May 26.—LUTHER DANIEL ESTABROOK, of Denver, Col., May 15, aged 68.—P. HERBERT LAROSE, of Indian Orchard, Mass., May 28, aged 31.—DWIGHT MERENESS, of Milwaukee, May 29, aged 41.—CHARLES W. CLOSE, of Chicago, at Los Angeles, Cal., May 29, aged 29.—JOHN PAYNE, of Birmingham, Ala., May 30.—JOHN L. FEENEY, of Stapleton, Staten Island, May 31, aged 56.—WILLIAM WOODS, of Boston, June 1, aged 60.—D. C. THOMAS, of Adrian, Mich., May 30, aged 66.—J. J. ELSBERG, of Slatington, Pa., June 3.—HENRY G. MOYLAN, of Philadelphia, June 3, aged 25.—Surgeon ST. JOHN, of Company A, Twentieth Regiment, United States Infantry, in Manila.—EDMUND BEALE, of Philadelphia, June 1, aged 81.

EASTERN STATES.

A New Industry is reported from Concord, N. H., 50 barrels of birch sap having been shipped lately from a neighboring town to a Boston patent medicine firm.

Vaccination Compulsory.—Under the provisions of the recently-enacted law, vaccination is now compulsory in all public, private and parochial schools throughout the State of New Hampshire.

The Country Sanatorium for Consumptives, a Jewish but nonsectarian institution which is to be conducted in connection with the Montefiore Home, in New York City, was opened formally at Bedford, May 23. This sanatorium, consisting of a group of 5 frame buildings on a high hill, is the result of experimental work which has been carried on at Bedford for several years and the directors expect not only to save many lives, but also to train the uneducated consumptive taken from unsanitary environment to hygienic ways, so that he may become a beneficent factor in teaching sanitary measures and in preventing infection in his family and vicinage when returned to it.

NEW YORK.

Dr. James A. J. O'Brien, of New York, has been appointed by the Municipal Assembly physician to the county jail of that city.

Dr. Pearce Bailey, of New York, has been appointed by Governor Odell, a manager of the Craig Colony for Epileptics, to fill the vacancy created by the resignation of Dr. Peterson, who was made president of the State Commission in Lunacy.

Christian Science Treatment.—An effort will be made to fix the responsibility of the death of Mrs. Charles Ockerman, of Binghamton, N. Y., upon 2 Christian Scientists who persuaded her that she was not ill. Investigation showed that she suffered from pneumonia.

Kneippism.—A resident of Matteawan, New York, and a disciple of the Kneipp cure, was captured by a man, who supposed him to be a lunatic escaped from the State Insane Hospital. The man was able to prove his identity, but was advised to put on shoes and stockings. There is a standing offer of \$25.00 for each capture of runaway inmates of the Hospital and, consequently, the residents in the vicinity are ever on the watch for queer-looking people.

Plague Nurses.—Katherine Carpenter and Celia Harkness, of Buffalo, N. Y., are on their way to Cape Town, South Africa, to become plague nurses, where they will be attached to the British Army Nursing Service Reserve, and where there is a demand for nurses. The salary is at the rate of £4 4s (about \$22) a week, with quarters and rations. The matron of the hospital and 3 nurses died from the plague soon after their arrival in Cape Town.

Illegal Practice.—A. de Sarak, a scientist from the Orient, general delegate of the Scientific Academy of "Sauveteur" of Paris, was charged with practising medicine without a license, in the West Side police court of New York, recently, on the complaint of agents of the Country Medical Society. He admitted that he was not registered as a physician, but claimed that he was not practising medicine, merely palmistry, double vision, magnetism, etc. He was held in \$300 bail for trial.

Laundry Law.—A new section has been added to the labor law relating to public laundries, which holds that any place where public laundry work is done is a factory within meaning of the law, and shall be subject to inspection by the factory inspector, the same as any factory. No public laundry work shall be done in any sleeping or living room; the laundries must be clean, free from vermin, and all impurities of an infectious or contagious nature. This does not apply to washerwomen doing custom laundry work at home for regular family trade.

The Board of Health of New York is in somewhat of a dilemma, relative to the case of the Colonial Brewing Company and other manufacturers who are violating the Penal Code and burning soft coal in their furnaces, thus making themselves a nuisance to the public in their vicinity; the health authorities claim that they have done all in their power to secure indictments and convictions in cases of this kind, but that political influence invariably defeats their aims and that the offending parties are generally discharged by the magistrates.

Statistics of Tuberculosis.—The Department of Health of the State of New York has requested the local health officers throughout the State to make an enumeration of the number of persons suffering with tuberculosis in their respective localities. The present purpose is not to obtain a personal registry of cases nor to institute sanitary inspection or isolation of such, but to acquire an accurate record of the number of cases, the locality of the disease, its distribution and surroundings. The accumulated data will be of worth, it is thought, in the discussion of the question of State care of tuberculous patients.

The New York Hospital has divided its anatomic and pathologic collections among the following: The College of Physicians and Surgeons, the Postgraduate Medical College, Bellevue Hospital Medical College, Cornell University Medical College, and the New York University. The authorities thought that since no lectures were given at the hospital and because the museums were maintained only for visitors, they would serve better use in educational institutions. For similar reasons, the Academy of Medicine, 3 years ago, was the recipient of the library of the hospital.

Cost of Crime.—Mr. Eugene Smith, of New York, recently stated before the National Prison Association that nearly all the disbursements of a community in times of peace are due to the suppression of crime. All the machinery of justice is necessary to protect the good from the evil. This cost, Mr. Smith actually finds to be between \$3 and \$5 per year for every honest man in the community; the nation expends a total of \$200,000,000 on this account. The expense to the family, due to the criminal, is about \$25. This tremendous cost is increasing, and the cost per capita is more than we pay for our children's education.

PHILADELPHIA, PENNSYLVANIA, ETC.

Allentown Hospital is the recipient of \$35,000 for the purpose of erecting an additional wing to the hospital for the treatment of surgical cases. The donor's name is not mentioned.

Patent Medicine.—The bill before the House prohibiting the sale of patent or proprietary medicines unless the formula is registered with the Secretary of the State Pharmaceutical Examining Board, was indefinitely postponed.

Breeding of the Jersey Mosquito will be prevented by the Town Improvement Association of Summit, N. J. The swamp lands and surface of waters throughout the village will be covered with oil. The aid of the Standard Oil trust has been solicited.

The Allegheny General Hospital will soon instal 4 new resident physicians: J. Wale Elphinstone, C. B. McAvoy, A. W. Sherrill, and Louis W. Smith. Dr. Elphinstone is a graduate of Western University, and the others are from the University of Pennsylvania.

Typhoid Fever.—Dr. J. Howard Taylor, Chief Medical Inspector of the Bureau of Health, has had instruction to thoroughly investigate the increase of typhoid fever in West Philadelphia. Of 102 new cases reported last week, 40% were located in the Twenty-fourth and Thirty-fourth Wards.

The United States Marine-Hospital Service Office, adjoining the Custom House at Philadelphia, will be remodeled and a new building will be erected with a dispensary, examination rooms and waiting rooms for the use of American seamen. Dr. H. W. Austin, who devised the plans for the new building, will still be in charge.

Oleomargarine.—Bills restricting the sale of oleomargarine have become operative in Pennsylvania. Licensed dealers only, according to the proposed law, are permitted to sell the article. The oleomargarine must be sold uncolored, on its own merits and not made to imitate butter. Severe penalties will be enforced in the event of the violation of the law.

The Children's Hospital of Germantown will now be known as the General Homeopathic Hospital of Germantown. The institution will soon remove to more commodious and better adapted quarters at 47 West Penn street. Owing to change of residence, the president of the hospital, John D. Pessano, has handed in his resignation.

Location of Hospitals.—An attorney representing property owners has drawn attention to a decision of the Supreme Court sustaining the act of April 20, 1899, prohibiting the establishment or maintenance of additional hospitals, pesthouses and burial grounds in built-up parts of cities. There are several institutions in Philadelphia that are affected, because established since the passage of the act.

Joseph P. Remington, of Philadelphia, has been elected chairman of the Committee of Revision of the Pharmacopoeia of the United States (1900-1910). Professor Remington has served as first vice-chairman since 1880, and has now succeeded to the chairmanship owing to the death of Dr. Charles Rice, of New York, on May 13. This office, the most important in pharmaceutical work, was held for 40 years (1840 to 1880) by Dr. George B. Wood, of Philadelphia.

Was it Swearing?—From Elizabeth comes the story that the ambulance surgeon was compelled to postpone sending the patient to the hospital by a superior, who demanded that they should wait for the priest and the last sacrament. Irritated by the delay the ambulance surgeon then told the driver to "drive like hell." For this he was charged with profanity. Governor Voorhees was moderator in the dispute, and announced his decision, with a twinkle in his eye, as follows: "I think, under all the circumstances, I would have done the same thing."

SOUTHERN STATES.

St. Louis Insurance Men are planning to discriminate against Christian Scientists. There is at present no way to legally prohibit them.

Dr. A. G. Maylie, of New Orleans, has received an unsolicited appointment as inspecting surgeon in the United States Pension Bureau.

Prof. Ira Remsen, head of the department of chemistry in the Johns Hopkins University, was elected president of the university June 3, at the regular monthly meeting of the board of trustees.

Leper Hospital.—The project on the part of the Leper Board of New Orleans of establishing a Leper Home at the Plantation House on the Elkhorn Plantation, Jefferson Parish, La., was met by indignant protests from the inhabitants of the Jefferson and St. Charles Parishes and resulted in the destruction by fire of all the buildings on the plantation during the night of May 22.

The Ophthalmological and Otological Society of Washington City at the thirty-seventh session elected the following officers for the ensuing year: President, S. O. Richey; vice-president, W. H. Wilmer; secretary and treasurer, Anton Coo.

A Swindler, supposed to be R. G. Stearns, is being sought by Washington detectives. He represented himself to physicians and dentists as an agent selling medical magazines at reduced rates. Investigation has shown that no such man was connected with the firms he mentioned.

Filtration.—The committee appointed by the U. S. Senate to investigate methods of filtration for the supply of Washington, D. C., found that slow sand filtration was preferable for clear water, while rapid filtration, with the use of a coagulant, was better for turbid water. Either method removed the bacteria.

A Christian Science College was refused a charter by the Secretary of State of North Carolina on the grounds that the institution had not demonstrated in its petition that it would conform to the legislative policy of the State, in relation to the treatment of disease, nor the requirements and practices of the State Board of Health.

Police Marshal Hamilton, of Baltimore, is endeavoring to make arrangements with the hospital authorities, whereby the latter will report suspicious cases to the police. One of the principal reasons for this is that under the present condition of affairs a criminal may pose as a patient and thus hiding his identity, escape detection.

The Recreation Building, near Tousand, Maryland, for the use of the patients of the Sheppard and Enoch Pratt Hospital will cost, when completed, about \$15,000. It will be located about 1,500 feet from the main building and will be built on the style of a country clubhouse. It will be 1 story in height, comprising 2 departments, 1 for the women patients and 1 for the men.

Florida Quarantine Stations.—A special meeting of the State Board of Health of Florida was held at Tallahassee recently to consider a proposal submitted from the United States Treasury Department, through the Marine Hospital Service, to turn over the maritime quarantine service to the State and lease all quarantine stations to the Government, as authorized through a joint resolution passed by the Legislature. The Board accepted the agreement.

Pure Milk Supply.—The Modified and Sanitary Milk Company, of Baltimore, organized by Baltimore physicians for the purpose of furnishing that city with a milk guaranteed absolutely pure and uncontaminated, has announced the opening of its laboratory and the dispensing of the milk from it. Not only the greatest possible care is exercised over the milk in respect to its quality and the manner of handling it, but careful oversight is extended to the herds, dairies and farms supplying it.

WESTERN STATES.

J. C. Carbus has been reelected superintendent of the Illinois Eastern Hospital.

Colorado State Medical Society.—A meeting will be held in Denver, June 18-20, 1901.

A Test Case.—Indiana's new medical law will be tested by George P. Parks, who was fined \$25.00 for practising magnetic healing without holding a medical license.

The Cincinnati Hospital has received from the estate of Dr. Max Thorner a valuable addition to its library in the reference books belonging to this specialist of nose, ear and throat diseases.

A Hospital for the Tuberculous will be constructed on the infirmary grounds of Cleveland, Ohio, the city hospital being no longer large enough to accommodate those suffering from the disease.

Milwaukee a Healthy City.—Registrar Coon, of the health department has made deductions from the government statistics showing that Milwaukee is the healthiest city of its class in the world with the single exception of Buffalo.

Louisville Hospital College of Medicine.—It is reported that Dr. Dudley S. Reynolds, a member and one of the founders of this institution, has been dismissed by the faculty because he persisted in denouncing cigaret smoking and smokers before his classes.

Insurance Verdict.—Judge McMasters, of Indianapolis, recently decided that the bite of an insect, when it disqualifies a man from his labors, should be classed as an accident, and, therefore, allowed Mr. Carson, the plaintiff in a suit against an insurance company, \$30.20 damages.

Deaths Due to Christian Science.—Reports from Chicago detail 3 deaths due to faith cure and lack of proper medical treatment. Mrs. Bessie Vance died after lingering 3 weeks, while Christian Scientists endeavored in vain to save her life and that of her newborn infant. Mrs. Christensen, who was burned in a fire, died after 12 days of unrelieved pain.

Smallpox Regulation.—The school and health authorities of Cleveland, Ohio, have decided that no child shall be vaccinated without 1 day's warning. The children must then submit to vaccination or be debarred from school. If a smallpox victim is discovered in the school room, however, the doors shall be locked and vaccination of the pupils and disinfection must be made at once.

Two Dowie Healers, O. Inouye and T. Kitano, of Japan, who have been studying at Zion, are to be sent back to their native country as missionaries. The Japanese Consul, Toshiro Fujita, of Chicago, has warned them that arrest and imprisonment will be the result of any attempt to introduce their methods of healing into Japan, as they are forbidden by law. The Japanese laws prescribe vaccination every 3 years, and any evasion meets a vigorous punishment.

The Cigaret Crusade is being pushed vigorously by the authorities of Chicago. The law requiring a special license to sell cigarettes will be strictly enforced, and all dealers will be reported to the police officials who fail to meet its requirements. An ordinance has been introduced into the Council prohibiting the sale of cigarettes, cigaret paper, or cigaret tobacco within 600 feet of a school house, and also forbidding the giving away of such articles by persons unlicensed to sell them.

Leper in Chicago.—A follower of Alexander Dowie, named Stewart, is reported to be suffering from leprosy in an advanced stage. The city health department has detailed a physician to look after the sufferer, who is thought to have contracted the disease in Australia. It is said there is no law under which he can be removed from the community, but he has been warned to keep away from others. Efforts to give him the benefit of medical treatment are met with the assertion that Dowie's prayers will effect a cure.

Chicago Sewage.—Through a commission of experts who have been conducting experiments to determine to what extent Chicago sewage, conducted through the drainage canal, pollutes the waters of the Illinois River, the State Board of Health has submitted a report which is reported to disprove the contentions of St. Louis as to the effect of the canal on the water of the Mississippi. It is claimed that the experiments show that the condition of the water of the Illinois River at Grafton is the same as though no Chicago sewage went through the canal.

Sanitation of Chicago Schools will be investigated by the Chicago branch of the Association of Collegiate Alumnae. Questions relative to the cleanliness and sanitary measures adopted by the schools, the general health among the children, and a study of the diseases prevalent in the different school districts will be forwarded to the principals of the schools throughout the city. The answers to these questions will be published as statistics. The final object of the association is the enactment of a new sanitary law, and the report will be the precursor of a bill to the State Legislature on the subject.

CANADA.

Dr. George Stirling Ryerson, of Toronto, has been made a Knight of Grace of the Order of St. John of Jerusalem, for his services in South Africa.

Dr. Patterson, of Winnipeg, under direction of the Dominion Government, is visiting the northern Indian reserves in the territories to investigate the reported smallpox outbreak.

Lady Minto's Cottage Hospital plan for the Canadian Northwest territories has been furthered by a gift of \$1,000 from E. B. Osler, conservative Member of Parliament for Toronto west.

The Canadian Nurses' Association has been incorporated with the object of furthering the best interests of the profession, financially and professionally. A universal standard of training nurses will be established and maintained.

Public Health Legislation.—A bill before the Legislative Assembly of the Province of Quebec, provides that the Secretary of the Provincial Board of Health shall receive a salary not exceeding \$2,400 a year, and that the Board may appoint analysts, a statistician, and other necessary officers. It also provides for the exclusion of unvaccinated children from schools.

Ontario Physicians recently requested the government to test the validity of a \$2 annual tax imposed by the medical council. Several hundred physicians in Ontario were recently reported in arrears and some who refused to pay were suspended from practice under the Act. Objection is taken to the tax on the ground that it maintains a costly building in Toronto of which the outside physicians get no benefit.

FOREIGN NEWS AND NOTES

GENERAL.

Typhoid Fever in South Africa.—Mr. Broderick, Secretary of State for War, reports typhoid fever among the troops in South Africa as follows: January, 2,121 cases, 356 deaths; February, 2,119 cases, 391 deaths; March, 2,018 cases, 313 deaths.

Deaths from Plague.—It is reported that during the week ended May 25 there occurred in Hong Kong 187 deaths from bubonic plague. It is reported that although the plague has already invaded several hundred villages in the Punjab the regulations against its spread have been so irritating to the natives that the Government has been obliged to suspend them.

Tuberculosis in Japan.—Statistics show that 32% of all deaths in Japan are due to tuberculosis. Its prevalence and the frequency of rheumatism are attributed largely to the fact that the Japanese always live in one-story houses built upon the ground with inadequate ventilating and heating arrangements, making their homes cold, dark and damp.

Plague.—Lord Stanley, in reply to a question, reports that the plague among the troops in South Africa up to May 3, amount to 14 cases among European soldiers, 20 native drivers and 7 other employees. In Australia cases continue to occur at Perth and Brisbane. In New South Wales and Victoria the extermination of rats is prosecuted vigorously and precautions are observed against introduction by sea.

Obituary.—FREDERICK WILLIAM BAYES of Walsingham, Eng., aged 76. D. C. DAVIDSON of the Indian Medical Service, May 2, aged 50. SODEINDE ALFRED LEIGH-SODIPE at Lagos, West Africa, April 15. S. LAMANSKI of St. Petersburg, aged 60. DR. V. ITERSON, professor of clinical surgery, in Leyden. DR. DECROIX, the founder of the French Antitobacco Society, aged 80. CHARLES NATTRASS of Sunderland, Eng., May 2.

Labrador Hospitals for the fisherfolk number 3; 1 at Battle Harbor, 1 at Indian Harbor and the third is in course of erection at St. Anthony, on the North French Shore. In addition to these there is the hospital ship *Strathcona*, of which the medical officer is captain, which is equipped with 6 beds and all necessary appliances, including x-ray apparatus. This ship constantly cruises up and down the coast and last year handled 1,020 cases.

Need of Medical Research.—A strong plea is urged by the *Lancet's* correspondent from India for the establishment of well-equipped research laboratories in Calcutta and Bombay, where the field for original work in bacteriology and experimental pathology is vast and in view of the fact that no advance has been made in the knowledge or treatment of plague, cholera, relapsing fever and other anomalous fevers, of which so much is written, within the last 4 years.

Income of Berlin Physicians.—The Medical Chamber of Berlin and the province of Brandenburg has issued an interesting report on the subject of the income of the medical profession residing in that district. The chamber is authorized to fix an annual sum to be paid by every medical man for the expenses of the chamber and the support of distressed members of the profession. It has been decided that a uniform rate of 10 marks (10s) should be paid and an additional sum by those earning more than 5,000 marks (£250). The chamber has been informed by the income-tax officials that of 1,946 Berlin medical men under the jurisdiction of the chamber 529 earned from 900 to 3,000 marks (from £45 to £150), 273 from 3,000 to 5,000 marks (from £150 to £250), and 785 more than 5,000 marks, the largest income amounting to 295,000 marks (£14,750). It appeared that 107 medical men had no taxable income at all and the income of 252 could not as yet be ascertained. In the other towns of the province the proportions were similar to those found in Berlin, so that 4% of all the medical men had no taxable income, 26% had an income from 900 to 3,000 marks, 17% from 3,000 to 5,000 marks, and 40% more than 5,000 marks. In 13% no reliable information could be obtained.—[*Lancet*.]

GREAT BRITAIN.

A Monument to Huxley is proposed at Ealing, his birth-place, but the form is not decided upon.

Plague Victim.—A man has been found at Willesden, a suburb of London, apparently suffering from an extremely mild form of bubonic plague.

Alfred Harmsworth, of the *London Daily Mail*, has given \$50,000 to the Royal Hospital for the establishment of a plant for the treatment of lupus by light.

Sir William MacCormac, president of the Royal College of Surgeons of England, has been elected a Foreign Associate Fellow of the College of Physicians of Philadelphia.

Bequests.—The late Mr. T. E. Exley bequeathed by will £1,000 to the Bristol Royal Infirmary, £1,000 to the Bristol General Hospital and £500 to the Trowbridge Cottage Hospital. Miss Mary Cannington of Bristol bequeathed recently £10,000 in Consols to the Bristol Royal Infirmary, £5,000 to the Bristol General Hospital and £500 each to the Bristol Dispensary and the Bristol Eye Hospital.

Extermination of Mosquitos.—A Glasgow citizen whose name is withheld has placed at Major Ross' disposal a sum of money sufficient to make a year's thorough trial of the relation of mosquitos to malaria in some malarious district of West Africa and a corps of workers with necessary equipment will proceed shortly to Sierra Leone to exterminate the mosquitos in some selected town or district the choice of which will depend mainly upon the cooperation offered by local authorities.

Maple scale or cottony cushion is reported to have gained a foothold in Washington, Idaho and Oregon to the detriment of maple, apple and cherry trees. This pest, supposed to be brought there by the Australian Steamship Line, originated in the acacia forests of Australia, spreading to South Africa, in 1873, and later to New Zealand. It was brought into California in 1868 on trees and shrubs from Australia, and increased so rapidly that one potted plant is said to have spread the scale through the San Gabriel Valley, and soon the orchards of the State were infested. Albert Köbele was sent to Australia to investigate what means there existed there to keep its ravages in check and prevent the utter extermination of the forests, and he sent back colonies of a scale-destroying beetle and a fly which punctures the scale to deposit its eggs, which as grubs devour it. These were distributed and by 1889 the work of extermination was practically complete.

Street Cleaning in Glasgow.—This Scotch town with a population of 750,000 has learned not only to keep its 315 miles of streets clean, but to realize a large profit from the refuse. The Glasgow Cleaning Department controls several farms with an aggregate area of 800 acres, employs 1,300 men, and owns 900 railway cars, 300 horses and a vast array of carts. It has besides its own railways on its own estates, its own quarries and workshops. The city refuse is divided into 4 distinct classes, domestic garbage, refuse from business houses, excrement from public works and dwellings, stable manure and refuse from abattoirs. These last 2 articles mixed together form a compound which commands a ready sale and brings a good income to the city. There are special establishments in various parts of the city known as dispatch works for the separation of inferior material from that having value, where ashes and sweepings are screened and scientifically mixed with a fixed quantity of excremental matter for use as a fertilizer and this is eagerly bought up. The iron, tin and paper are sold separately. The useless matter is consumed in furnaces and the civic government of Glasgow is considering a scheme by which the heat resulting from the burning garbage may be utilized as its volume is sufficient to generate 890 horsepower of steam an hour, or power enough to light 600 street lamps of 2,000 candle-power each. The cost of the operations for the year ended May, 1899, was \$365,000 and the revenue was \$750,000.

CONTINENTAL EUROPE.

Hippocrates' Grave is reported to have been discovered at Larissa, in Thessaly, during some recent excavations.

A Hospital for Carcinomatous Patients and research will be founded by Professor Levschin, of Moscow. He has succeeded in raising \$175,000 for that purpose.

Military Medical Academy.—It is reported that the Russian Ministry for War contemplates the reorganization of the Military Medical Academy, where the students are subjected to military discipline and are required to serve 3 years as military surgeons after graduation.

Baby-farming in Norway.—A report from Christiania states that 3 women killed 27 children, by starvation or suffocation, in a baby farm since last summer. It is thought that some of the mothers, who belong to all classes of society, were not ignorant of the fate awaiting their offspring.

An Institute for the study and cure of tuberculosis and other infectious diseases has been founded by Professor E. Maragliano of Italy. It is modeled after the Pasteur Institute. Physicians are given opportunities for special study in the line of serum culture, etc., and contagious diseases are treated gratuitously.

Smallpox.—For the week ended May 5, 1901, the official report of cases of smallpox in Naples was 95, with 24 deaths. The disease prevails through Italy, with marked prevalence in Naples, Salerno, Avellino, and other towns. A careful lookout is kept for cases among emigrants about to embark for the United States.

Suicides in Germany.—Last year about 4,000 of the 8,000 suicides were victims of drink, and more than 2,000 were unbalanced mentally. The proportion of men to women was as 3 to

1. As if to verify the statement that women seldom shoot themselves over $\frac{2}{3}$ of the female suicides in Germany either poisoned or drowned themselves.

Memorial to Professor Ollier.—W. W. Keen, Treasurer of the committee to solicit subscriptions for a monument to the late Professor Ollier, in Lyons, wishes to inform the profession that he has received \$649 from 103 subscribers, and has forwarded the same, less \$4.60 for postage, printing, etc., to Dr. G. Mondan, of Lyons, France.

Dr. Laborde reported to the Academy of Medicine of Paris a novel and painless method (the discovery of a dentist of Paris) of extracting teeth. Tubes from a phonograph, playing gay music, are connected with the patient's ears just before the anesthetic is administered. The music shuts out all extraneous sound and the distorted visions usually incident to the beginning of anesthesia are avoided. Then, too, the after effect of nervous depression is lessened.

German School Gardens.—Many French, Swedish and German cities, but particularly Leipsic and Plauen, in Saxony, have a plot of land not far removed from the schools, where gardening is taught to the children on 1 or 2 afternoons in the week. They learn not only how to sow the different kinds of vegetable seeds, how to transplant trees, how to tell when melons are ripe, how to care for strawberry beds in all seasons, but also learn the botanic names and relationship of the plants, and the name and appearance of all the common weeds and the poisonous plants, which are plotted by themselves and labeled. A little pond holds aquatic flora.

German Sick Clubs.—Through the intervention of the municipal authorities the strike of the medical officers of the Leipsic Sick Club has closed and an agreement has been made: That the committee of the Medical Officers' Union shall be formed exclusively of members engaged in club practice; that a permanent court of arbitration shall be created, composed of members of the Leipsic Medical Chamber and members of the committee of the club, over which the chief medical officer of the city presides, and empowered to adjust any dispute that may arise between the club and its medical officers; and that the club shall maintain the free choice system and shall not issue orders direct to the medical officers without reference to their committee. This agreement has been accepted by both parties and pleasant relationships have been established again.

Red Light Treatment for Measles.—A cable from Berlin says: The treatment of diseases by the use of colored light, however much it might be ridiculed, is obtaining a footing here. The latest novelty is the cure of measles with a red light. Dr. Chatinier publishes in a popular medical magazine the results of a number of experiments, all having been favorable. Patients with measles are kept in rooms lighted with subdued red light, much like that in a photographer's dark room. Dr. Chatinier uses red silk paper pasted on his window panes. The patient receives no medicine. Dr. Chatinier explains that the prevailing red light enables the inflamed skin to rest. All other colors, especially strong shades of violet, excite the skin. He was first attracted to the discovery by noticing that the peasant women in his district always wrapped children with measles in red cloth.

Sanitariums for Tuberculosis.—M. Lemoine, at a meeting of the Academy of Medicine in Paris, deplored the haste shown by France to follow the lead of Germany in constructing huge establishments without first considering if the system of sanitariums was the best for treating tuberculosis, which causes the death of 150,000 persons yearly in France. From a study of the results obtained in various institutions of this kind, he is led to a preference for the plan proposed by Brunon, of Rouen, to transform into sanitariums the wards of communal infirmaries, or even peasants' cottages in suitable locations, and advocates admitting tuberculous patients into the existing establishments in all country places, after making necessary structural alterations and placing them under the control of the local medical men, and also enlarging the scope of the Poor-law medical officers with a view to the prevention of the disease.

Sanitation in the Austro-Hungarian Navy.—Hospital admissions 25 years ago, from the fleet, ashore and afloat, were equal to 641 per 1,000. Sanitary measures have reduced this ratio to 467 per 1,000, per annum. At Pola, the "home of the fever" (its former name) the admissions due to malarial affections have fallen from 800 per 1,000 to 30 per 1,000. Quinin, prophylaxis and sanitation have brought about this improvement. Trachoma, scurvy and smallpox, which formerly swelled the sick list of the navy to an inordinate degree, have almost entirely disappeared. Typhoid fever still is epidemic some time in the year and there is still about 0.3% of tuberculosis, but these too are gradually lessening with the improved sanitation. In the last 20 years venereal diseases have diminished from 104 to 90 per 1,000. More diseases of this character occur in the navy of the empire than in the army. This same fact has been noted in the armies and navies of Germany, England and Italy. The Pola hospital authorities have discovered that typhoid bacilli live 20 days in oysters; and they have also found that fermented grape juice is death to this germ, inoculated wine having been found sterile after 24 hours.

SOCIETY REPORTS

AMERICAN GYNECOLOGICAL SOCIETY.*

26TH ANNUAL MEETING HELD IN CHICAGO, ILLINOIS, MAY 30
AND 31, AND JUNE 1, 1901.

FIRST SESSION.

Dr. CHAUNCEY D. PALMER (Cincinnati) read paper on **Intraligamentous Cysts, their diagnosis and treatment.** He spoke first of the classification of ovarian tumors in our textbooks as being very unsatisfactory. What we need is a classification, at once clear to our understanding, and helpful by way of diagnosis and treatment. He spoke then of oophoritic, paroophoritic and parovarian cysts. The oophoritic cysts are the *hydrops folliculorum* and the unilocular and multilocular cysts. The oophoritic have a Graafian follicular origin, are not papillomatous, except very rarely. The paroophoritic cysts start from the hilum of the ovary and are papillomatous. All kinds of cysts, whether oophoritic, paroophoritic or parovarian, may grow into the folds of the broad ligament and become intraligamentous. The paroophoritic cyst is most apt to take on this special course of movement in its progressive development. He then referred to the symptoms and the signs before removal which would enable us to differentiate intraligamentous cysts. All ovarian cysts of whatever kind should be removed by surgical procedures, the sooner the better. But the removal of intraligamentous cysts demands more time, a most correct knowledge of the parts and surroundings, and superior skill. He then dwelt upon the advisability, if not necessity, of availing ourselves of the extraordinary opportunities, when the abdominal cavity is opened, to see and to feel, and to map out, *what is, where it is,* and determine *what methods* are best to adopt in the removal of these pelvic growths. Intraligamentous cysts are, as a rule, easily peeled out of the broad ligaments. Enucleation, first suggested by Dr. MINER, of Buffalo, can be done, but it ought only to be attempted when the attachments are superficial. The attempt commenced in the old way on some intraligamentous cysts may have to be resigned as an incomplete operation, or as an inoperative case. Many such patients have died on the table. He referred to the dangers of wounding the uterine arteries; and then he earnestly advocated the advisability of completely excising the uterus, as well as appendages thereof, when the cysts are bilateral, and when they are deeply imbedded within the surrounding textures. This new method of procedure, while seemingly the more radical way, is the only rational method of a skillful surgical extirpation of the diseased structures. He lauded highly the irrigation of the peritoneal cavity with gallons of hot salt water after section, and the measures he had utilized of a continuous peritoneal irrigation of hot sterilized water, used for hours or days, in many cases of post-operative septic peritonitis.

In discussion A. LAPHORN SMITH (Canada) reported 2 cases, 1 operated upon by the old method, with death of patient; the second, in which the broad ligament cyst was complicated by a uterine fibroid. That organ was removed and the hemorrhage was easily controlled. The large raw surface left was covered by peritoneum by using a running suture of catgut.

WATHEN (Louisville) thinks the essayist magnified the dangers of these operations. Thorough knowledge of the pathology of these growths makes the treatment easier. They rarely extend to the base of the broad ligament or split the mesorectum. He cited 2 cases successfully operated on when uterine extirpation was practised.

SUTTON (Pittsburg) thinks that the safe removal of these growths has been much facilitated by the employment of the Trendelenberg position.

KELLY (Baltimore) urged that the cyst be shelled out of the broad ligament, and the tube and ovary be allowed to remain if their retention was important or necessary. Sometimes it is difficult to differentiate between pseudo and true intraligamentary cysts, as these inflammations may cause adhesions, smooth in appearance, leading to mistake in diagnosis. The true cysts are rarely papillomatous, and usually monocystic. If disease is also present on opposite side, cut across from it and shell out the growth and control bleeding. Bisection of the uterus will do much to facilitate the operation. Sew the peritoneum over the raw surfaces, and if necessary drain through the vagina with iodoform gauze.

JOHNSTON (Cincinnati) spoke of the difficulty of diagnosis, and of the desirability of saving the opposite ovary when possible. He has never found it necessary to remove the uterus.

BALDY (Philadelphia) considers that the false cysts are generally small, and the true intraligamentary cyst rarely requires the ligation of either ovarian or uterine arteries, but having very slight blood supply, may be easily enucleated. He has little sympathy with the practice of using vaginal drainage, and thinks it useless and unnecessary.

HENROTIN (Chicago) entered a protest against such extensive irrigation of the peritoneal cavity; thinks that it is not

required and is, therefore, objectionable. He spoke of the liability of the ureter to pass over the summit of these intraligamentous growths in a tortuous manner, and the possibility of its being injured. E. C. DUDLEY (Chicago) agreed with him.

The paper by W. GILL WYLLIE, M.D. (New York) on **Chinical Observations on Uterine Fibroid Tumors and their Treatment** was read by title.

Dr. WM. H. WATHEN (Louisville) read a paper on **Improved Technic in the Surgical Treatment of Uterine Myomata**, describing the various procedures he employs, the methods advocated, and indications for each.

Dr. PHILANDER H. HARRIS read a paper on **Painful Menstruation as a Factor in Determining the Character of Operations on the Uterine Appendages.** He divided all cases of dysmenorrhea into 2 classes. 1. Primitive dysmenorrhea, including all cases in which the pain dated from the commencement of the menstrual function. 2. Acquired or secondary dysmenorrhea which comes on during the course of menstrual life—menstruation having previously been painless. Primitive dysmenorrhea may be increased or altered in character by the acquirement of an additional cause for painful menstruation. Tubal suppuration, either alone or with ovarian abscess, causes painful menstruation which disappears after excision of the tubes. And after this excision of the tubes, even if ovarian tissues be left, the patients are usually cured of all their symptoms. He does not remove either one, or both ovaries for the single purpose of curing dysmenorrhea, and in excising suppurating tubes, believes the apparently healthy ovaries should be spared in all cases of acquired dysmenorrhea, for by so doing, we retain the item of menstruation which contributes so much to the moral and physical well being of women, and also render menstruation painless. The least mutilating operation should be employed, leaving the patient, if possible, with the valuable quality of possible fertility.

Discussion.—MANN (Buffalo) believes that term "dysmenorrhea" should be applied to painful menstruation alone and when due to uterine disease or contraction and that the pain produced by disease of the tubes or ovaries should not be thus classified.

EDEBOHLS thinks that dysmenorrhea may be purely ovarian—the pain be present at regular intervals even when the uterus and tubes are absent. It may be due to a variety of causes and the time of its occurrence often indicates the point of disease. It is unwise to leave a vestige of the ovary in operating for symptoms due to ovarian disease.

A. P. DUDLEY believes that the foundation of the pain may be found in the nerve supply and that pelvic congestion is a prime factor—any obstruction to the pelvic circulation producing it.

LAPHORN SMITH thinks that when the pain is so severe as to incapacitate a woman for active work that removal of the appendages is justifiable. The question is how bad the case must be before the radical procedure is employed. He gives his patients the benefit of 1 year's treatment and if they are unrelieved, he then operates.

KELLY considers the treatment of these cases is very unsatisfactory. A radical operation for the relief of dysmenorrhea should never be performed unless some structural or macroscopic disease is present. Fight the battle without operation. He has secured surprising results in some cases by the use of parotid or ovarian extracts. Dilatation or division of cervix is sometimes beneficial. Use the milder sedatives and avoid morphia. Treat the case palliatively and never radically.

WATHEN mentioned the great variety of causes producing the pain and deprecates any operation when disease is absent. Curettage often gives satisfactory results.

BALDY believes that in the class of patients in whom the pain is confined to the menstrual period only palliative measures may be employed, but in that class who suffer during the greater part of the month and are thus made complete physical wrecks from the pain and excessive bleeding that complete extirpation of the uterus, tubes and ovaries, is indicated and justifiable. He would not leave any ovarian tissue if relief from pain was the object of the operation.

GORDON (Maine) advocates the complete extirpation of the uterus and its appendages, when the menstrual pain is great and lasts almost the entire month.

HENROTIN thinks that the patient should be consulted and her wishes acceded to, up to a certain point. She has the right to earn her own living, and if operation is necessary for this it should be performed. Often an incision is necessary to reveal unsuspected adhesions, which may be the cause of the trouble.

SUTTON (Pittsburg) spoke of postmarital cases of dysmenorrhea, and of gonorrhoea a factor in their causation. He has found it necessary to remove the uterus as well as the adnexa in order to give complete relief.

ENGLEMAN has successfully employed dilatation and the galvanic current for the relief of the pain and hemorrhage.

Dr. E. GEHRUNG (St. Louis) read a paper on **Status of Menstruation.** He believes menstruation is not, as has been supposed, a special function of the generative organs of woman, but only the perverted counterpart of the estruation of the lower animals. This transformation into a monthly "hemorrhage" (menorrhagia) has generally been brought about by the necessities and results of the social, moral and conjugal life of mankind, as well as through the transmission by inheritance of certain debilities of the generative apparatus, and more espe-

*Specially reported for AMERICAN MEDICINE by Dr. Wilmer Krusen.

cially by the erect position and its natural consequences, assumed by the human species. This fact being admitted, the profusion and prolongation of the sanguinous loss is a proof that it is now a physiologico-pathologic condition, predisposing to anemia and all its direful consequences, preeminently to the nervous system. In the great majority of cases the quantity of blood lost during so-called normal menstruation is an unnecessary and therefore pathologic waste of the very essence of life. It stands to reason that in all cases of depressed vitality, this loss should be reduced as much as possible. The best means for controlling the waste is the vaginal (not uterine) tampon, applied "secundum artem." When curcottage is not indicated or applicable, and where it has failed in gaining the desired result, the tampon is the means indicated. Chronic and acute inflammation of the pelvic organs are contraindications. Unless the restriction of the waste is put in execution, tonics are useless, because they simply increase the pressure and consequently the waste, while after the repression or simultaneously with it, they seem to work wonders. The superstitions surrounding menstruation, as well as the misunderstanding of its true character by the medical profession as well as the public, have caused a world of trouble and suffering by the neglect of the necessary advice and treatment.

AFTERNOON SESSION.

Dr. GEORGE I. ENGELMANN (Boston) read a paper on **The Age of First Menstruation in the United States**. Over 10,000 observations as to the time of first menstruation of American-born women, many with reference to points never before investigated, here or elsewhere, give me ample material for an authoritative solution of the questions involved. These observations, from my own practice and that of helpful friends, are many, and the identity of results obtained in far distant points, Montreal and New Orleans, Cincinnati, St. Louis and Boston, vouches for their correctness; furthermore, they are corroborated by all previous records, a total of 6,000 in such points as these may cover. The mean age of first menstruation in this country is 13.9, or 14 years, the same in the United States and in Canada. Climatic differences in no wise influence pubertal development within the bounds of the North American continent; the American-born, be they of American (14.1), German (14.5), Irish (14.5) or French (13.6) parentage of the same class, attain puberty at the same age in Montreal, St. Louis or Boston; the Negro does not vary (14.05) whether in New Orleans or St. Louis. The greatest variation caused by the extremes of all influences is 1 year, from 13.5 in the girl of highest refinement and education to 14.5, which is the period for the American-born of the laboring classes of German and Irish parentage; in other countries the difference between the extremes of social classes is from 2 to 3 years. Refinement, education, city life, nerve stimulation, determine precocious puberty; ignorance, poverty and manual labor retard; social status in itself means very little; heredity and race have a slight determining influence. The American-born are more precocious than the women of other countries in the same zone; 14 is the age of puberty in the United States and Canada, 15.5 in the temperate zone of Europe. The native American is more precocious than the American born of foreign parents, but the latter closely approximates the American of American parentage, even in the first generation. Racial characteristics fade rapidly away; the age of puberty in Germany is 15.5 to 16, in Ireland 15.3, and for the girl born in America of German or Irish parentage, 14.5, in St. Louis as it is in Montreal; the Canadian French are the only exception, between 14 and 15 in their native land, these alone of all races are more precocious than the American of the same class when born in this country; 13.7 is the mean age. Climate here has absolutely no influence; race, mentality, surroundings, education and nerve stimulation stand out prominently in this country as the factors which determine precocity.

Dr. BALDY (Philadelphia) read a paper on **Cancer of the Body of the Uterus**. He expressed incredulity as to the accuracy of German statistics and emphasized the wide practical difference between cancer of the cervix and cancer of the fundus. Operations of all kinds have proven a dismal failure as far as securing a cure in cancer of the cervix, and the proportion of permanent cures is probably as low as or below 5%. Of 24 cases of cancer of the fundus which have applied to him for treatment, 3 refused operation, 21 were operated upon; 2 died from operation, 1 from recurrence, a total of 6 not cured, or 75% of cures. The enormous difference in results of treatment in same disease located in different parts of the same organ was particularly noticeable, even when allowance is made for all possible mistakes and for the total unreliability of statistics.

Dr. CYRUS A. KIRKLEY (Toledo) discussed the **Status of Hysterectomy for Uterine Cancer**. The paper was a plea for conservatism in the surgical treatment of uterine cancer, and contrasted its pathology and treatment of half a century ago with that of the present. While we have revised nomenclature as to the varieties of uterine cancer, actual knowledge of the disease has not materially advanced. Old truths may have been made a little clearer as to its pathology, but its etiology is still unknown, and notwithstanding the advantages of asepsis, and perfect operative technic, its treatment is still unsatisfactory. Due credit was given the advocates of vaginal hysterectomy for their skill, and for whatever pathologic progress may have been made within the last few years. Its peculiar fascination made it too general, and proper indications for it were too

often disregarded, and as often misunderstood. Instances were given pointing out this truth. With these discordant views as to the propriety of so serious an operation, the primary mortality of which is at least 10%, we might well hesitate in its adoption. The operation should be done at that early stage when microscopic examination is necessary for a correct diagnosis. Most cases have passed the limits of radical operation when they apply to the surgeon. The paper took the view that adenocarcinoma of the body of the uterus in its early stage, while yet localized, is the only form of cancer clearly indicating vaginal hysterectomy. Hysterectomy gave the best results in this variety of cancer. Dr. Cullen's and other tables were quoted showing average primary and remote results, but little was found in them to recommend vaginal hysterectomy as a general rule of practice. He then discussed the Rumpf-Reis-Clark operation, in which Dr. Pryor had reported in a total of 95 cases by different operators, a primary mortality of 11.2%. When the disease has extended so far as to require it, little could be expected from any radical operation, because in most cases it was impossible to know whether all the diseased glands and infiltrated tissue had been removed. From the paper's view-point the only indication for abdominal hysterectomy for cancer is when the disease is strictly confined to the cervix and body, or to the body alone. Electrocauterization as practised by Dr. Byrne was given the preference over all the other methods of operating. It had not received the recognition it deserves. Dr. Byrne's skill in its application, could only be acquired as in other operations. Freedom from danger, and longer period of exemption were its strongest recommendations. An old table published by Dr. Byrne in 1889 was referred to, so that in comparison vaginal hysterectomy might have the advantage. In a total of 367 cases there was not a single death from the operation. The position held by our fathers 50 years ago, that hysterectomy for cancer has its narrow limitations, that it should be done early, if at all, and that only temporary relief can be hoped for is just as true today.

A paper on **Prolapse and Procidencia of the Uterus** was read by Dr. HENRY T. BYFORD (Chicago). He holds that the essential features of prolapse are the want of supporting power of the pelvic connective tissue. To suture the uterus to the abdominal walls is to support the pelvic connective tissue by means of the uterus and is wrong and inefficient. The best and most rational method is to draw up and attach the periuterine tissue and thus keep the uterus up by means of its natural supports. In addition to the ordinary operations for lacerations and relaxation at the vaginal outlet, the following method is proposed: (1) Shorten the round ligaments intraperitoneally, making one large loop of each ligament, and then stitch the loop to the parietal peritoneum a little above, and internal to, the internal inguinal ring, which is plainly marked by the entrance of the ligament. The uterus is now held in a nearly normal position and the relationship of the other ligaments, as well as the effect of our work upon them and upon the position of the uterus, can be gauged at every step. (2) Suture the infundibulo-pelvic edges of the broad ligaments forward to the parietal peritoneum, external to the internal inguinal rings, as high as they can be drawn without much resistance. Then suture any available relaxed part of the broad ligament forward over or beside the round ligament loops. (3) Put a suture through the base of each round ligament at its junction with the uterus, and suture it to the peritoneum over and beside the bladder. (4) Examine the sacrouterine ligaments. If the peritoneum corresponding to their location is not drawn up and made somewhat taut by the new position of the uterus, or if the cervix sags far forward toward the vaginal entrance, take a short fold or tuck in it and suture it to the broad ligament beside the cervix, and perhaps slightly to the edge of the cervix, getting as broad a peritoneal apposition as possible. (5) Search for the remains of the urachus at the lower end of the abdominal incision. Start a slit in the peritoneum an inch above the lower angle, and half an inch on either side, and extend them downward and outward to the bladder wall. Make a transverse incision on either side, uniting the upper end of the slits to the abdominal incision. Separate the peritoneum between these slits, including as much connective tissue as possible, from the underlying fascia, and there will be formed a partly divided flap of connective tissue and peritoneum with the urachus near its center. Fold or twist this loosely into a sort of cord and attach it to the rectus fascia at the edge of the incision, and high enough up to draw the bladder and anterior peritoneal wall well up. This suspends the bladder somewhat after the manner described by Dawson (*British Medical Journal*, July, 1898). The external sutures should catch hold of the newly formed vesicle cord, or artificial urachus, and the lower one may even engage a few fibres of the vesicle wall.

GEORGE M. EDEHOHL, of New York, read a paper on **Panhysterokolpectomy, a new Prolapsus Operation**: The very multiplicity of operations heretofore proposed for the cure of complete prolapsus of the uterus and vagina is proof, if such were needed, that no operator of larger or longer experience is entirely and absolutely satisfied with the results of all his prolapsus operations. There is room, in the treatment of complete prolapsus of the uterus and vagina, for an operation which, properly and successfully performed, will guarantee a certain and permanent cure of the prolapse. Such an operation is panhysterokolpectomy, the essentials of which consist in complete removal of the uterus and vagina, followed by operative

obliteration or columnization of the bed of the genital tract. The tubes and ovaries are not disturbed, if healthy; if diseased, they are removed with the uterus and vagina. Obliteration and columnization of the bed of the removed uterus and vagina is effected by means of from 7 to 9 buried pursing sutures of chromicized catgut placed about 2 to 2½ centimeters apart and running parallel to each other. Each suture gathers the raw surface from the periphery in circular fashion and draws or purses them together in the median line. It is buried by being pushed upward toward the abdomen while the next suture is being tied beneath it. The effect of the completed operation is to build a solid pelvic floor 10 to 15 centimeters in depth, and to establish broad apposition of the base of the bladder and the anterior surface of the rectum, conditions similar to those obtaining in the male pelvis. The patient is kept in bed for a week after operation. Recurrence of prolapse is impossible after a correctly and successfully performed panhysterocolpectomy. The operation is indicated in the severest cases of total prolapse, and more especially where other operative procedures have been tried and failed. The interference with further marital relations must be explained and accepted by the patient prior to operation. In the case of a married woman the husband must also be consulted. Four cases have thus far been operated upon by the author of the operation, all with perfectly satisfactory results.

HUNTER ROBB (Cleveland) read a paper on **Pus in Abdominal Operations**. He emphasized the value of perfect technic in abdominal surgery—operators frequently err in carrying out an operation when the patient is too weak for radical work. In pelvic abscesses, operations should be deferred if possible until the acute stage passes. The streptococcus pyogenes is the microorganism most to be feared. Drainage through the abdominal incision is rarely necessary and if drainage is required he selects the vaginal route. In operating, the healthy peritoneum should be protected with large gauze sponges and large quantities of normal salt solution be used to irrigate and to dilute any poisonous material—a quantity being left in peritoneal cavity. He presented a careful statistic study of 72 cases of suppurative disease of the appendage that had been operated upon, with 2 deaths. In about 33% of these cases a gonorrhoeal history was clearly established. Many of them were accidents of labor or abortion.

The first paper read was on the **Removal of the Female Urinary Bladder for Malignant Disease**, MATTHEW D. MANN (Buffalo). This will be published in a future number of AMERICAN MEDICINE.

MANN says that the operation for removal of the bladder has not received enough attention in this country, there being very few cases on record. Cancer of the bladder is rare, but is the commonest form of growth found in the bladder. The diagnosis can be made by the symptoms, the use of the cystoscope, palpation, and the examination of the urine. Treatment may be removal through the urethra, the vaginal septum, or by suprapubic cystotomy. The operations are the removal of the growth and its base, resection of part of the bladder, or cystotomy. Indications for total removal are multiple growths, return after removal, extensive involvement of the base, and extension of cancer of the cervix uteri into the bladder. The ureters need no attention at the time of operation, as by the removal of a portion of the anterior vaginal wall, they will discharge into the vagina. If possible the ureteric openings into the bladder should be left intact. This will rarely be possible. He does not believe in ureterointestinal anastomosis. The vagina can be used as a receptacle for the urine, as was done by Pawlik. If this be done, there will be little danger of infection traveling to the kidneys, as the newly-made bladder can be kept clean. The operation is done in the Trendelenberg position. The peritoneum over the bladder being cut, the bladder is enucleated by the fingers, and the base, with the anterior vaginal wall still attached, is removed. The uterus is then removed, and the peritoneum closed over the floor of the pelvis. Mann reports 2 cases, both of which recovered from the operation, and has collected from the literature 14 cases more. He concludes that in certain malignant disease of the bladder, total extirpation is a justifiable operation, offering no serious difficulties to an experienced abdominal surgeon, and giving the patient a chance for a comfortable continued existence.

The President, Dr. VAN DE WARKER, then delivered his annual address and commented upon the splendid achievements of gynecologists as specialists, their duty to the profession and the laity, and the relation of the gynecologist to the general surgeon and to other specialists. His subject was **The Future of Gynecology as a Surgical Specialty**. The general scope of Dr. Van de Warker's address was given in an anecdote of a noted ovariologist, who was invited by the president to contribute a paper to the Section on Obstetrics and Gynecology of the American Medical Association, at the session at which he presided as chairman. The ovariologist declined on the ground that he was not a gynecologist, that ovariectomy and hysterectomy, and other abdominal operations were general surgical procedures, and were more in the line of the general surgeon than the gynecologist, and wound up his letter of refusal by predicting that the time was not far distant when these operations would be by the general consent of the public in the hands of the all round surgeon. The speaker asks the question if that time has not arrived? The public consults the general surgeon

as frequently as the special surgeon. A large proportion of the major pelvic operations are now made by men who are not specially recognized as gynecologists. Surgery in general has made as marked advances in all directions as that which was at one time by common consent relegated to the specialist. The lay public has become more familiar with serious abdominal operations made by the general surgeon than those made by the gynecologist. The great frequency of operations for appendicitis, on the gallbladder, for intestinal injuries, and for other intraabdominal conditions has educated the public to place as much reliance upon the surgeon at large in a field of surgery, which at one time was regarded as the exclusive domain of the specialist. The same woman who would apply to the general surgeon for the removal of her ovaries would seek by chance the specialist for the performance of a genitoplasty operation. In her choice of a surgeon she is guided more by her senses than by her knowledge of her physiology.

This evolution, for so the speaker regarded it, since it involves the diffusion of skill and knowledge among the many which was at one time the property of a few, has already had a marked effect upon gynecology as a surgical specialty, an influence which will have still wider effects in the future. This result is already to be detected in gynecologic literature. The old operation, ovariectomy, is but rarely seen in the title of a paper and is relegated from the current journal to the pages of the textbooks. The same may be said of the removal of the tubes and ovaries, the removal of pus sacs, Battie's and Tait's operations. Great international reputations were made in these fields which is no longer possible. By making these operations common property to be practised by all surgeons and all made on general surgical principles they have to that extent ceased to be special operations confined to a few men.

The influence of the gynecologic surgeon will, however, always be felt. To him as a man of last resort will always be left the question of methods and expediency. Total hysterectomy for cancer is yet on trial. It is already abandoned by able men while others are hopeful of good results. Will the final verdict upon this question be given by the general or special surgeon? The latter is trained in dialectics; he will bring to bear on the ultimate solution of such a problem qualities which the former cannot possess, because he cannot have universal knowledge and be the possessor of unlimited technic. All the great abdominal operations which are so eagerly exploited by the surgeon at large passed through this ordeal at the hand of the gynecologist and were turned out finished procedures both in expediency and method into other hands.

The day is nearly passed when great gynecologic reputations can be made by the exploitation of a few operations. That belonged to the formative period of the art. A continent can never be discovered more than once, nor a new star give honor to more than one by its discovery in this alert age. But there is enough yet left for gynecology to explore and add to the sum of its literature. The subject of pelvic dynamics is still left to research. We know little of the subject of genital ptosis in women; our treatment of uterine displacements is rank empiricism. The physiology of the pelvic organs must at last be given its true value by the gynecologist rather than by the physiologist in his laboratory, as it must be studied functionally rather than structurally. Questions of sociology, the insane, the criminal, social and industrial feminism, appeal to the gynecologist with greater force than to other physicians. The question of coeducation, into which educators have rushed without heed of consequences, must ultimately come before him for discussion. Many other fields of investigation yet unexplored, or only imperfectly known, yet remain invitingly open.

Gynecology will always have its future, possibly brighter, more generally fraught with usefulness, from the fact that its best minds are no longer concentrated upon matters purely mechanical, and which appeal to a comparatively few unfortunates, but because it will embrace in a broader scope all humanity. These are a few of the problems which the gynecology of the future must meet and in which men trained as we are ought to feel a profound interest. We not only study the diseases peculiar to women, but we must also study social conditions that may tend to disease. There is no other department making such imperious demands upon its advocates as the gynecology of the present, and we may be sure that it will not diminish in the future. There is nothing that contributes to the mental equipment of a man that the gynecologist can do without. The ascendancy of gynecology as a surgical department will in no manner diminish because it shares its surgical triumphs with all who have the skill and knowledge to follow its lead; on the contrary, it will have a greater moral power when its advocates can find a field, broad and in close touch with humanity all about, beyond the limits of the operating room. Would not the gynecologists of France be doing a better service to their country and to science if they were to find the cause and conceive the remedy for the decadence of the birth rate rather than bend their energies in finding a new way to perform an operation? If surgery has its limits there are no limits to higher gynecology. Either the word is badly constructed or its meaning only half understood among those who attempt to limit it to surgical lines.

A second paper on **Extirpation of the Urinary Bladder** was read by Dr. J. WESLEY BOVEE, of Washington, D. C., and will be published later in AMERICAN MEDICINE.

AFTERNOON SESSION.

Dr. EUGENE BOISE, of Grand Rapids, read an interesting paper on **Shock from a Clinical Standpoint**. The generally accepted idea that the pathology of shock is essentially a paresis of the vasomotor nerves, does not seem to be borne out by the clinical manifestations, when analyzed according to undisputed physiologic facts. The basis of the theory of paresis is the thought that the extremely low arterial tension of shock is inconsistent with vasomotor stimulation, which, by causing arterial contraction, should give high tension. On the contrary, the symptoms of shock can, in reality, only be explained by the theory of extreme stimulation of the entire sympathetic system. Laboratory experiments have demonstrated that extreme stimulation of the cervical sympathetic will cause cardiac and arterial spasm with consequent low arterial tension by reason of incomplete diastolic relaxation of the heart. Post-mortem records show that in fatal cases of shock the heart is found contracted and empty, even ruptured, showing a condition of extreme stimulation of the vasomotor system, rather than paresis. In shock, then, there is arterial and cardiac spasm, with consequent low tension. This causes the peculiar pallor and the condition of mental and physical lethargy. The perspiration of shock is caused by stimulation of the secretory nerves of the sweat glands, branches of the sympathetic system. Experiments have shown that the secretion of perspiration is independent of vascular conditions. The other clinical manifestations of shock can readily be explained by this theory of hyperirritation of the entire sympathetic system, and only by this. Moreover, those remedies which are of benefit in shock are such as act as sedatives to the vasomotor nerves. Amylnitrite and nitroglycerin are noted arterial relaxants, and yet they are very beneficial in shock. So also with strychnia. The opinion of operators of large experience is that to be of benefit it must be given in very large doses. And yet all therapeutists agree that in such doses strychnia paralyzes the vasomotor center and the intracardiac ganglions, and therefore is absolutely contraindicated if the vasomotor nerves are already parietic. So also with normal saline infusion. To derive the greatest benefit it should be used intravenously and at a temperature of 118° or 120°. Thus when diluted by the mass of blood in the vena cava the temperature is so reduced as to be sedative to the irritated cardiac and arterial nerves and muscles, and their spasmodic condition is relieved. Therefore, shock is essentially a hyperirritation of the entire sympathetic system of nerves.

Dr. FERNAND HENROTIN (Chicago) read a paper on **Resections and Excisions**, which provoked an animated discussion and will be published later in AMERICAN MEDICINE.

THIRD DAY.

Symposium on Cesarean Section.—

Circumstances Which Render the Elective Section Justifiable in the Interest of the Child Alone: Dr. REYNOLDS. (1) The cesarean section performed late in labor, or on the presence of infection of the uterus or other complicating constitutional conditions, has been shown by the experience of almost every operator who has tried it, to have so high a mortality as to be totally unjustifiable when performed in the interest of the child alone; (2) when a cesarean section is performed on healthy women, early in labor, and under otherwise favorable circumstances, for merely mechanical indications, it has, in skilled hands, no mortality other than the fractional percentage incidental to all considerable operations per se; (3) the inconveniences and high morbidity rate of symphysiotomy render it considerably inferior to the section as an operation of choice but it is an operation which as compared to craniotomy, or prolonged and forcible high forceps work without it, involves almost no increased risk to life. He therefore believes it to be the operation of choice in the somewhat limited number of neglected cases (*i. e.*, those for which the cesarean is ruled out), in which the pelvic contraction is within the range where the extraction of a living child without symphysiotomy is difficult or impossible, but after symphysiotomy is safe or easy; (4) the induction of premature labor for contracted pelvis results in so high a fetal mortality, as to be unwarranted when placed in opposition with the performance of the cesarean section at the beginning of labor and in favorable cases.

The Technic of Cesarean Section: MATTHEW D. MANN (Buffalo, N. Y.) first discusses the relative merits of the Sanger and Porro operations. He concludes that there is no rivalry, but that each has its proper place. The classic operation should be done in all elective cases, when the woman is in good health, the operation done in time, and all the conditions favorable. The Porro operation should be done when the uterus is septic; when gonorrhoeal infection is known to exist; when the uterus refuses to contract; when there are large fibroids or ovarian tumors, which cannot be removed without injuring the uterus. Small fibroids usually disappear after pregnancy. Other indications for the porro are: disease of both ovaries; when the uterus is torn or ruptured in labor; in cancer of the cervix; when the patient is greatly reduced and bearing the operation badly; in osteomalacia and bad atresia of the vagina. The uterus should not be removed simply to sterilize the woman, as this can be done, if thought best, by removal of the tubes. In this way the woman's sexuality is not destroyed. The question of sterilizing the woman is a hard one to decide, as ethical questions are involved. She may be sterilized to prevent the possibility of future offspring and in the interests of

society, as well as to prevent possible future cesarean sections; but this only at her own request. **Technic of Celiohysterotomy.** Median incision in abdomen and uterus. The removal of child and placenta. Uterus sutured with catgut. The Fritsch incision seems to be better if the placenta is in front. Uterine tourniquet to be tightened when needed. Hypodermic of ergot and hot applications to the uterus, and letting-up on the ether, to induce contractions. Careful toilet of the peritoneum. **Technic of Celiohysterectomy.** Same as before. Then the vessels tied on each side of the uterus, and the uterus removed, all but the cervix. The peritoneum closed over the stump. **Vaginal Cesarean Section.** This is done for cancer of the cervix, and for rupture of the uterus. Few cases are on record. **Reports.** Six cases have been done in Buffalo, by four operators, with the loss of one child. One mother died six weeks later of carbolic-acid poisoning.

Dr. CHARLES JEWETT (New York) read a paper on **The Place of Symphysiotomy as Contrasted with Section**, and presented the following conclusions: Symphysectomy is still a useful operation within a very limited range of pelvic contraction. It is suited to conditions in which only very little additional pelvic space is required for delivery. It is a valuable recourse, therefore, in cases in which forceps unexpectedly prove inadequate. Axis-traction forceps, with the aid of posture, should always be tried before resort to symphysiotomy. Its results would be much improved by restricting it to pelvis with a conjugate of not less than 7.5 cm., 3 inches. Under equally favorable conditions its total mortality should be no greater than that of cesarean section. When the pelvic space permits it should replace cesarean section in the presence of exhaustion. It may be elected primarily as an alternative of cesarean section, when the operator can be assured that the degree of obstruction is well within its safe limit. Here the choice of operation is largely a matter of individual preference. Within its proper field symphysiotomy is better than cesarean section for an operator of little experience in abdominal surgery.

After the discussion on cesarean section Dr. HENRY D. FRY, (Washington, D. C.) read a paper on **The Relative Merits of Bipolar Version with slow Extraction and Accouchement force in the Treatment of Placenta Previa**: The advantage of bipolar version is the ability to successfully perform it with very little dilation and with consequently less loss of blood. In placenta previa a fatal result is usually due to hemorrhage or sepsis. The hemorrhage is unavoidable and incident to the dilation of the os, consequently the method requiring the least degree of dilation necessary to perform version will naturally be expected to give the least hemorrhage. After dilation be obtained in sufficient degree to insert several fingers further continuance of the process by manual means is likely to endanger the integrity of the soft parts. The artificial dilation sufficient to perform bipolar version is comparatively safe, while that necessary for the insertion of the hand and internal version is dangerous. The rapid delivery of the infant in accouchement forcé adds additional risk of rupture. Fry summarizes the histories of 14 patients—50% of whom were primipara. Bipolar version and slow extraction were employed 9 times; membranes ruptured and delivery left to nature, 1; tampon and natural delivery, 1; forceps extraction, 4 times including 1 application to the after coming head following bipolar version. All of the mothers recovered, and 5 of the infants were born alive.

Indications as Furnished by Pelvic Contractions, by J. W. WILLIAMS, Baltimore.—In 2,123 cases delivered in the Obstetric Department of the Johns Hopkins Hospital, 278 (13.1%) had contracted pelvis. The pelvis were measured both externally and internally, and designated as contracted when the conjugata vera was 10 cm. or less in generally contracted, and 9.5 cm. or less in flat pelvis. Nine hundred and forty-one of the patients were white and 1,182 black. Contracted pelvis occurred in 6.91% of the former and 18.1% of the latter. That is, in every fourteenth white and every sixth black woman, 199 of the 278 cases ended spontaneously (71.57%). The number of spontaneous labors decreased with the increase in the pelvic contraction, as shown by the following table:

Conjugata vera 10-9 cm.,	77.28% spontaneous,
Conjugata vera 8.9-8 cm.,	61.54% spontaneous,
Conjugata vera 7.9-7 cm.,	53.2% spontaneous,
Conjugata vera 6.9-5.5 cm.,	0% spontaneous.

The cases requiring operation were delivered by high forceps, version, symphysiotomy, cesarean section, craniotomy upon the dead child, or embryotomy, according to circumstances, giving a gross fetal mortality of 12.96%, and a gross maternal mortality of 2.88%, which, by deducting the cases in which the death of the child or the mother was not due to us, gave a corrected mortality of 4.32% and 0.72% respectively.

In view of the markedly improved results following cesarean section, the indications for its use should be widened. Thus we find that Zweifel, Olshausen, Reynolds, Bar, Charles, and Cragin have performed 162 operations with 5 deaths, a mortality of 3%. We, therefore, believe that in uninfected cases the upper limit for the absolute indication for cesarean section should be advanced from 5.5 to 7 cm., and the relative indication from 7 or 7.5 to 8.5 for flat, and 9 cm. for generally contracted pelvis. With the absolute indication, the operation should be done either at the end of pregnancy or the onset

of labor; but when the relative indication is present, the woman should be allowed to go into the second stage of labor and have bearing down pains for one hour, when, if the head does not show signs of moulding or descending, cesarean section should be performed, instead of forceps upon the movable head or version. So that at present cesarean section for the relative indication should compete with high forceps or version, instead of with craniotomy upon the living child, as in the past. On the other hand, if the patient be infected, or her surroundings such that an aseptic operation cannot be performed, high forceps or version should be attempted, followed by craniotomy in case one fails to deliver the child by their means, and cesarean section reserved for those cases in which an absolute indication is present on the part of the pelvis.

A paper by Dr. ANDREW F. CURRIER, (New York) on **Injuries of the Head in the Newborn** was read by title.

Scratch-marks on the Waxtipped Bougies in diagnosis of Urethral and Renal Calculi: HOWARD A. KELLY (Baltimore) exhibited 9 drawings made by Mr. Becker, showing scratch-markings made on waxtipped bougies by calculi in the kidney and ureter; also, pictures of the calculi and the bougies used were shown. A mixture of melted dental wax and olive oil, equal parts, was used to tip the renal catheters. This substance produces a smooth and highly-polished surface, which, on coming in contact with a stone, is scratched or gouged in longitudinal strias. The mucous membrane of the urinary tract cannot possibly affect the waxed surface. In the method there are 3 sources of error: (1) Rubbing on the side of the speculum during introduction of catheter produces a flat facet which in no way resembles a scratch-mark; (2) a to and fro movement in the effort to introduce tip into the urethral orifice may gouge the wax at the end of the speculum. This is avoided by keeping the end of the catheter free in the lumen of the speculum, skillfully carrying it into the ureter at the first effort; (3) another source of error is drawing out the catheter and pulling it through the vulva hairs; this is avoided by separating the labia and careful withdrawal. The evidences of stone in the urinary tract furnished by a catheter are as follows: (1) A sense of obstruction when the stone is struck by the tip of the instrument; (2) a free flow of urine, often turbid and purulent as soon as the catheter has passed the obstruction; (3) the injection of a weak solution of hydrochloric acid (15 cc. of a one-half percent solution) withdrawn in 10 minutes, shown in one case, calcium and magnesium phosphates coming down subsequently in excess of the urine of the opposite kidney; (4) on withdrawing the catheter, it may be held by the stone as if in the bite of a stricture; (5) the stone may yield a grating sensation as catheter is withdrawn; (6) a bit of stone may be brought in the eye of the catheter, or washed out by the injection of fluid into the kidney; (7) bits of debris of the stone, little black specks, may be brought down by the urine, subsequent to the withdrawal of the catheter.

The last paper was by Dr. J. DUNCAN EMMET (New York) on **Myomectomy during Pregnancy, with Delivery at Full Term**, which will be published in AMERICAN MEDICINE.

The following officers were elected for the ensuing year: President, Dr. S. C. Gordon, of Portland, Maine; vice-presidents, Dr. George M. Edebohlis, of New York, Dr. Edward Reynolds, of Boston, Mass.; secretary, Dr. J. Riddle Goffe, of New York; treasurer, Dr. J. Montgomery Baldy, of Philadelphia. Atlantic City, N. J., was chosen as the place for the next meeting.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

TENTH ANNUAL MEETING, HELD IN ST. PAUL, MINN., MAY 30.

[Specially reported for AMERICAN MEDICINE.]

The tenth annual meeting of the Association was opened in the Hall of Representatives, State Capital, at 10.30 a. m. There was a fair attendance for the first day.

Brigadier-General A. J. STONE presided. The meeting was called to order by Brigadier-General JOHN F. FULTON. Prayer was offered by Archbishop IRELAND, followed by an eloquent and hearty address of welcome by Governor SAMUEL R. VAN SANT, also an able address by Judge E. A. JAGGARD. The secretary reported a decrease in membership of 60 during the year, partly from deaths. The SANDER prize was not awarded as no paper had been presented. A telegram of cordial and fraternal greeting was received from the Association of Medical Officers of Army and Navy of the C. S. A., now in session at Memphis, Tenn. By action of the executive committee, Dr. CHARLES FENGER, of Chicago, was elected an honorary member.

President's Address.—General STONE welcomed the association, complimenting them for the self-sacrifice that some of their members had made for country and their fellow men. To this body, and especially to members of the Army, Navy and Marine-hospital service, must the country look in the event of introduction of oriental epidemic diseases. The Army surgeon must be well grounded in sanitation. It is his duty to choose proper locations for camps and their proper relation to pure water supply, and equally his duty to protect them from contamination; only the gravest reasons should stand in the way of

his authority. Location of sinks and their control should be left entirely to him. He called attention to the shortsighted policy of limiting the amount of supplies by redtape procedure, thereby hindering the efficacy of preventive medicine. He referred to the scientific work done by surgeons in regular service in regard to yellow fever and malarial infection by mosquito inoculation, and made allusion to the plague that had found foothold at San Francisco, together with the remedy pointed out by SURGEON-GENERAL WYMAN in his report. The physician in civil life should follow the example of the Army surgeon and become a sanitary propagandist in his own State or municipality. He suggested closer affiliation between the Army surgeon and the civil practitioner. The surgeon of the Navy is an intermediary between the two. The experience of the United States surgeon in the handling of masses better qualifies him for service for the community. He favored establishing a journal, and believed it would have sufficient clientele to maintain it.

A plea for Immediate Celiotomy in Penetrating Gunshot-wounds of the Abdomen in War. This paper by Captain CHAS. E. B. FLAGG, Asst. U. S. A., was read by Major JOHN VAN R. HOFF, Captain Flagg being absent. The author was sanguine that others would soon adopt his views; expectancy is the present military method in these cases; immediate abdominal section is the rational method of diagnosing any repair of visceral lesions. The claim that spontaneous closure and recovery follow more often when produced by the small caliber bullet, is not upheld by statistics. The mortality from penetrating gunshot-wounds in the Spanish-American War was 65%, that of the Civil War 89.29%. All the combined numbers of cases numbering 5,490 with 3,649 deaths, occurring in the last 6 wars, commencing with the Crimean War to the Japanese-China War, gives a mortality of 61%, or 4% less than that of the Spanish-American War. For the year ending June 30, 1900, (Surgeon-General's Report) 116 cases occurred, 81 deaths; mortality 70%, which is 17.2% less than the Civil War, and 9% more than the mortality of the 6 wars mentioned. Spontaneous recovery from perforating intestinal wounds can only take place through adhesions to adjacent viscera. As 30% to 35% of cases recovered, it is possible that in many no penetration of the intestine occurred. These cases should not die if immediate celiotomy be made, and it should save many of the 65% to 70% fatal cases, if done by a competent operator. The Surgeon-General's report gives history of 10 cases operated on, with 9 deaths, of which Captain Flagg operated upon 3 with 2 deaths. One died on the table from ether-poisoning, the other, a Filipino, from tearing out of sutures by lumbricoid worms. The third escaped perforation of the intestine and lived. Cases should receive similar treatment as in civil practice. Unsuitable conditions is the only argument against operations during battle. There are only 2 necessities, the surgeon who knows how, and shelter and appliance for asepsis. With an anesthetist (spinal cocaine) suggested in his absence) and 1 trained assistant, one can improve the necessities of an operating room and do aseptic work.

Discussion was limited on this paper, the unanimous opinion being opposed to immediate operation on the firing line. Dr. FITZGERALD had had 12 months' active experience in the Philippines. Early operation on the field meant not only danger from sepsis, but of secondary shock added to primary shock. Noninterference constituted best treatment, with small abdominal incision and drainage give best results. Complete operations usually resulted fatally.

Captain A. E. BRADLEY, U. S. A., read a paper on **Suprapubic Operation for Varicocele and Other Conditions Occurring within the Scrotum Requiring Surgical Interference**. He reports favorable results in all cases operated on, with shorter convalescence than by other methods. He considers it of special value on account of easier and surer asepsis and quicker recovery. The usual technic as regards the preparation of location of operation, operator, instruments, etc., is followed. An incision is made from the spine of pubes, 2 to 2½ inches in length, upward as for inguinal hernia. Exposure of the external ring, lifting of cord and separation of veins, ligation and excision of same, pulling up freely the veins from below, closure of wound by subcuticular suture follow.

Discussion was antagonistic. The old operation through the scrotum was preferred; the question of sepsis was simply a matter of thoroughness. The real argument against the operation was that of tendency of weakening the abdominal wall and possibly resulting hernia. Varicocele is considered by any surgeon a sufficient disability to bar acceptance of recruits. It is always a source of complaint for the soldier, a very common trouble of men, and often used for malingering. Varicocele is not thought a sufficiently important disease to warrant discharge of the soldier by the Government, but sentence him to the hospital for radical cure.

SECOND DAY.

Secondary Hemorrhage, by CHRISTIAN FENGER (Chicago, Ill.).

Some Problems for Solution by Medical Officers of the Army Serving in the Tropics, by Major JOHN VAN R. HOFF, Medical Department, U. S. A.

These papers were read by title.

Three Noteworthy Cases of Brain Injury.—GEORGE TULLY VAUGHAN said: Injuries of the brain have attracted

the attention of surgeons and physicians from the days of Hippocrates and are still burning questions of our day. The dangers in severe injuries are shock, hemorrhage, causing compression, or anemia, and infection. Shock symptoms are immediate; those of hemorrhage immediate or a few hours later, occasionally a week later; of infection 2 days to a week, or maybe months or years after an injury, possibly as a result of secondary injury, arousing infection that has remained dormant. When shock and hemorrhage coexist, it is difficult to diagnose the symptoms due to shock and those due to hemorrhage. The remote effects are abscess, tumor, epilepsy, insanity and chronic headache. Brain surgery has been established on a firm basis during the last quarter of a century by the brilliant work of neurologists and surgeons. This dangerous region can now be invaded by competent operators with almost the same impunity as the abdominal cavity. The large amount of brain-tissue which can be destroyed without producing death and the toleration of the brain to the presence of foreign bodies is remarkable. According to my experience the greatest mortality is in injuries caused by falls from a height, striking on the head, such as being thrown from a horse or bicycle or falling from a building, scaffold or rapidly moving car. Extensive fractures of both base and vertex are the results with hemorrhage in the brain substance. Gunshot wounds of the brain are almost equally fatal. Injuries from blows upon the head give the smallest mortality. Limited fracture of the skull and limited lesion of the brain are the results. Operative interference is indicated when there are symptoms of compression from hemorrhage, depressed bone, or a foreign body. In gunshot wounds, if the ball can be located by the Röntgen ray in a reachable locality, it should be removed to avoid abscess or tumor or other dangerous sequel.

Observations in China and the Tropics on the Army Ration And the Post Exchange or Canteen read by Major LOUIS LIVINGSTON SEAMAN dealt with personal experience and will no doubt be the entering wedge for the restoration of the canteen. He gives a very graphic description of U. S. Military Hospital, No. 1, at Camp Reilly, Pekin, China, situated in one of the compounds of the Temple of Agriculture. In this magnificent building the medical staff were quartered. This building with 2 others adjacent, served for dispensary, hospital, with plenty space for medical, surgical and venereal wards, operative rooms and nurses' quarters, equipped with trained female nurses, hospital corps, extra diet kitchen, etc. The health of the men was remarkably good. The week ending February 9, 1901, showed a sick list of 80 out of a force of 1559 or .051%. Of these there was only 1 case of typhoid fever, 4 of malaria, 41 venereal, the rest respiratory and of digestive organs. The winter climate is cold, dry, and clear, with frequent dust storms which is productive of respiratory diseases, especially of recent arrivals from the tropics. Typhoid fever among the American troops was rare because of pure water-supply while the Germans, using ordinary water, had several hundred cases of typhoid. The Americans had 6 water distilling plants, only 1 being necessary for sufficient supply for themselves, and 2 tons were given daily to the Japanese army. The physical condition of the men was perfect, their digestion more than competent for the army ration which was proper for the climate of Pekin, but which had directly opposite effect in the tropics. He called attention to the dietetic value of sugar as a producer of energy. His experience goes to show the necessity of the adapting of the army-ration to climatic conditions—heat-producing foods for cold climates; foods rich in carbohydrates in hot climates. In spite of recent experience, Congress refuses to change the United States Army ration. He protests vigorously against the abolition of the army post exchange or canteen. The effect has been to deteriorate the soldier, physically, mentally and morally. The liquors which he now drinks to excess are all rank poisons, especially those of tropic production, and the results, insubordination, drunkenness, debauchery, or desertion. For comparison, there were 70 to 90 trials before the Summary Court of the Twelfth United States Infantry, Philippine Islands, during February and March, 1901, four-fifths for intoxication from native wines. A post exchange was established at the end of March, after which only 20 cases to 8 cases were before the court in any month thereafter, of which only 2 were for wine intoxication. Venereal disease, always present in military hospitals, has doubled since the abolishment of the canteen. He criticized the W. C. T. U. for "their misguided enthusiasm that was responsible for the repeal of an institution that was the soldier's friend, often saving him from disgrace and disease worse than death." There is no single cause so prolific in invaliding men here as this. By action of the members the following resolution, presented by Dr. Seaman, is to be sent to each member of Congress and United States Senator:

WHEREAS, The Association of Military Surgeons of the United States, now in session in St. Paul, recognizes that the abolition of the army post exchange or canteen has resulted, and must inevitably result, in an increase of intemperance, insubordination, discontent, desertion and disease in the army; therefore

Be it resolved, That this body deplores the action of Congress in abolishing the said Post Exchange, and in the interest of sanitation, morality and discipline recommends its reestablishment at the earliest possible date.

Discussion.—The discussion following the reading of Major SEAMAN'S paper was very enthusiastic, unanimously approv-

ing the ground taken by the author. The main idea is to restore the canteen. The question is, how? While criticizing the W. C. T. U., they hope by showing the error to get their active support in undoing their work. Also each member of the Association is to consider himself a committee of one to personally influence the representatives of Congress and United States Senate of his State for the reestablishment of the canteen.

Report of Committee on Journal.—The Committee on Journal, after considering the various propositions, submitted reports that it believes the publication of the journal inexpedient at the present time, further that many of the points suggested as reasons for the publication of the journal can be covered by the election of the permanent secretary, who shall be authorized to issue in pamphlet form within 30 days after the meeting of the Association minutes of the meeting, list of officers and committees for the ensuing year, and brief notes of interest regarding the meeting, and that circulars of information be issued by the secretary according to his judgment such as may be advisable.

Discussion on the subject of uniformity of organization and equipment of medical department of National Guards. No definite plans proposed.

A paper by General GRIFFIN (St. Louis, Mo.) followed, with no particular title, which was a potpourri of practical and surgical points. He advised more careful examination of surgical cases prior to operation, especially examination of urine. Lithiasis was the bane of American race due to their manner of living. The Englishman eats regular meals, takes plenty of time, masticates food slowly. The American swallows today, chews tomorrow. Lithiasis is largely the result of faulty eating and resulting indigestion. He cautions against the use of intravenous saline solution when the heart is feeble by shock or sepsis, contraindicated unless there has been large loss of blood, even then is questionable, as he lost 2 cases from its use. **Treatment of Gonorrhoea.**—We know as little of its treatment and of its sequels as we ever did. It is the bête noir of the profession. His experience with tendon suture has been perfectly satisfactory; suturing of muscles gives bad results. **Rubber Gloves.**—They have come to stay. A necessity for aseptic surgery, especially in serous cavities; time will remedy its interference with tactile sense. He advises the use of needles of assorted sizes, already armed with aseptic catgut sutures, that come in sealed bottles ready for use. He believes that closure of wounds without suture is practicable, but still sub judice.

Discussion.—Gen. HARVEY REED (Wyoming) criticized the use of ready-to-use suture material. To insure aseptic sutures, one must give it his personal attention.

He was opposed to the use of rubber gloves; they were clumsy, interfered with the tactile sense; thorough surgical cleanliness was sufficient. Simplicity in method and in instruments for operation should be the rule.

Dr. H. O. MARCY (Boston) spoke of the perfect technic of Keith's work, also of Tait's, who, while he was a false leader by his opposition to bacteriology, should be honored for teaching us through cleanliness. He uses rubber gloves because he feels safer by their use, but admits their interference with tactile sense. He finds it difficult to find proper gloves, they are either too thick or too thin. He thinks they are of great importance to be worn by his assistants, it makes their hands safe. Gloves also protect the operator from infection wounds. Has good results from tendon suturing, also muscle suturing, if the part is kept at rest. His results have been perfect in closing abdominal incisions, has had no hernia following in his last 1500 abdominal sections. His results due to little irritation of the tissues, layer suturing in their natural relations, subcuticular suture with collodion dressing.

THIRD DAY.

The Pennsylvania Brigade Hospital Tent was exhibited by Lieutenant H. A. ARNOLD; this tent was devised by Colonel W. F. RICHARDSON, Superintendent of State Arsenal, and is described by him as follows:

Length of tent.....	32 feet.
Width of tent.....	18 feet.
Divided into 2 apartments.....	16 x 18 feet.
Apartment fastened on wall by snap hooks and rings.	
Height of wall.....	5 feet, 2 inches.
Two ridges.....	each 16 feet long.
Three uprights.....	each 12 feet, 9 inches.
Nine side poles on either side.....	each 5 feet, 9 inches.
Fly on top.	

One end of this tent is equipped as a hospital, 6 complete cots, with mosquito bars, also writing table, wash stand, commode, slop bucket, pitcher and bowl, strips of carpet in front of each cot. Small table between the cots, 2 rocking chairs, 2 folding camp chairs and floored. Ventilator on each end of the tent, controlled by rope. Entire wall can be taken off from either side when required. Tent protected from storms by guy lines. When complete, is the most substantial ever used for such purpose. Such a tent is especially needed for tropic service, as it affords shelter without oppression. The special feature of this tent is its detachable wall, ordinary hospital tent must be reefed up along one entire side, and even then the wall interferes somewhat with ventilation. In this way free ventilation may be secured for some cots while others are sheltered. Temporary privacy may be obtained by raising the wall opposite one or

more cots. Sagging of the sides of the tents is prevented by detachable side poles, which also gives stability to the tent, so that it will stand very severe wind storms. In the event of soiling, the detachable walls may be more readily cleaned than those of the ordinary hospital tents.

The following officers were elected: President, Major John Van R. Hoff; first vice-president, General R. A. Blood; second vice-president, General Walter Wyman; treasurer, Lieutenant-Colonel H. A. Arnold; secretary, Major Jas. E. Pilcher.

An invitation to meet next year in Boston was received through General Blood, but on discussion, it was decided to refer to the later decision of the executive committee as to time and place.

THE AMERICAN PEDIATRIC SOCIETY.

ANNUAL MEETING HELD AT NIAGARA FALLS, N. Y., MAY 27, 28 AND 29.

[Specially reported for AMERICAN MEDICINE.]

A number of interesting discussions took place on the feeding of sick and well children, with special reference, as might be assumed, to the question of using cereals and various forms of modified cow's milk. Incidentally, a difference of opinion on some points was disclosed between the representatives of New York and those of Boston, though the divisions were not always so purely on geographic lines as one of the speakers made it appear. Nor was there any tendency on this account to minimize the importance of the work which the doctors of the metropolitan city are doing in the way of saving infant life in the crowded tenements. The champion of the Harvard school may be admitted to have had the best of the argument so far as theory and the niceties of scientific procedure were concerned, but even he did not seek to question the importance of the clinical results that were reported.

One of the most noteworthy papers was that contributed by Dr. CHARLES GILMORE KERLEY (New York), who gave the conclusions drawn from a study of 555 cases of summer diarrhea. Out of the total number only 10 died. In other words, the death-rate was a little over 2%, and this, the author of the paper said, showed the enormous extent to which mortality from this cause is preventable. After explaining that the cases were all taken from the homes of the poor, the doctor proceeded to say that at the Babies' Hospital they had but one rule of treatment. Irrespective altogether of the duration of the complaint, or of whether the child was being fed on the breast or not, they always cut off the milk at once. Not only did they advise this, but they said positively that the milk must be discontinued for a few days, or they would not treat the case. No milk was allowed until the stools were normal. The period necessary to bring about this improvement might be only 24 hours, or at most a few days, but it varied to such an extent that one child had to be kept off milk for 5 months. Cereal water—barley by preference, failing that rice-water—was substituted; and occasionally a little beef-juice might be added, care being taken to alternate the diet and watch its effects. Brandy and whisky should never be given; in fact he looked on the popular brandy and egg mixture as the most atrocious substitute for milk ever suggested. When it was found that the child could digest milk, its use should be resumed gradually. As to drugs, after trying a great number, he had come to the conclusion that there were only 4 that were of use and could be employed with safety. They were calomel, castor oil, bismuth and opium. He added in connection with treatment that he thought that irrigation of the colon was very much overdone. The importance of educating mothers in regard to matters of this kind, he thought, could not be exaggerated. He found poor and ignorant women ready to act on the instructions given them, and the result was that many cases that were now being brought to the hospital were already on the way to recovery when first seen by the doctor, simply because their mothers had known to stop the milk and give them a dose of castor oil, and put them on barley-water. His experience led him to say that he would as soon trust a hundred children to such treatment by their mothers in the tenement districts as he would to nurses in the best conducted hospital.

In the course of the discussion which followed, one speaker expressed surprise that the use of albumen water was not recommended, while another said he would like to add another cathartic, namely magnesia, to the list of drugs that could be used with advantage, and a third spoke with some apparent approval of an old-fashioned country practitioner of homely speech who advised giving castor oil and gum water and leaving the child alone until it was able to assimilate something else. One of the same speakers remarked in regard to castor oil that if it were only given a long name ending in "in," it would come to be looked upon as almost a cureall, at least in cases affecting the stomach and bowels. Questions on the other hand were asked as to why barley water was to be recommended for sick children if it was not approved of for children in normal health, and also as to why the use of stimulants should be so sweepingly condemned. The utility of dispensaries and hospital service in regard to cases of the kind under question was likewise debated, and the pros and cons in reference to rectal irrigations set forth in detail.

Then Dr. T. M. ROTCH, of Harvard, took the floor, and took exception to almost everything that had been advanced by the reader of the paper and his New York colleagues. At the outset, he requested a statement of the reasons there were for objecting to the use of brandy. Dr. Kerley replied that one reason was that it caused vomiting, and another was that nephritis frequently accompanied these complaints. Dr. Rotch said it was not his experience that it caused vomiting when given in small doses, and even in cases when the kidneys were affected, and they were not usually affected at the beginning of the complaint when the use of brandy was indicated, a stimulant might be resorted to. He protested, however, against the term "summer diarrhea" altogether, and said they could never get to a proper understanding of the matter unless they knew exactly what they meant. Furthermore, he thought they had proceeded to work in the wrong way by seeking to draw deductions from work among the poor. This was altogether a nonscientific method of procedure. What they ought to do was to try and ascertain what was the best treatment, irrespective of the circumstances of the patients, and then apply it as far as possible. This was what they did in Boston, where, thanks to a fund that existed for the purpose, they were able to treat the children of the poor exactly as they did the children of the rich, the physicians being free to deal with each case individually, and in the case of the poor to make such requisitions on the dispensaries as would provide whatever treatment was considered most desirable. Coming to the question of barley water, the speaker asked how much nourishment there was in it, and remarked that if it was given in large quantities the baby would not keep it down. Why, indeed, should they give anything at all for the first 24 hours or so? In the vast majority of cases the systems of their patients were not crying for food, but were crying to be left alone. And if they were prostrated he did not see why alcohol should not be administered.

After a vain attempt to reach some understanding as to the classification of complaints of the kind referred to, the general opinion being that it was impossible to decide clinically in every instance whether they were organic or not, Dr. Kerley replied on the debate. Barley water, he explained, might have to be given for a long time, and the case he had mentioned was one in point, but the practice at the New York Babies' Hospital was to try giving the children milk in small quantities from time to time to see whether they could stand it. He had ceased giving albumen water because he found that it was usually followed by an increase of the diarrhea. As to the question of classification, he believed the doctor was yet unborn who could look at a child with summer diarrhea, and say whether there was a lesion or not.

Papers by Dr. CHARLES W. TOWNSEND (Boston), and Dr. HENRY D. CHAPIN (New York), one on the feeding of an incubator baby, and the other on the place of cereals in infant feeding, were discussed together. The infant described by Dr. Townsend was one of premature birth, and was brought up satisfactorily on modified cow's milk, the increase in its weight being remarkably rapid. Dr. Chapin dealt elaborately with the question whether the judicious use of cereals in connection with cow's milk might not be justified and even recommended. The principal objection to it was that it was not scientific, and was not following nature. To show that this objection was unfounded he analyzed the milk of different classes of animals—the cat and the dog, the ewe, the goat, the buffalo and the cow, the mare, the mule and the ass, etc.—with the view of showing that they all differed in accordance with the differences in their digestive apparatus, and that they all, including cow's milk, were suited to a different digestive process than that possessed by human beings. He thought it had been practically demonstrated that the judicious use of cereals with cow's milk made it digestible, and therefore should be approved of. Replying to the objection that his statements would be taken advantage of to advertise proprietary cereals, and so increase their consumption, he said that the very opposite result would take place, because doctors would get into the way of making their own scientific prescriptions as to how and to what extent cereals should be used, and particularly in what proportion they should be given in connection with cow's milk.

At one point in the discussion, Dr. J. P. CROZER GRIFFITH (Philadelphia), sought to throw oil on the troubled waters by suggesting that it was a case in which nobody was all right or all wrong. On account of the difficulty of getting something exactly like woman's milk, they could not have an exactly scientific principle. All of them got good results in different ways, although they had all to deviate from their theories in certain cases. Dr. ROTCH, however, would hear of no compromise, contending that there must be one way that was better than all others, and that it was the duty of physicians, and particularly specialists, to find out what way that was. The controversy was expected to be renewed by Dr. JACOB, of New York, who was down on the program to read a paper on Milk Sugar, but to the regret of the members generally, a message was received from that eminent authority on pediatrics that he found at the last moment that it would be impossible for him to be present.

Another singularly interesting paper besides those mentioned was one by Dr. W. S. CHRISTOPHER (Chicago), dealing with physical measurements in puberty, their significance, variation, and applications. It was a continuation of a report

which the author made at the last annual meeting of the society, and embodied the results of work being done at his instance under the auspices of the Chicago Board of Education. A substantial appropriation, it was explained, had been made for the purpose, and the services of very competent examiners and statisticians having been secured, it is hoped that data will be collected which will be of great use in various ways to scientific investigators. Nor are these confined, it may be added, to the points handled in Dr. Christopher's paper. The mental as well as the physical developments of children are being inquired into and the results carefully tabulated, special attention being, of course, paid to those having physical or mental defects. The present paper gave the results obtained from the examination of 6,250 children, 7 measurements being made on each child, and tables being prepared to show their average height, weight, strength, etc., at different ages. Girls were separated from boys, and comparison drawn between them to show the respects in which they progressed more or less on parallel lines, or differed from each other in their rate of progress. Among the general conclusions arrived at by the author was that in both sexes there was a period of quiescence before puberty, followed by a period of exaltation. Puberty also was a period of great individualization—a period when the weak were apt to fail, and when the strong developed rapidly. It was the period of greatest morbidity, the period when latent abnormalities might be expected to develop, as a consequence of the unbalanced condition of the child physically and mentally.

The discussion of the paper largely took the form of praise of the author and his collaborators for their painstaking labor, and a hope was expressed that these labors would be continued, to which Dr. Christopher replied that there was every probability that they would as the Board of Education was keenly interested in the matter and thoroughly appreciated the work that was being done.

The attention of the society was directed by Dr. SAMUEL S. ADAMS (Washington) to the great fluctuations in temperature that take place in children in the terminal stage of tuberculosis without any apparent evidence of septic affection, and the general treatment of tuberculosis was discussed in a paper by Dr. B. K. RACHFORD (Cincinnati). A contribution from Dr. C. P. PUTNAM (Boston) on extensive pneumococcus infection was read by title, as were likewise papers by Dr. WILLIAM OSLER (Baltimore) on (1) congenital absence of the abdominal muscles, with distended and hypertrophied urinary bladder in a child of 6 years, and (2) the visceral lesions of the erythema group of skin diseases in young children. The subject of Cretinism was dealt with in papers by Drs. FREDERICK A. PACKARD and ALFRED HAND, JR. (Philadelphia) and Drs. HENRY KOPLIK and I. LICHTENSTEIN (New York) the former discussing the pathologic anatomy of cretinism and the latter making a contribution to its symptomatology.

Dr. WILLIAM P. NORTHRUP (New York) enlarged on the advantages of glass sun rooms on city roofs or winter playhouses. Dr. ROWLAND G. FREEMAN, of the same city, gave an account of an epidemic of malaria in children, and Dr. JOHN LOVETT MORSE (Boston) gave an analysis of 32 cases of congenital heart disease. Reports of cases on maternal impressions were contributed by Dr. RACHFORD (Cincinnati) on measles complicated by appendicitis, by Dr. HAROLD WILLIAMS (Boston) on amaurotic family idiocy, etc., by Dr. A. C. COTTON (Chicago) on pernicious anemia in infancy, by Drs. T. M. ROTCH and MAYNARD LADD (Boston) on general arteriosclerosis in a boy of 10, by Dr. ALLEN BAINES (Toronto) on hemorrhagic nephritis complicating influenza in a 13 months old baby, by Dr. D. J. MILTON MILLER (Philadelphia) on scalled cyclical albuminuria, by Dr. FRANK SPOONER CHURCHILL (Chicago) on pulmonary gangrene in a baby, by Dr. WALTER LESTER CARR (New York) on arsenical poisoning in an infant of 6 months, by Dr. JOHN LOVETT MORSE (Boston) on multiple arthritis in a child 2 years old suffering from gonorrhoeal vaginitis, by Dr. GEORGE N. ACKER (Washington) on (1) infantile scurvy and marasmus, and (2) gangrene of the lung, history, operation and recovery, by Dr. F. HUNER (New York) on (1) appendicitis in a child of 3 months, and (2) long-continued laryngeal stenosis of uncertain nature, by Dr. J. P. CROZER GRIFFITH (Philadelphia). The etiology of rectal polypi in children was the subject of a paper by Dr. F. HUNER and the treatment of the nasopharynx in scarlatina of a paper by Dr. A. SEIBERT, both of New York. A note on the little finger of the Mongolian imbecile and of normal children was contributed by Dr. J. PARK WEST (Bellair, Ohio) and the use of the term "exanthem" was discussed in a communication from Dr. F. FORCHHEIMER (Cincinnati).

The use of suprarenal extract in the treatment of hemorrhage in the new-born was reported by Dr. L. EMMETT HOLT (New York). The case in which he had given it was that of a child which was seized with vomiting of blood on the day following its birth. It was a strong, healthy baby, weighing about 9 pounds, and it was of interest to note that the family had lost a child, but a less healthy one, under similar circumstances, 2 years previously. In the present case, suprarenal extract was administered in grain doses every hour, commencing in the afternoon. About 12 grains were given in all, and in the morning the hemorrhage stopped. It never returned, and the child had gone on improving ever since—a period of 2 months. A colleague had since used the drug with the effect of stopping a

gastrointestinal hemorrhage, but the child in this instance had a cerebral hemorrhage as well, from which it died.

Dr. MORSE said he had tried the use of suprarenal extract in a powder, but apparently with no result. Dr. ROTCH observed that the case reported by Dr. HOLT was an extremely interesting one, and if suprarenal extract proved valuable in this connection it would be a useful addition to their agencies for the treatment of the newborn. The vitality of the child might no doubt have had something to do with its recovery, but it was certainly worth while making further experiments with the drug. In the course of further discussion it was mentioned that Dr. BATES, who had made a special study of the effect of the suprarenal extract, laid stress on the importance of giving it in solution. Dr. HOLT admitted that the child might have had a better chance of recovery than some other children on account of its being strong and healthy; but it was the prompt effect of the drug that surprised him.

A short discussion took place in regard to another case reported by Dr. HOLT, a case of diphtheria of the conjunctiva, which yielded very promptly to antitoxin. Dr. CHAPIN said antitoxin was always given in such cases at the Willard Parker Hospital, but he was inclined to place more reliance on the local treatment that was given simultaneously. Dr. ROTCH said he had experience of cases in which antitoxin had acted in a most remarkable way after local treatment had failed. Dr. KERLEY mentioned a peculiar case, in which 2 boys, sons of a nose and throat specialist, suffered from rhinitis, which their father failed to cure. He (the speaker) was consulted and found germs of diphtheria in both the noses and throats of the boys. Antitoxin was given, and they were cured. Dr. CHAPIN explained that he did not wish to be understood as objecting to the use of antitoxin. They always gave it, and he believed it should always be given in such cases. At the same time he attached importance to the local treatment.

The program having been exhausted, a business meeting was held, when the following office-bearers were elected for the ensuing year: President, Dr. W. S. Christopher, Chicago; vice-presidents, Drs. Charles W. Townsend, Boston, and John Dorning, New York; secretary, Dr. Samuel S. Adams, Washington (relected); treasurer, Dr. J. Park West, Bellair, Ohio (relected); recorder and editor, Dr. Walter Lester Carr, New York (relected). Dr. Rotch, Boston, was elected a member of the Council.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

SEVENTH ANNUAL MEETING, HELD AT NEW YORK ON MAY 23, 24, 25.

[Concluded from page 532.]

Dr. L. L. MIAL (New York) said he had had experience of 2 cases in which the suprarenal extract produced violent sneezing, which continued for 10 or 12 hours. He had obtained excellent results from the suprarenal mixed with chlorotone.

Dr. M. R. WARD (Pittsburg, Pa.) said that, like some of the preceding speakers, he had had some unsatisfactory results from the use of the suprarenal extract, but he had not attributed them to the drug. He thought they might have been due to defective method of application. He did not think that any one who had had experience with adrenalin or the suprarenal extract would question their power to control hemorrhage. In plastic work on the septum he had difficulty in the way of sloughing. Whether this was due to any fault on his part or not, he was unable to say.

The President (Dr. B. C. MYLES, New York), said that 2 or 3 years ago he had been in the habit of using the suprarenal extract in the powder form, but he had rather lost faith in it. In fact he had lost some patients through it. He generally used it with resorcin. One patient on whom he had used it called him up on the telephone 2 or 3 days afterwards and asked him what on earth that was he had put in his nose, adding that he had sneezed for hours after going home. Another patient, who was interested in large commercial undertakings, wanted to have his nostrils clear as he expected to have a good deal of talking to do. He was given some of the extract, and the result was that his wife had to sit up with him all night and he was unable to attend to 7 important committee meetings which he had down for the following day. These and similar experiences had caused him to lose some of his faith in the drug.

Dr. PRICE BROWN (Toronto) said he had not used the extract for more than a year. Before that he had used it for some little time, but he always found that it produced an irritating effect. He had not used adrenalin, but would do so after what he had heard about it.

Dr. TAKAMINE was then introduced and invited to address the meeting. He remarked that he felt mighty honored at being given an opportunity to speak on the subject, and was well pleased with the way in which the drug had been discussed. Of course he was only a chemist and could add nothing to what had been said from a medical point of view. What he had done was simply to isolate the active principle from the suprarenal gland. This was the first time that such a thing had been done. In other words, it was the first time they had got the active principle of this gland in the pure form of chemical crystals,

and this was only a beginning of the wonderful work that he believed was being opened up in the domain of organotherapy. He had no doubt that the other ductless glands would be similarly utilized in course of time. In fact, he believed that in the near future they would have the active principles of all the other glands isolated as they now had the active principle of the suprarenal capsule. It depended on the members of the medical profession to decide how and when the drug should be used, and in what strength. Everything depended on the way in which it was used. If it was misused, it would, of course, produce bad results. He did not say this was why the gentlemen who had reported unfavorable results had got them, but from a chemical point of view he was at a loss to understand why it should have had the irritating effect it had been described as having in certain cases. One writer, who was now a strong believer in adrenalin, admitted that he got bad results at first, when he used it with formalin. Adrenalin in that case got the blame which was due to something else, and it was possible it might do so in other cases also. Then they were aware that there were some cases in which distilled water would produce a stinging effect similar to that which had been spoken of. All these were matters for the medical profession to consider and account for. All that he as a chemist claimed to have done was to have given them the active principles of the suprarenal gland in a form in which they could gauge its strength, and this they never could do with the gland itself.

Replying to questions subsequently put to him, Dr. Takamine said he was still prosecuting his investigations with the view of making the drug still more stable.

Dr. WILSON, replying on the debate, said he had seen cases where the suprarenal extract produced the irritating effects which had been described, but he had not found them follow the use of adrenalin. Another advantage possessed by adrenalin was that it could be boiled and boiled again to render it thoroughly sterile. This could not be done with the suprarenal capsule. He had never found any of the sloughing which had been spoken of, and in this connection he suggested that possibly one mistake which was sometimes made was that of using too strong a solution. A solution of 1:10,000, or at most 1:5,000, was quite strong enough for ordinary cases.

Dr. T. H. HALSTED (Syracuse, N. Y.) reported a case of acute sphenoidal abscess, amaurosis and operation, with recovery of sight, and Dr. Thomas R. Pooley, New York, a case of frontal and ethmoidal disease with abscess of the orbit, the latter contending that in such cases as he described operative interference was necessary to produce permanent results.

Dr. GEORGE L. RICHARDS (Fall River, Mass.) read a paper on empyema of the frontal sinns, in which he offered some suggestions as to treatment. In the course of discussion, Dr. C. W. RICHARDSON, Washington, said there should be no hesitation in resorting to operative interference in cases where there was an abscess of the mastoid. The discharge might be slight, and yet there might be a large diseased area. The President thought that free drainage was far better than anything else in the treatment of the conditions described. All cases, however, had to be considered individually. As a general rule, a trial of conservative methods did no harm.

Observations upon the treatment of stricture of the lacrimal duct by electrolysis were contributed by Dr. L. L. MIAL (New York). He contended that strictures could be modified by this means more readily than by any other, and that there was less danger of entering false passages and tearing the mucous membrane.

Dr. T. R. CHAMBERS (Jersey City) said that he used to have great difficulty in entering the lachrymal duct, but now he employed a combination of adrenalin and cocaine, and by its means he was enabled to enter the duct with ease.

Dr. NORTON L. WILSON (Elizabeth) thought electrolysis did good by relieving the stricture.

Dr. EDWARD B. HOLT (Portland, Me.) believed that in a great many cases much could be accomplished by electrolysis.

Replying on the discussion, Dr. MIAL said he had used cocaine and adrenalin in the lachrymal duct. They relieved the pain and enabled the operator to pass the probe with more comfort to the patient, but they did not affect the stricture.

Dr. H. A. ALDERTON (Brooklyn) contributed a few remarks on a generally unrecognized ear disease. It resembled otitis media, but varied so much in the character of its symptoms that it might exist for years without being detected. The treatment he recommended was incision and evacuation of the tympanum and thorough cleansing of the naso-pharyngeal cavities.

Dr. J. F. McCAW (Watertown, N. Y.) gave a brief report of a case of tuberculous otitis media, mastoiditis and meningitis in an otherwise apparently healthy adult. The patient died, and an examination showed the existence of tubercular bacilli and streptococci in the ear, while there were no signs of tuberculosis in the lungs, liver or spleen. It was difficult to say whether it was a primary or secondary tuberculosis. The primary lesion, no doubt, might have been overlooked, but he thought it was primary.

Dr. M. D. LEDERMAN (New York) described a Schwartz-Staacke operation for chronic suppurative otitis media, reformation of the tympanic membrane and secondary myringotomy, resulting in improved hearing.

Diseases of the Facial Tonsil and Peritonsillar

Tissue.—There was a symposium of papers on this subject, the anatomy and physiology of the parts being described by Dr. NORVAL H. PIERCE (Chicago); acute suppuration being dealt with by Dr. MAX GOLDSTEIN (St. Louis); recurrent peritonsillar suppuration, by Dr. HENRY J. HARTZ (Detroit); acute lacunar inflammation, by Dr. M. R. WARD (Pittsburg); mycosis, by Dr. ARTHUR G. ROOT (Albany); tuberculosis and syphilis, by Dr. CORNELIUS C. COAKLEY (New York); and glandular complications, by Dr. T. R. CHAMBERS (Jersey City). Other 2 papers were read by title, and will be published in the transactions of the society. They were by Dr. JOHN O. ROE (Rochester, N. Y.), and Dr. F. E. HOPKINS (Springfield, Mass.), and dealt respectively with chronic hypertrophy and malignant growths. The discussion which followed was taken part in by Dr. JONATHAN WRIGHT (Brooklyn); Dr. F. C. COHN (Boston); Dr. L. A. COFFIN (New York), and others.

The results of A Year's Experience in the Treatment of Stricture of the Eustachian Tube by Means of the Electro-bougie were given in a paper by Dr. THOMAS H. HARRIS (New York). The conclusions at which he arrived were that the electro-bougie had a place in aural surgery, though less important than had been supposed; that it should be used after and not before other methods of treatment; that it was most liable to fail in cases where there were complications; that its results were not always permanent, and that its use was not without danger.

Dr. GEORGE L. RICHARDS (Fall River), described the sensations caused by a bougie passed into his own ear, and said that the ear had felt better since the operation.

Dr. WENDELL C. PHILLIPS (New York) in whose clinic the experiments detailed in the paper had been conducted, said his views coincided generally with those reported. He believed that in the electro-bougie they had a useful instrument, but he did not think that it was a cure-all, and it certainly had to be used with caution.

Dr. NORTON L. WILSON (Elizabeth) said he had found it easy to make an entry with the electro-bougie in cases in which he had been unable to do so with an ordinary bougie.

Dr. WILLIAM P. BRANDEGEE (New York) said that at the Eye and Ear Infirmary the results obtained with the electro-bougie had been more satisfactory than those obtained from any other method.

Dr. C. DUNBAR ROY (Atlanta, Ga.) said the electro-bougie when used in selected cases was superior to anything else he had tried. In the course of further discussion, the use of the electro-bougie in urethral work was referred to, and Dr. A. B. DUEL (New York), who had been credited with its introduction into aural surgery, made some remarks in which he disclaimed having ever regarded it as a cure-all, but said that he still maintained that an opening could be made by its means more readily and successfully than by any other method. Dr. E. B. DENCH (New York) remarked that if the electro-bougie had never done anything more than to have provoked that discussion, it must be acknowledged to have done a great deal, because it had directed attention to what could be effected by means of bougies. He thought the use of the instrument was perfectly safe if used subject to the conditions of aseptic surgery. Replying on the discussion, Dr. HARRIS expressed the opinion that even with ordinary caution there was danger of suppuration from the use of the instrument, though he admitted that the danger was not great in thoroughly competent hands. As to the value of the method, he regretted that he had not obtained as good results as Dr. Duel and others.

Dr. JOHN F. WOODWARD (Norfolk, Va.) read a paper in which he advocated Simple Operations on the Turbinates in place of Cauterization. He remarked that complete removal of the turbinate was seldom necessary.

Dr. DUNBAR ROY (Atlanta, Ga.) submitted a contribution regarding Chronic Nasopharyngeal Bursitis.

Among the other papers read were the following: Tympanic Vertigo due to Obstruction of the Eustachian Tube, Dr. WILLIAM P. BRANDEGEE (New York); Toxic Rhinitis, Dr. CHARLES P. GRAYSON (Philadelphia); Immunization in Hay Fever, report of 2 years' experience, Dr. H. HOLBROOK CURTIS (New York); Lichenic Pharyngitis, Dr. J. A. STUCKY (Lexington, Ky.); Management of Acute Otitis Media, Dr. F. L. JACK (Boston); Early Treatment of Mastoiditis, Dr. C. W. RICHARDSON (Washington); the Mechanical Treatment of Nasal Synechia, with demonstration of an appliance, Dr. F. H. KOYLE (Hornellsville, N. Y.); Diseases of Stenson's Duct, and the treatment, Dr. C. E. MUNGER (Waterbury, Conn.); Observations on the Treatment of Catarrhal Deafness, Dr. SARJENT F. SNOW (Syracuse, N. Y.); report of an interesting case of Aneurysm of the Internal Carotid Artery, Dr. WALTER B. JOHNSON (Paterson, N. J.); Subarachnoid Injections of Cocain for Operations on the Head, Dr. REDMOND W. PAYNE (San Francisco); Papillomatous Growths of the Soft Palate, Dr. WILLIAM DUDLEY (Brooklyn), and Variations in the Technic of Septum Operations, Dr. STEPHEN H. LUTZ (Brooklyn).

New Office-bearers.—The election of office-bearers for the ensuing year resulted as follows: President, Dr. Charles W. Richardson, Washington; Vice-presidents, Dr. H. Holbrook Curtis, New York; Dr. H. W. Loeb, St. Louis; Dr. Charles F. McGahan, Aiken, S. C.; Dr. Ernest W. Fleming, Los Angeles, Cal.; Secretary, Dr. Wendell C. Phillips, New York; Treasurer, Dr. Ewing W. Day, Pittsburg, Pa.

SPECIAL ARTICLES

THE PRESIDENT'S ADDRESS.*

BY

CHARLES A. L. REED, A.M., M.D.,

of Cincinnati, Ohio.

In approaching the discharge of my duties as presiding officer of the fifty-second session of the American Medical Association, I beg to express my appreciation of the generous suffrages by which I have been called to a position of such conspicuous honor. This appreciation becomes all the more pronounced when I reflect upon the magnitude and achievements of this great national body and upon the luster of the distinguished men who have presided over its deliberations. This thought brings me to the first duty of the occasion, and that is, officially to bring to your attention the fact that since our last reunion 3 of my most illustrious predecessors have been called from their worldly activities to the realm of rewards. Alfred Stillé, Lewis A. Sayre and Hunter McGuire, each a former president of the Association, died within a single week. Their lives were known of men, their records are ornaments of our annals, and their achievements are their eulogies. They labored zealously and with beneficent results, not alone in the scientific field, but in behalf of an organized national profession; and to guard jealously the splendid legacy which they, among others, have left us, must be one object of our labors upon this auspicious occasion. The hope is indulged that steps may be taken to procure suitable portraits of these and of other deceased presidents of the Association, to be placed in some safe gallery until such time as the Association may be able to transfer them to its own Temple of Fame. I recommend that suitable formal action be taken on this occasion relative to the life, distinguished services, and the death of these lamented *confères*.

FOREIGN RELATIONS OF THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association accredited delegates during the last year to several foreign medical conventions, notably the International Medical Congress at Paris, the Dominion Medical Association of Canada, the Mexican National Association and the Pan-American Medical Congress at Havana. To each of these organizations the American Medical Association sustains relations of peculiar intimacy. As one of the great scientific nations of the earth, the United States is naturally an integral part of the International Medical Congress. This Association, by a resolution presented by your present executive officer, took the initiative in 1891, in organizing the Pan-American Medical Congress. The first reunion of that Congress was held in Washington in 1893, under the presidency of the late lamented Dr. William Pepper. The second was held in the City of Mexico in 1896 under the presidency of Dr. Carmona y Valle, while the third has been held during the last few months in the City of Havana under the distinguished presidency of Dr. Juan Santos Fernandez. This movement has for its object the establishment of closer relations between the medical profession of the different countries of the Western Hemisphere. It has already borne excellent fruit in the increased patronage of our medical schools from the far south, in the improved status of American medical practitioners in Latin America, in a better understanding of quarantine questions in the different countries, and in the development of a concert in the investigation of the medicinal flora of the Western Hemisphere. Our

relations with the medical profession of Canada must be of increasing intimacy, and I indulge the hope that while maintaining the national limitations of our Association for delegate and legislative purposes, its membership, with the privilege of participating in all scientific matters, may be freely opened to our brethren who live beyond our immediate borders.

FISCAL AFFAIRS AND THE JOURNAL.

It has passed into unwritten law, born of the gradually developing features of our organization, that your President shall restrict his annual address to a discussion of the affairs of the Association and to the great object to which, by the terms of its Constitution, it stands consecrated—"the common interests of the medical profession in every part of the United States." In compliance with this rule, and realizing that I am leaving scientific questions to be presented by orators appointed for the purpose, I have pleasure in calling your attention to the satisfactory condition of the affairs of the Association, as indicated by the consolidated report of the Treasurer and of the Board of Trustees. From it you will observe that under the judicious management of your Board of Trustees you had a cash balance at the end of the last fiscal year of \$31,004.67, being an excess of \$3,696.66 over the preceding year. Your plant has been increased in value to the amount of nearly \$10,000.00, and the net profits of *The Journal* amounted to nearly \$14,000.00. You will be gratified to realize that, in addition, you have safely invested as part of a fund with which to buy a home for *The Journal* and for the Association, the respectable sum of \$25,000.00. If, however, you have occasion to feel satisfied with the normal condition of your finances, you must contemplate with pride the rapid increase of your journal, in quality, size, circulation and influence. The average weekly circulation grew, during the last fiscal year from 13,672 to 17,446, and I have added pleasure in informing you that, since the period covered by the report, the weekly circulation has grown to 22,000 copies. For the accomplishment of these splendid results, I feel that you will join me in hearty acknowledgment, not only of the sagacious management by the Board of Trustees, but the tireless industry and the discreet direction of our accomplished editor, Dr. George H. Simmons.

I feel that it is important, however, to call your attention to the fact that it would have been impossible for your Board of Trustees to have accomplished these results if, through its action, the Association had not become incorporated. Leases were to be executed, purchases were to be made, contracts were to be entered into, money was to be loaned and bonds were to be exacted, to do all of which it was necessary that the Association should become a legally organized corporation. This was effected, *ad interim*, by the action of your Board of Trustees, which procured articles of incorporation under the laws of Illinois, bearing date of April 14, 1897. I am not aware that this fact, attested by the document which I have laid before the Executive Committee, has ever been confirmed by the vote of the Association. I recommend, therefore, that such action be taken at the present session.

If, however, the condition of the Association, and particularly of *The Journal*, is, on the whole, occasion for much satisfaction, certain facts revealed by the report are food for thought. Thus, *The Journal* has an aggregate circulation 2½ times greater than the aggregate membership of the Association. It would seem, therefore, that while the profession at large prizes *The Journal*, it places relatively less than half as much value upon membership in the Association. This fact becomes strikingly significant when it is remembered that membership can be acquired by those who are eligible at no additional expense and with but trifling inconvenience. Does *The Journal* fulfill all the wants of the profession arising in connection with the Association? Are there no addi-

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tional advantages to be derived from membership? Is there a lack of *esprit de corps*—a lack of the sense of unity in the profession? Is the existing basis of our national organization distasteful to the majority of the practitioners? Do our subscribers embrace a considerable number of practitioners who, under existing rules, can not become members, and whose influence, therefore, cannot be secured in behalf of the Association? These are questions that I am at liberty to ask, and that you are at liberty to answer.

Another thought suggested by the report relates to the disposition of the accumulating surplus. Shall the present policy for creating a fund for the purchase of property be carried out? Shall a larger proportion of the money be expended in still further exploiting *The Journal*? Shall the members receive a direct advantage from the earnings of the property which they have created, by reducing the annual dues, or shall a certain proportion of our surplus be expended in conducting original scientific investigations on subjects of universal interest to the profession? I cannot resist the temptation in this connection to venture replies to these questions far enough to say that, in my opinion, a reserve should be held in hand large enough to meet any possible contingencies that might occur by fire or other disaster in connection with *The Journal*; that the present generous policy in promoting the welfare of *The Journal* should be continued; that the dues of the Association should not be decreased; and that the question of establishing and defraying the expenses of certain commissions for special scientific investigators should be taken under serious consideration. The question of tuberculosis is not yet a closed chapter. The causation of cancer is yet a sealed mystery. The problems of tenement house reform are not yet solved. The prevention of various endemic diseases has not yet been made practicable. The systematic investigation of the American medicinal flora, begun under the auspices of this Association more than 40 years ago, remains an uncompleted task. These are a few among the many objects of a specific character which demand and should receive the fostering care of the Association.

I feel, however, that at the present moment, and under existing features of our organization, it would be almost impossible to determine, judiciously, either of these very important questions, and I now bring them before the Association only for the purpose of directing attention to them, with the hope that they may be taken up subsequently and under more auspicious circumstances.

SCIENTIFIC WORK OF THE ASSOCIATION.

The Association began its career with general meetings devoted chiefly to questions of medical education and professional conduct, and to lengthy reports from various standing committees. In 1860 it divided itself into a few sections, each with a certain autonomy, and each devoted to a particular part of our great scientific work. This change was followed by the establishment of the Judicial Council, by which means controversial questions, many of them of a personal character, were eliminated from the general meetings. The subsequent creation of the Executive Committee still further relieved the general meetings of annoying details. Thus relieved, both the general meetings and the sections have grown in scientific importance, emphasizing the persistence of our devotion to what must ever be recognized as the essential, fundamental object of our organization—the cultivation of the medical sciences. It must be acknowledged, however, that great as has been the progress in this particular, too much of the time of our general sessions is yet devoted to the consideration of matters which might, with propriety, be relegated for final action to a smaller body. It would redound largely to the interest of our annual session if the general membership could be entertained and instructed at our general meetings by

exercises of a more purely scientific character, of such broad nature that they should not be restricted to any of the sections. A reform in this particular will be a long step in the direction of progress. The sections, in consequence of the faithful labors of their officers, offer strikingly attractive programs for the present session. In several of the lists will be found the names of invited guests who, through fortuitous circumstances, are not members of the Association, but who are, nevertheless, active workers in the scientific field, and whose participation in our labors will enrich the value of our proceedings and enhance the felicities of the occasion. I bespeak for them your cordial welcome. While the officers of sections and your President have exercised the prerogative of inviting guests, who come as guests, and not as members of any class, as specified by the Constitution, such invitations have been extended solely with the object of advancing the interests of the Association. I look upon this privilege, which has been exercised by all of my predecessors and by previous officers of sections, as one of extreme importance, and one which should be continued under any plan of reorganization which may be adopted. It is my conviction, however, that the privilege should be hedged about by certain limitations, one of the most important of which should be that an invitation should not be extended a second time to any person residing within the United States whose professional qualifications may entitle him to membership. With reference to the invitation of persons identified with the allied sciences, the matter should be left absolutely to the discretion of the President of the Association and with the officers of sections.

CONGRESSIONAL AND STATE LEGISLATIVE AFFAIRS.

The American Medical Association, during the first 50 years of its existence, exerted relatively little influence upon legislation, either state or national. Since the Standing Committee on National Legislation and the National Legislative Council of delegates from the State societies have been established and have become cooperative, there is some evidence that the voice of the profession is heeded at Washington. The experience of the splendid committee of the association, acting in concert with the National Legislative Council during the last year, has, however, shown the serious necessity for more thorough organization in protecting the interests of the profession, and the interests of society as represented through the profession. The inefficiency of our present organization for influence upon Congress was shown in the inability of your committee, notwithstanding its strong *personnel* and the influences at its command, to prevent the degradation of the army medical service. This was accomplished by the passage of a bill under the championship of Senator Hawley, by the terms of which the medical corps of the army is subjected to unfair and humiliating discrimination. This law grades the medical department for rank, promotion, and, in consequence, for pay, below every other department and special corps of the army, and, with the exception of second lieutenants, it is graded below the line. In accordance with its provisions, a medical officer, to obtain a colonelcy, must pass through three times as many files as an officer of either the Quartermaster's, the Subsistence or the Pay departments; more than twice as many as an officer of Engineers or of Ordnance, and nearly twice as many as an officer of the Signal Corps. The effect of this discrimination is not only to lower the rank and pay of medical officers, but must result in lessening the efficiency of the corps by repelling men of spirit and worth.

In every war known to history the deaths from preventable diseases have exceeded those due to battle. At no time has hygienic science been so resourceful as at present in preventing disease. A law which fails to give to armies, either in peace or in war, the fullest protection by the application of the latest scientific develop-

ments at the hands of specially trained medical men is unjust to the soldier, to society, and to the medical profession. In view of these facts, the army reorganization law of the last Congress was inexplicable and inexcusable. It, however, forces itself upon your consideration from another standpoint. Physicians are citizens of the Republic. As such they are intellectually, socially, politically and officially the equals of any other element of the body politic. There is no station to which they may not attain; there is no distinction of which they may not be the recipients. Their rights are of manhood origin and their prerogatives are inherent. They are, in very fact, peers of the realm, and the peers of any peers of any realm. When the status of any number of physicians in their representative relationship to society is lowered, the status of the medical profession in general is menaced in corresponding degree. When the Congress, by the enactment of a law, degrades, relatively, the status of an important body of medical men, engaged in the public service, it strikes at the status of every physician in the country. It becomes, therefore, the duty of every member of the medical profession, jealous of his rights, his prerogatives, and the fair name he may leave his children, to resent as personal between himself and every member of the Congress who voted for this law, the action which cast a stigma upon our profession.

It has been the conviction of many enlightened members of the medical profession that the means employed by the general government for the protection and promotion of the public health are capable of improvement. These duties have devolved upon the Marine-Hospital Service, which was originally designed to give succor to unfortunate people, without other domicile, who were employed upon our rivers, lakes and the high seas. With the growth of sanitary science this service, being the only established agency available by the government for this purpose, has been largely diverted from its original object. As a result, under the present wise administration of its Surgeon-General, its representatives are abroad investigating the sanitary condition of foreign cities, its agents are at our ports beating back threatened epidemics, while valuable investigations are being conducted in its laboratories. In the exercise of its quarantine functions, however, it comes in conflict with the police power that is guaranteed by the Constitution to the different states. The friction thus engendered has been especially marked in the seaboard states. While this is true, the Marine-Hospital Service, in scope and design, does not fulfill in highest degree the objects of a central coordinating agency for the protection of the public health. It was thought to create a Department of Public Health, with its executive officer in the Cabinet, but this idea yielded to that of a bureau in charge of a large Advisory Council, composed of representatives from the various states. Resolutions have been adopted and memorials have been sent to the Congress, committees have been appointed, money has been appropriated by this Association; bills have been introduced and hearings have been had in committee, with the result that the conditions to-day are precisely the same that they were 10 years ago, when the agitation was inaugurated in the session of this Association held at Washington.

Secretary Wilson, of the Department of Agriculture, in his report for 1899, recommended that the Congress appropriate money to defray the expense of a systematic investigation of the medicinal flora of the United States, and of experiments upon the neutralization of medicinal plants indigenous to other countries. This recommendation was based upon the fact that the United States is the only great country which either has not conducted or is not conducting such experiments, and upon the fact that the proposed measure, touching the avenues of industry, manufacture, commerce and the public health, was one of national concern. This measure, however,

with its manifest importance, was denied even courteous consideration, while its friends were denied a hearing by the committees of the Congress.

The cause of failure on the part of this Association to procure legislation by the Congress—and with the exception of preventing the passage of the Antivivisection bill last year and securing the enactment of the Quarantine bill this year, our recent efforts must be recognized as failures—I say the causes of our failure are properly subjects for careful consideration. I have examined the records of the Association from the date of its organization, and have been profoundly impressed with the fact that memorials, resolutions, or even more definite propositions addressed to the Congress have, for the most part, represented the views, or rather the impressions, of the individual members proposing them. They have generally been presented in the general meeting, and have been endorsed without the deliberation essential for wise action; but a deliberation which is simply impossible in the limited time available in our general meetings. In certain instances memorials to the Congress have been presented at one session of the Association, have been reported to committees and reported back for action, either at a later meeting of the same session or at the succeeding annual session of the Association. But it becomes evident that this course lessens the evil but a trifle, for the reason that the committees to which such matters were referred have been constituted either under the leadership of the member proposing the measure or of members of a standing committee who had no interest in or understanding of the proposed measure. Such memorials, resolutions or propositions, when acted upon affirmatively by the general meeting of the Association, have, possibly, been mailed to some member of Congress or of a legislature, but were not followed by effective work in the rank and file of the profession or among their patrons. When such bills have been presented to the Congress, and have received a certain amount of support from representatives of this Association, they have, as a rule, attained only that degree of importance that has made them valuable to their ostensible champions, as something to trade in the game and barter of legislation for something which would please a larger number of constituents and command a larger number of votes. In view of the fact that, after all, the argument of votes is the only one which appeals effectively to the average Congressman, it behooves this Association, in its efforts to conserve the interests of the profession and of society, to put itself in position to influence the largest number of votes. Every physician, therefore, should, in a perfectly respectable sense, become an active working politician. This subject, however, is of such breadth and of such depth that it may be well for us to pause at this juncture long enough to consider, from the standpoint of fundamental facts, the relationship of physicians to each other, and of the medical profession in the aggregate as an integral factor in society.

THE PROFESSION, THE ASSOCIATION AND THE COMMONWEALTH.

In approaching a study, however brief, of the relation of the medical profession to the State, or, as I prefer to call it, the commonwealth, I feel that I am inviting your attention to an eminently practical theme; one which may enable us to understand the influences by which we have arrived at our present estate, and the means by which we may advance to even greater achievements. As we approach this theme—this eminently practical theme—we discover that the status of the medical profession, like that of every other element of that complex whole which we call society, is a perfectly natural one. Whatever it may be, it has been attained in the process of evolution, and has been, and is determined, by laws as immutable as those which govern the commingling of atoms or the sidereal strides of the

planets. It is not the result of conventions or of resolutions or of statutory enactments; but these are to be interpreted as *indicia*, for the time being, of the position of the profession in the body politic. They are, indeed, consequences rather than causes, and as such they are subjects for careful inquiry. It is by a study of them that we are enabled in part to determine those laws, those natural laws, our harmony with which is essential, not alone for the present usefulness and continued progress of the profession, but for the ability of the medical profession to conserve the welfare and promote the happiness of society at large.

But I have said that the position of the medical profession is a natural one. The truth of this declaration is apparent when we go back to the beginnings of society—when we examine the evidences presented by primitive peoples. We are familiar with the classic example so frequently utilized as a starting point in the discussion of sociologic phenomena—the example of the 2 aborigines, one of whom makes better arrows, and the other better mats than his companion, when, presently, one confines himself to arrows, the other to mats, each trading his own for the other's product. Here is an example of the beginning of what the scientists call "specialization of function in the social organism." It is an interesting process, which, based upon varying necessities and diverse aptitudes, results in multiplication of handicraft until somebody is hurt. This is a new necessity, and it is met by a new aptitude, and the possessor of that aptitude—the medicine man, our honored progenitor—steps upon the scene. His companions, appreciating his services, reward him with their arrows and mats; and he, finding the life to his liking, restricts himself to his new-found vocation—and the medical profession is established! As the necessity for his services, whether of charm or incantation, becomes more apparent, the esteem of his fellows becomes more pronounced. As events progress, he is accorded certain rights, given certain prerogatives and hedged about by certain limitations, all calculated to increase his efficiency in promoting the common welfare—and thus is the practice of medicine regulated. He is spared from the battle that he may serve his companions, and he stays away from the chase that he may delve into the great mysteries—and thus is medical education inaugurated. He is the exponent, not only of his professional knowledge, but of at least the average intelligence of his people. He is, in short, an integral part of the primitive social fabric. As such, he shares the manners, the customs, the aims, the ambitions of his companions; and he, with them, is controlled by the forces which determine the common state and the common destiny. His status is, therefore, determined by the very laws which control the growth and development of society itself. So true is this that, from the dawn of history until the present day, and in every stage of sociologic development, the civilization of a people may be infallibly determined by the intelligence, the efficiency and the influence of its medical profession.

THE MEDICAL PROFESSION AND SOCIETY 50 YEARS AGO.

It would not be to our present purpose to follow the evolution of society as exemplified in any of the civilized peoples, or, as the scientists say, "distinct ethnic entities of the world," in which the present complexity has been attained by an orderly succession of events. And it would be equally unnecessary to show, what everybody knows, that the medical profession, the heritor, in common with others, of antecedent influences, has been propelled by the same forces and by equally orderly events to precisely the same standard of civilization. The lesson before us is that of the relation of the medical profession to a society which, but a few decades ago, was the most diverse in origin and the most heterogeneous in constitution known to modern history; but a society

which at the dawn of the twentieth century is one of the largest, richest and most intelligent of the world, a society well amalgamated, and which by common consent of even adverse critics is moving in harmony with the most advanced influences of civilization. I fancy I should suddenly find myself unpopular with the audience if I were to intimate that you, who comprise it—that you, the representatives of the medical profession—have failed to contribute your full quota to the great progress which that society in general has achieved, or that you do not reflect in intelligence and morality the highest type of civilized man. I hasten to allay your apprehension, for I have no such intention. On the contrary, I ask you to indulge with me in a retrospect of American society during the last half dozen decades that we may the better understand the important part that you, and the profession that you represent, have played in the attainment of present results.

As I have already stated, the middle of the nineteenth century found diverse conditions of society in the United States. The older cities of the seaboard were the centers of an advanced civilization. The remoter counties of the same State, however, were then, in the absence of railroads, the telegraph and modern mail facilities, more remote from the centers of American influence than is St. Paul today from St. Petersburg. The great tide of emigration that had already poured and was yet pouring over the mountains and spreading in lonely habitations or widely separated communities over the vast valley of the Mississippi from the Lakes to the Gulf was busily engaged with the serious problem of existence. The forest was to be felled and the prairie was to be subjugated, habitations were to be built and crops were to be raised. In the midst of these exactions, institutions of higher learning were established, and to an extent patronized, and some strong men were produced. But it must be recognized as true that society in general had but little time and less money to devote either to schooling or to the amenities of life. The medical profession, under these circumstances, was precisely like the community of which it was a part. There were but few medical colleges, and they, for the most part, were but meagerly equipped. Many doctors became such while going from one town to another. Ignorant inventors of alleged systems of cure hawked their wares in the high-ways and the byways. Dogmatism that was destructive to intelligence was rampant, while schism was fostered by the baneful commercialism that too generally pervaded the heterogeneous mass of 40,000 people that comprised the medical profession. In 8 of the 26 then existing States no laws affecting medical practice had ever been enacted; in 11, laws previously enacted had been repealed; in 3 only were there any restrictive laws, and these proved inefficient; while the facts could not be ascertained relative to the remaining 4 States.

THE ERA OF ATTEMPTED VOLUNTARY REGULATION OF MEDICAL PRACTICE.

To remedy these evils, and actuated by the love of science, the promptings of self-interest, and by devotion to the interests of humanity, representatives of the various State medical societies met in convention over half a century ago and organized the American Medical Association, with the avowed object of having its members represent and take cognizance of "the common interest of the medical profession in every part of the United States." It sought to cultivate medical knowledge among its members, to elevate the standard of medical education, to promote the honor and influence and interests of the medical profession, and to enlighten the public concerning the relation between the medical profession and society. Emulation and concert of action in the profession and friendly intercourse among those engaged in it were additional aims of the founders of this great body of representative American medical practitioners. A constitution, by-laws, and certain rules of conduct were

adopted. The constitution provided for a delegate body, delegates being accredited from recognized medical societies, medical schools, and eleemosynary institutions. The rules of conduct prescribed in detail the department of a physician, the department of the patient, interdicted the licensure of sectarian physicians, and proscribed from consultation those whose practice was based upon an exclusive dogma. The influence of the new Association was extended chiefly through the avenues of the various State societies, many of which adopted the rules of conduct that had been prescribed by the newly-formed national body as the basis of affiliation. Several of the State societies, notably those of Massachusetts, Rhode Island and Mississippi, finding either that the prescribed rules of conduct were not suitable to their respective local conditions, or feeling that they were sufficiently in touch with the ordinary forces of civilization to require no such formulas, never adopted the rules of conduct prescribed by the national body. The medical association of Alabama adopted the rules with rather a *naive* proviso that somebody be appointed to call attention to such of the special teachings of these rules "as may seem to require elucidation in view of special circumstances and conditions." Other State societies adopted more or less modifying resolutions, but the general spirit of ostracism and aloofness was maintained during the succeeding 3 decades. The result of this movement was immediately salutary; it developed an *esprit de corps* in the great body of the profession; it gave an authoritative definition to medical education, and it created a strong and influential national body within the profession. At the same time, however, it became apparent that the organization did not possess the necessary inherent strength to accomplish its avowed object to regulate the practice of medicine. As time passed schismatic medicine grew apace, its colleges multiplied, its practitioners appeared all over the country, exemplifying that law that always makes the blood of the martyrs the seed of the church. Quackery of the most flagrant character was found everywhere, and society was unprotected from its ravages, while the inability of a voluntary unchartered organization to enact and to execute plenary laws was reduced to a demonstration. The medical profession, as an organized body, discovered that its relation to the commonwealth was, as the result of its own proscriptive policy, scarcely more intimate or more influential than at the beginning of the thirty years' hopeless experiment.

THE ERA OF EFFECTIVE LEGISLATIVE CONTROL OF MEDICAL PRACTICE.

The era of effective legislative control of medical practice came as the natural reaction from the demonstrated failure to accomplish the same result through voluntary organization; but it came as the result of the sentiment which had been propagated largely through the influence of this Association. The representatives of progressive medicine, turning from the National Association, invoked the aid of their respective State societies in taking up the question with their respective legislatures. The profession in each State, however, recognizing its own local conditions, proceeded in its own way to attend to its own business. The very earliest attempts to secure State legislation revealed the fact that the so-called irregular practitioners, under the stimulus of ostracism and the fostering care of public sympathy thereby induced, had become so numerous and so influential that in a majority of States nothing could be done without their cooperation. It was no longer a theory, but a condition with which the real performers were confronted—and they met it. California, in 1876, through its regular medical society, took the initiative. After conferences with the representatives of the sectarian societies, and after securing their cooperation, a law was procured creating a licensing board composed of representatives of both the regular and sectarian schools of practice. Illinois, confronted by precisely the same

condition, took precisely the same course. Alabama, always progressive, but the happy possessor of other conditions, was able to place the regulation of medical practice for the time being under the control of its incomparable State Medical Association. Colorado created a mixed board. New York, confronted by conditions even more complicated than those in other States, took up the same task. The profession of that State, acting through its organized body, containing among its members many of the most honored and illustrious names in American medicine, found it doubly necessary to enter into treaty with the denominational physicians. It realized, however, that the rules of conduct to which it had always conformed contained, among other provisions, one which made it unlawful to ". . . examine or sign diplomas or certificates of proficiency for, or otherwise be especially concerned with the graduation of, persons whom they have good reasons to believe intend to support and practise any exclusive and irregular system of medicine."

As the thing expressly interdicted by this rule was the very thing which it was proposed to do, and which had been done in other States, and which it was very necessary to do in New York, the medical society of that State amended the rules of conduct so that it or its members might, at discretion, enter into professional relations with any or all persons whom the law of the State at that time recognized to be practitioners of medicine. When this action was brought to the attention of this national body it resulted, not as might have been expected, in the amendment or the abrogation of the rule which had grown obsolete in the march of events, but in its tacit reaffirmation and in the opprobrious excommunication, for the time being, of the entire profession of the great Empire State. This action, viewed impartially after the lapse of nearly 20 years, becomes the more extraordinary when it is observed that similar action was never taken with regard to Massachusetts or Rhode Island or Mississippi, the societies of neither of which had ever adopted the prescribed rules of conduct; nor with regard to California or Illinois or Colorado, each of which had, by overt act, if not by open declaration, so far as this rule is concerned, taken an equally nonconformist position. It is not surprising that, with such an example before the State societies, the experiment in consistency has not been repeated. But the movement of effective regulative legislation, once inaugurated, happily spread with great rapidity. Mixed boards of licensure are now to be found in the majority of the States of the Union, and in the majority of such boards are to be found members of the American Medical Association engaged in issuing licenses to practitioners of exclusive dogmas, and sitting in consultation with sectarian physicians, not over a dose of medicine, but over the vastly more vital question of the qualifications of those who are to care for the sick of our Republic.

THE MEDICAL PROFESSION AND SOCIETY AT THE BEGINNING OF THE TWENTIETH CENTURY.

The results of the 25 years of statutory regulation of medical practice are in striking contrast with the results of the quarter of a century of attempted regulations by methods of proscription. At the conclusion of that humiliating experiment, as at the beginning of it, there was not a single effective medical practice law on the statute books of a single State of the Union. Today there are 48 State or Territorial licensing boards, the most of them being composed of representatives of both the regular and the sectarian schools of practice. The laws of the different States are of varying efficiency, the one procured by the Medical Society of the State of New York, at the price of yet-maintained excommunication from this body, standing today as the model of excellence for the entire country. Under the influence of these laws, instigated by members of the American Medical Association, and which, after all, are but expressions of

the sentiments of the medical profession confirmed by society at large, many substantial reforms have been accomplished. The medical schools which, in this country, have labored bravely and efficiently under adverse conditions, have been stimulated to increased efficiency. One of the first changes accomplished was the practical standardization of requirements to enter practice; and one of the first features of this standardization was to secure for the student "the aids actually furnished by anatomy, physiology, pathology and organic chemistry"—the 4 cardinal studies which, strange-sounding as it seems, it was necessary solemnly and specifically to insist upon a half century ago. It follows, therefore, that with broadened and increasingly uniform curriculums, it can not be said that schools even of sectarian antecedents entirely "reject the accumulated experience of the profession," nor can it be said that, in a sectarian sense, they any longer possess an excuse for existence. Their graduates, or such of them as do not base practice on an exclusive dogma, are, in many instances, met in formal consultation by even conservative regular physicians, and, in more than one instance, are made members of medical societies that are in affiliation with the American Medical Association.

The Illinois State Medical Society, which has always been among the foremost in reform movements within the profession, at its recent annual session, unanimously

"Resolved, That the school of graduation shall be no bar to membership in the Illinois State Medical Society, providing such physician is recognized by the local societies as qualified and not claiming to practise any exclusive system of medicine."

The Ohio State Medical Society, by precedent, if not by formal action, established the same rule.

We thus see that the proscriptive rule which, during the more than 25 years of its dominance, propagated the very evils it was intended to correct, is rapidly expiring by limitation in the face of new conditions that have been induced, in spite of it, by beneficent and catholic legislation. In the State of New York alone the annual registration of sectarian physicians has diminished nearly 90%, under the operation of its present laws. In the State of Ohio many physicians who are graduates of sectarian schools are making application to have their classification on the register changed to "regular," while equal reactionary movements are observable in other States. Thus we observe the passing of Homeopathy and Eclecticism just as did the calm scientists of Rome witness the passing of the "Humoralism," the "Methodism," the "Eclecticism," and the "Pneumatic School" of that period; and just as passed the "Chemicalism," the "Iatro-Physical School," the "Iatro-Chemical School," and the "Brunonianism," and the dozen other "isms" of later epochs, each leaving its little modicum of truth as the memento of its existence. And let us felicitate ourselves that, with the passing of the particular sectarianism of the last century, there is also the passing of its concomitant evils, such as existed in even greater degree in the time of Galen, who "found the medical profession of his time split up into a number of sects, medical science confounded under a multitude of dogmatic systems," and, as if relating the effect of the cause, the historian continues, "the social status and the moral integrity of the physician degraded." The further results of this new order of things, however, are observable, not alone in the modified curriculums of the medical schools, but in the changed organic relations of the institutions themselves. Under the pressure of legal requirements the weight falls with almost fatal force upon the small, private and poorly equipped institutions. These institutions, in the interest of self-preservation, and to protect a respectable alumni, are forced either to expand their enterprises or to seek relations with universities which are deeply founded in the community; or else actually to go out of existence. The majority of the schools seek connection with the uni-

versities, by which step alone they become logical objects for endowment, and it is to be hoped that this movement will continue until in this great country medical education shall be as firmly established as it is today in any of the transatlantic nations.

Another of the new conditions which has developed within the last quarter of a century, as the result of an increasing professional unity, is the efficient sanitary regulations, national, State, and municipal, that now afford protection to the people from diseases that were formerly devastating in their effects. It is not necessary in this audience to mention smallpox, cholera, typhoid fever, diphtheria, anthrax, leprosy, and the bubonic plague, each of which has been brought under relatively effective control, but I do feel that it is necessary to emphasize the fact that there are many unsolved problems relating to the prevention of disease that stand as a challenge to the industry, the ingenuity and the courage of the profession. While these various changes have taken place, others of almost equal importance are observable in the relations of physicians to society. While the community, instigated by the medical profession, has given to that profession a legal status, definite and increasingly influential, and has given it certain prerogatives and certain exemptions, it has, likewise, hedged it about with certain limitations and imposed upon it certain liabilities. There are numerous laws, both common and statutory—*lex non scripta* and *lex scripta*—that admonish the physician that his conduct carries with it a liability not defined by self-imposed rules, and the numerous courts of our land proclaim that there are tribunals "other than his own conscience to adjudge penalties for carelessness or neglect" on the part of the physician. So numerous, so unjust, and so disastrous are actions before such tribunals that they have caused the development of a new, legitimate and beneficent enterprise, in the development of a company to insure physicians against malpractice. It may be true that in certain states and localities these laws are unjust, and that there is a grave error in their administration by judges created under our wretched elective system; but if so, the facts only emphasize anew the necessity for more complete organization of the profession and for the more active exertion of its influence upon elections.

THE REORGANIZATION OF THE ASSOCIATION.

This brings us again to a realization of the fact that the results that can be achieved only by the unification of our national profession cannot be attained under the present organization of our Association. The disproportionately rapid growth of *The Journal* as compared with that of the Association can have no other significance. The weakness of the Committee on Legislation at Washington was a question neither of personnel or of industry, but arose purely from the fact that there was no efficient organization in the rank and file of the profession by which speedy and effective influence could be brought to bear upon members and senators. Equal difficulty has been encountered in several States where organization has been similarly defective. The demand for more effective organization of the Association has come from all over the country and resulted in the adoption of a motion at Atlantic City authorizing the appointment of a committee of three to report a plan of reorganization at this session. Another motion was adopted authorizing the creation of a supplementary committee of one from each State and territory, entitled a Committee on Organization, which has been filled by appointing for the most part the retiring presidents of state societies for the current year. The Committee on Reorganization, consisting of Dr. J. N. McCormack, of Kentucky; Dr. George H. Simmons, of Illinois, and Dr. P. Maxwell Foshay, of Ohio, has given to the important question entrusted to it a most careful and painstaking consideration. It has laid before you the results of its

deliberation. In doing so it has emphasized the principle that this Association has its origin in the organized profession of the respective states. It emphasizes the fact that the delegate body should be so small that it can remain in prolonged session and give to various subjects under consideration that deliberate attention which has not been possible under the existing scheme of organization during the last 40 years. It recognizes the paramount importance of the scientific feature of our work by relieving the general meetings and the sections alike of the troublesome details that now consume the limited and valuable time of the sessions. It remedies the glaring and serious defects in the present constitution. It prepares the Association, by perfecting the organization, to meet important and pressing questions. These considerations, together with the fact that the existing constitutional provision relative to delay of action on pending amendments has been met by the appointment, a year ago, of a committee for the avowed and published purpose of reorganization, and by the action of the committee in laying the results of its work before every member of the Association—I say these considerations, and these facts, prompt me to advise the adoption of the proposed constitution and by-laws in their entirety at the present annual session of the Association.

The Committee on Reorganization, under the restrictions of the resolution creating it, has, very properly, left undisturbed the existing rules of conduct. These, if construed to have a fundamental importance, and if vigorously enforced as they now stand, would disintegrate the Association in a single day. This reason, and others already given, confirm me in the conviction that such rules should be either amended or abrogated, or, if reaffirmed, it should be by general resolution endorsing their underlying principles but disclaiming the present applicability of their details. There are, however, various views entertained upon this subject, and that the matter may be approached in a spirit of tolerance, may be discussed coolly and impartially, that a consensus may be reached and that harmony may be attained, I recommend that the general questions of the revision of the rules of conduct be referred to a special committee on ethics, consisting of 3 members, with instructions to report to the legislative body at the next annual session of the Association.

THE NEW SCHOOL OF MEDICINE.

The changes which I have advocated are essential for the attainment of the purposes of the Association and for the fulfillment of the high destiny of our national profession. They are demanded by the changes that have taken place during the last 50 years. The legislative functions have passed from voluntary organizations to the Congress and the legislatures, where they belong; but it still devolves upon the profession in the organized capacity, to stimulate, to restrain, or otherwise to control the law-making power. The responsibility of the profession is increased, rather than diminished. Science has come to have a clearer meaning. He who now proclaims a dogma cries alone in the night, while the world sleeps. They who demand a creed may read its varying terms only in the progressive revelation of natural laws. Practice has changed. The depletions, the gross medications, the absurd attenuations, the ridiculous antimicrobialism have given way to a refined pharmacy and to a more rational therapy. Sacrificial surgery has yielded to the spirit of conservatism. Prevention is given precedence over cure. Education implies research and discovery, and all may delve. I proclaim, events proclaim, the existence of a new school of medicine. It is as distinct from the schools of 50 years ago as is the Christian dispensation from its pagan antecedents. It is the product of convergent influences, of diverse antecedent origin. It acknowledges no distinctive title, it heralds no shibboleth. It is a school of human tolerance, of personal independence, of scientific honesty. It

is the slave of neither prejudice, nor preconception, and abandons the accepted truth of yesterday, if it only be the demonstrated error of to-day. It places no premium upon personal prerogative, and extends no recognition to individual authority. It makes no proclamation of completeness, no pretension to sufficiency. It recognizes that truth is undergoing progressive revelation, not ending to-day, but continuing through the ages. It yields its plaudits to achievement, and recognizes that he is the greatest among men who reveals the most of truth unto men. It greets as a friend him who thinks, though he think error, for, thinking, he may think truth and thereby add to the common fund. It heeds all things, and examines all things, judges all things.

To you, the exponents of this new school, of this new generation, of this new century; to you, representatives of the Democracy of Science; to you, citizens of the Republic of Letters, I extend greetings; and here, in our parliament assembled; here, where our will is supreme, I this day invoke upon our deliberations the spirit of liberty, the spirit of courage, the spirit of progress, the spirit of truth.

THE VALUE OF CLINICAL MICROSCOPY, BACTERIOLOGY AND CHEMISTRY IN SURGICAL PRACTICE.*

BY

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of New York City.

For many years, almost without exception, my predecessors in the address on surgery have devoted their labors to the exposition of some general or special subject in the domain of operative surgery, and while I would in no measure detract from the value of a thorough technical knowledge, we should not in our attention to the *art*, fall short of a proper appreciation of the *science* of surgery.

The experienced surgeon soon learns that it requires more than asepsis and the rapid and skilful performance of an operation to achieve the fullest measure of success; that although a thorough practical knowledge of regional anatomy is essential in the highest degree to the conscientious fulfillment of the professional obligation, it is equally important that there be called into requisition the invaluable aid which laboratory research alone can give in determining an accurate diagnosis; in indicating the most rational measures of treatment not only in the preparation of a patient for an operation, and in the selection of the safest anesthetic, but for the postoperative management of the case, and in removing as far as possible all doubts as to the prognosis.

Chemical analysis of the normal and abnormal secretions and excretions of the body, *clinical microscopy* and *bacteriology* should form a part of the educational requirement of every surgeon. I do not insist that the busy practitioner should attempt to master all the intricate processes of the laboratory, for this is only possible to one who devotes years of patient labor to the fascinating department of science, but he should possess that practical knowledge of the chemistry of the body in health and disease, and of clinical microscopy and bacteriology, which any diligent student, under a competent teacher, and in a properly equipped laboratory, should be able to acquire in a 3 months' course of study.

The instances are exceptional in practice where this knowledge can not be applied with great benefit to the patient, and with satisfaction to the surgeon. It is naturally of greatest value in the cases where no emerg-

* Oration on surgery before the fifty-second annual meeting of the American Medical Association, at St. Paul, Minn., June 17, 1901. Published synchronously by courtesy of Dr. George H. Simmons, editor *Journal American Medical Association*.

ency for immediate operation exists, but its advantages are not wanting in these rarer cases, since it comes to his aid in the postoperative period.

Laboratory research, especially in the department of bacteriology, has placed not only the medical profession, but the entire human family under lasting obligations for the great benefits which have already been derived from its discoveries, and it may be safely said that it has done more than all else in accomplishing the revolution in surgical thought and practice which has taken place within the last 2 decades. One of the most notable illustrations of this great advance is the triumph which has been achieved over that once fatal disease, diphtheria.

The discovery by Klebs in 1883, and the isolation and cultivation in 1884 by Löffler of the bacillus of diphtheria had its logical sequence in Behring's invaluable discovery (subsequently elaborated by Roux) that the blood of animals, especially that of the horse, rendered immune to diphtheria by inoculation, first with attenuated, and then with more virulent organisms, contained a substance capable of neutralizing the effects of the bacilli or their toxin when simultaneously or subsequently inoculated in nonprotected animals.

This antitoxin serum in its dose of 10 cc. of either the 600, 1,000, or 1,500 immunizing units is potent not only to arrest the destructive processes which formerly characterized this disease, but to prevent the infection of those who have been exposed to the contagion. How great is the importance of the knowledge that these bacilli are not only always present in the throat of a patient suffering from diphtheria, but that they are frequently found on the nasopharyngeal surfaces and tonsils of persons free from systemic infection, and as shown by Biggs, Parke and Beebe, of New York, they may remain as long as 5 weeks after the membrane has been discharged from infected subjects, all of which points to the necessity for the isolation of the infected individual, and the careful disinfection of the throats of those who have been about diphtheria cases. (McFarland).

The statistics of Professor Welch, of Johns Hopkins University, show that the ratio of mortality as a result of these discoveries has been reduced more than 55%, and that in 115 cases, in which, by reason of an early diagnosis, the treatment of serum antitoxin was begun within the first 3 days of the disease, the mortality was only 8.5%. In 546 cases in which the remedy was begun after the third day of the disease, the mortality was 27.8%, the ratio of mortality increasing with fatal precision as treatment was delayed.

To the surgeon, one of the most gratifying results of this great triumph of the laboratory is the fact that he is now rarely called upon to perform the operation of tracheotomy, which was formerly distressingly frequent, nor to witness the sufferings associated with intubation of the larynx. A professional friend in the department of diseases of children informed me recently that whereas a few years ago he had from 10 to 20 intubations of the larynx on account of diphtheria in every month, he now, since the serum therapy was practised, averaged only 1 or 2.

I believe that what is true of this disease is true of all infectious processes, and that as our knowledge expands, a safe immunizing serum will be discovered for each special toxemia. Even now it would seem that this proposition is proved in other infections in which, like diphtheria, the pathogenic organisms are localized at the seat of infection, their toxic products alone entering the tissues through the circulation.

Of this type is the spirillum or "comma" bacillus discovered by Koch in 1884 in the intestinal contents of patients suffering from Asiatic cholera. These germs are not found in the deeper organs, the morbid changes in the tissues being due to their toxin. Immunizing injections of cholera cultures have already been experi-

mentally and successfully employed, and promise rich results.

In this same group, bacteriologists claim a place for *Diplococcus micrococcus lanceolatus* of Fraenkel, the *pneumococcus*. Sternberg and Pasteur isolated this germ in 1880, and in 1884 Fraenkel demonstrated it as the prevailing organism found in the sputum of croupous pneumonia. Very late investigations give encouragement to the hope that serumtherapy will soon be applied in the early arrest of the invasion of this most painful and fatal malady. Though pneumonia is strictly a medical disease, its early recognition as a surgical complication, or in view of an anticipated operation, is of very great importance. In a recent case which came under my observation at our laboratory, a specimen of sputum was sent in for bacteriologic study. It was not blood-stained or "brick dust," but yellowish-white in color like the ordinary sputum of bronchitis, and was supposed to be "grip" or tuberculosis. The bacillus of tuberculosis was not present, but numerous micrococci lanceolati were discovered, and the laboratory diagnosis was made and confirmed within 24 hours by the well-recognized symptoms of consolidation with the "brick-dust" expectoration of this disease which supervened.

Tetanus toxemia, or "lock-jaw," the organism producing which was discovered by Nicolaier in 1894, and which for years has baffled the most strenuous efforts of the bacteriologist and clinician seems at last to be classified with the controllable infections. Professor Osler, in the last edition of his "Practice of Medicine," says the immunizing serum of Tizzoni has been successfully and encouragingly employed in doses of 2.25 grams for the first dose, and 0.6 grams for subsequent doses. Of 113 cases treated by this method 63% recovered.

It was not until the discovery of the bacillus of typhoid by Eberth in 1880 and the pure cultures of this germ secured by Gaffky in 1884, that there was made possible in the vast majority of cases of typhoid fever a positive diagnosis.

The demonstration of Widal that when 10 drops of a 24-hour bouillon culture of *Bacillus typhi* was added and thoroughly mixed with 1 or 2 drops of serum from the blood of a typhoid patient, the bacilli lose their motility and become agglutinated in masses, was one of the most brilliant advances in clinical bacteriology, and of great value in surgical diagnosis.

In many of the lesions of the abdominal viscera, and especially in those located in that battle-ground of surgery, the right iliac fossa, where the physical signs and the febrile movement may suggest either beginning typhoid, intestinal toxemia, or a pyogenic sepsis, an early diagnosis may be determined in no other way than by the aid of the laboratory.

The practitioner who has not called into requisition the invaluable aid which bacteriology affords in the differentiation of those too often obscure intraperitoneal lesions, cannot appreciate the satisfaction which this practical application affords. How often the safety of a patient hangs upon even a few hours time, and alas, how often this precious time is wasted in the uncertainties of diagnosis, when a resort to the demonstration of science, available to all, would have plainly indicated the proper method of procedure. We know too well the fallacy of relying upon the ordinary subjective symptoms, and even some of the objective symptoms afford us no accurate clue to the pathologic process which may exist. The pulse and the temperature of commencing typhoid may well be mistaken for the pulse and temperature of an appendicitis. The pain and muscular resistance over the right iliac and the right abdominal region are in many instances practically alike. The nausea, the vomiting, and the general sense of uneasiness point neither directly to the one or to the other disease, but in a crucial test by Widal's reaction, with the blood-count pointing to the presence or absence

of a leukocytosis, the question is quickly settled. I have seen all the symptoms of appendicitis present in cases in which the blood-count contradicted a pyogenic sepsis, and in which Widal's reaction told the story of typhoid. On the contrary, I have dealt with cases which ordinarily would have been most perplexing, in which all the symptoms of typhoid prevailed at a period when it was too early to recognize this disease by Widal's test, and a leukocytosis of from 15,000 to 21,000 proved at the earliest possible moment that the case was one for immediate operation.*

The discovery by Bollinger in 1877 made the diagnosis of that comparatively rare affection, actinomycosis, clear. In examining the yellow granules and accompanying pus discharged from an infected area he recognized the ray fungus or actinomyces. More recent researches have shown this fungus to be composed of bacilli in various stages of development, some being spores and some more perfectly developed organisms.

In another fortunately rare disease, malignant pustule, caused by the lodgment in an abrasion of the bacillus anthracis, we are indebted to the laboratory for our knowledge of its etiology. Bacillus anthracis discovered by Devaine in 1863 is not usually found in the blood except in the most malignant cases and in the last stages of fatal infection, but can be demonstrated in the pustule of inoculation with the microscope or by cultures.

Roux and Chamberland, according to McFarland, have found that filtered cultures will produce immunity when properly introduced into animals, and we reasonably hope from these experiments that the serum treatment will before long be made applicable to infected human beings.

Another rare organism is the bacillus of malignant edema, which was discovered by Pasteur in 1875 and called by him *Vibrio septique*. There are only 2 cases of this disease so far reported in man, and they were subjects of abnormally low resistance infected by the hypodermatic administration of a product of musk.

Bacillus pestis or bubonic plague organism was discovered in 1894 simultaneously by Yersin and Kitasato, in blood drawn from the finger tips of infected individuals, and in the broken-down lymph glands, and is described by Kitasato as greatly resembling the micro-organism of chicken cholera.

Bacteriologic research has robbed the puerperal state of much of the anxiety and dread which formerly attended this ordeal, not only in preventing sepsis, but in recognizing the infections already established in time to prevent a general peritonitis or septicemia. The puerperal uterus, or this organ when the seat of non-puerperal endometritis, offers an ideal field for bacterial proliferation and invasion, since septic organisms enter-

ing the cavity may rapidly penetrate the endometrium and enter the lymph channels whence they pass into the venous sinuses and lymphatics of the pelvis.

Professor W. R. Pryor, in a paper read before the New York State Medical Association in 1900, says, "puerperal sepsis if not rapidly fatal almost always produces lesions which seriously damage the pelvic organs or the viscera," and that "time is in this serious condition an important element." He recommends the early employment of the Döderlein tube, which, after sterilization, is passed into the uterus, being protected from contact until the fundus is reached. From the serum and debris thus obtained cultures are made, and the character of the operation—either curettage or hysterectomy—determined by the result of bacteriologic investigation.

Not only does the laboratory come to our assistance in the diagnosis of certain obscure surgical lesions of the stomach, but it is still more valuable as an aid in arriving at the exact condition of the digestive functions of this organ, any derangement of which it is at times exceedingly important to correct in order to bring a patient into suitable condition to stand an operation. Thus it is important to determine in certain instances whether or not free hydrochloric acid exists in this organ, and while the total quantity poured into the stomach in the digestive process cannot be accurately measured, clinical chemistry can closely estimate the total quantity found at a given moment during digestion. The acid-combining power of the proteids is known, and by certain tests it is feasible to estimate sufficiently close for a satisfactory diagnosis, the quantity of hydrochloric acid secreted. The small quantity of hydrochloric acid which combines with ingested inorganic elements is lost to gastric digestion, serving as it does its function in this process in the intestines.

It is clear, as stated by Van Valzah and Nisbet, that the hydrochloric acid which combines with the proteids, and that which remains free, together roughly represent the activity of acid secretions. It is logical then to conclude that the quantity of hydrochloric acid loosely combined with albumin, together with the quantity remaining free in the contents withdrawn at the end of a particular time after eating a particular meal is a practical and clinical measure of the secretory activity of the peptic glands, and of the digestive work of the stomach. All of this is made sufficiently exact for practical purposes by the laboratory method of analysis after the simple test-breakfast of Ewald and Boas, or the more elaborate test-meal as recommended by Germain-Sée.†

†The simplest method is that known as the test-breakfast of Ewald and Boas in which on an empty stomach, usually in the early morning, a breakfast roll which contains about 5 gm. of proteids, 30 gm. of carbohydrates, 1/2 gm. of fat, 1/4 of a gm. of ash, and weighs 70 gm., and 350 cc. of water (about a glass and a half) are taken. The bread should be thoroughly chewed and insalivated before being swallowed with the water. Usually in 1 hour's time a tube is introduced and the contents of the stomach withdrawn, usually by expression, or by siphonage, and then filtered. An estimate of the acidity of the filtered contents is made by using a deci normal solution of potash or soda. The number of cc. of this solution which will neutralize 100 cc. of the filtered contents of the stomach expresses in figures the acidity of the fluid withdrawn. At the end of an hour, under approximately normal conditions of digestion, the total acidity should be 50 to 60, the hydrochloric acid albumin 30 to 40, the free hydrochloric acid 10 to 20. Any departure from this rule shows the abnormal absence or excess of this important agent.

The test-meal of Germain-Sée is at times preferable, since it contains a larger quantity of proteids than the test-breakfast of Ewald and Boas just given, but the method of procedure is practically the same. The presence of hydrochloric acid can be recognized by Gunzborg's reagent, which is composed of:

Phloroglucin 2 grains.
Vanillin..... 1 grain,
Alcohol (absolute).....30 grains.

By spreading 3 or 4 drops of this reagent in a porcelain crucible, adding upon this the same quantity of the filtered contents, and slowly warming the crucible, after several seconds, a red color appears, and at times the red crystals of free hydrochloric acid are seen. Or the simpler method of employing a filtered paper which has been soaked in a 0.5% alcoholic solution of diamethylamidiazobenzol and dried. This, in the presence of a trace of free hydrochloric acid turns distinctly red.

*Two of the cases occurring in my own work within the last few months may emphasize the great value of this technic.

A man of 30 was seized with quite severe pains which were confined to the region of the cecum and appendix. Upon palpation there was well-marked resistance in the muscles immediately over these organs which was not observed in any other part of the abdominal wall. He had vomited on one or two occasions and the temperature ranged from 101° to 103° F. on the second day of this attack. The questions which were presented to the consultants were whether this temperature could be accounted for by intestinal toxemia, by appendicitis, or incipient typhoid. Although it was too early in the history of a typhoid case to encourage a belief that Widal's reaction would be present, this was made and with negative results. On the following day, the symptoms still pointing toward typhoid fever, a careful blood-count was made, and the leukocytes did not count over 7,000. Assured from this that no dangerous pyogenic process was present, the idea of operation, even exploratory, was abandoned until the examination might be repeated on the succeeding day. A second careful blood-count showed no leukocytosis, and on the fourth day, although Widal's reaction was still absent, the case was declared to be typhoid, and the subsequent history proved the diagnosis to be correct, since a few days later the reaction of typhoid was present, and the patient went through the regular stages of this fever.

In a second case, a male patient, 45 years of age, there was a typical typhoid tongue, temperature ranging from 100° to 103.5° F., tenderness and muscular resistance in the right iliac fossa and loose discharges from the bowels not unlike those frequently met with in typhoid. Widal's reaction was tried with negative results on 3 successive days. The blood-count on the fifth day showed the leukocytes numbering 21,000, justifying a diagnosis which excluded typhoid and confirmed the suspicion of pyogenic sepsis.

The presence of lactic acid in the stomach contents as shown by Kelling's test* has a distinct diagnostic value, since it takes place in comparatively rare conditions, and since these conditions are seldom fulfilled except when carcinoma is present.

Lactic acid is dependent upon the presence of a special bacillus which thrives in the stomach under abnormal conditions, and is capable of converting glucose and lactose into lactic and carbonic acid. Boas goes so far as to insist that the persistent presence of lactic acid in noteworthy quantity during the digestion of a saucer of oatmeal, chemically free from lactic acid, is a specific sign of carcinoma of the stomach.

While the stomach may under varying conditions contain hosts of various bacteria in addition to the one just considered, there are only 3 others that are of importance as pathogenic organisms. First, *Sarcine ventriculi* (in their usual cube arrangement) which when found indicate insufficiency of the stomach muscle due to nonmalignant obstruction. They are not found in carcinoma, since they perish in the presence of lactic acid, which, as we have just shown, is so common in malignant disease of this organ.

Another microorganism is the *yeast plant* also found when motor insufficiency exists. It may be present when the stomach contents are alkaline, neutral or acid.

Bacillus geniculatus is present under the same conditions which produce the lactic acid organism and is considered also to be suggestive of carcinoma.

When the presence of blood is suspected in the stomach and is not clearly defined by the microscope, chemistry comes to our aid in its recognition by the glacial acetic acid and ether test.†

A study of the discharges from the rectum is as yet of little value to the surgeon. Beyond the recognition of blood or pus, or cast-off cell elements in certain malignant neoplasms, there is but a single organism which is of real diagnostic value, namely, the ameba of dysentery, described by Lamb in 1859, which is a motile mass of protoplasm about 20 micromillimeters in diameter containing a single nucleus, and 1 or several vacuoles.

In the differentiation between the pathogenic organisms of specific and non-specific urethritis, microscopy and bacteriology are our only infallible guides. They teach us to eliminate the various bacteria found in the external genital and urinary passages, not bearing directly upon the etiology of urethritis, and to recognize distinctly the 2 forms of diplococcus, the gonococcus of Neisser, and the pseudodiplococcus, which while not morphologically different from the specific disease-producing organism, can be readily distinguished by special modes of staining as well as by cultures. In the daily routine of practice the exact nature of every suspicious urethral discharge should be subjected to careful scrutiny. The patient is entitled to the satisfaction of a negative result, which is easily demonstrated by staining the smear with methylene blue which clearly defines both organisms. If no cocci are revealed all anxiety is put at rest, but if there are present both varieties of these organisms, occupying as they do, the protoplasm of the pus corpuscles, a further research and the differentiation of the true form from the false diplococcus is imperative. The pseudococcus retains the violet color of the anilin-gentian water violet stain, while with careful laboratory technique the addition of the Bismarck brown brings out the gonococcus, the protoplasm of a single pus corpuscle showing at times both the blue stain

of the pseudococcus and the diplococcus of Neisser which retains the brown color.‡

Bearing in mind the fact that the gonococcus of Neisser may remain dormant in these passages for months, and, as maintained by some observers, for years, incapable of a further inoculation of the seemingly immunized patient, but capable of exciting the most acute and injurious inflammation in an innocent victim, it becomes a matter of the greatest importance to subject to most careful study the external genitourinary passages where an infection has once existed. It has been demonstrated that an artificial urethritis as that which nitrate of silver produces will develop the dormant gonococci and cause their presence in the discharge.

Keys and Chetwood, in their excellent volume on venereal diseases, place well-deserved emphasis upon the value of the Gram test for recognizing these organisms. They properly insist that the diplococci should be of the recognized size and have within the protoplasm of the pus corpuscle their proper shape and arrangement and remain negative to Gram's staining. Even when cultures are made to demonstrate the specific organisms beyond all doubt, resort should still be had to the Gram staining as a final means of identification.

In cases of pyelitis, many of the difficulties which formerly stood in the way of differential diagnosis between renal calculi, simple pyogenic pyelitis or the presence of tubercular disease in this organ, are now overcome by the careful methods of the laboratory.

The presence of the bacilli of tuberculosis in one or both kidneys, even when they are exceedingly infrequent in the discharge, can be demonstrated in urine drawn by urethral catheterization, or by the more simple process of bladder sequestration, when the suspected organisms are with other detritus thrown down by the centrifuge. The carbol-fuchsin stain decolorized with 5% sulphuric acid, brings out in brilliant red the outlines of the bacilli of tuberculosis, while the addition of 95% alcohol decolorizes the smegma bacillus, and thus eliminates this possible source of error to any but the more expert laboratory workers.§

In the effort to arrive at the general condition of a patient, the chemie, microscopic and bacteriologic study of the urine is only second in importance to that of the blood, and when we consider the additional and exact information which can thus be obtained concerning any pathologic process at any point in the urinary tract, the value of this analysis is very materially increased. A careful study of the urine is always indicated before determining what anesthetic it is safest to employ in the operation to be undertaken. When there is no important lesion of the heart, either in its valvular mechanism or in the blood supply and nutrition of its muscular walls, few surgeons, I hold, would employ ether in a

†Dr. Jeffreys, the director of the laboratory in the New York Polyclinic, employs the following differential stain:

Use Gram's stain followed by a contrast stain such as Bismarck brown. To prepare this stain proceed as follows:

Prepare aniline water by emulsifying 8 drops of aniline oil in about 10 ccm. of water, filter through a wet filter; to this aniline water add about $\frac{1}{4}$ its bulk of a saturated alcoholic solution of gentian violet. Stain smear with this "aniline water gentian violet" 1 or 2 minutes. Wash in warm water and then immerse in Gram's solution for 1 minute. The formula for this solution is as follows:

Iodin	1 gram.
Potassium iodid	2 grams.
Water	300 cc.

Thoroughly wash in 95% alcohol until no more blue appears to wash out; then wash in water. Counterstain for 1 minute with a saturated solution of Bismarck brown in 3% aqueous solution of carbolic acid. Wash, dry, and mount in balsam. After this treatment, pseudogonococci should be stained violet, and gonococci should be brown.

§The following process is used at the Polyclinic Laboratory in determining the presence of Bacillus tuberculosis in the urine and feces. The sediment is thrown down in the centrifuge, the smear dried slowly over the Bunsen burner and stained with carbol-fuchsin, which is then warmed over the Bunsen burner for 3 or 4 minutes without being dried. Then wash with water and decolorize with 5% sulfuric acid, and again wash with water. After this add 95% alcohol, which decolorizes the smegma bacillus and again wash in water, counterstain with methylene blue and dry. With the 1-12 oil immersion, the clusters of tubercle bacilli are readily seen.

*Kelling's test consists of 5 cc. of the filtrate diluted to 50 cc. with distilled water, to which 1 or 2 drops of official 5% solution of the perchlorid of iron is added. The yellowish-green tinge indicates the presence of lactic acid.

†To 10 cc. of the filtered contents add 3 cc. of glacial acetic acid, and extract the coloring matter of the blood by shaking with 5 cc. of ether. This turns the ether extract brown. When this discoloration does not take place there is no blood. To carry the demonstration further, to the brownish decanted ether extract, 10 drops of fresh tincture of guaiac with a few drops of peroxid of hydrogen are added. After vigorously shaking, the mixture becomes clear blue if blood is present.

protracted operation in which there was any suggestion of an acute nephritis, or in certain chronic forms of Bright's disease.

It is commendable practice to study through several days the quantity of urine passed, keeping accurate measurement, as well as making a qualitative analysis of that which is passed under conditions as near as possible similar to those to which the patient had been subjected before coming under observation, and then under conditions of rest, with proper alimentation and the free opening of the alimentary canal with calomel and Carlsbad salts (which agents in my experience most readily do away with fermentation and the production of gases in the bowels) to note the changes which occur in excretion.

The presence of oxyluria is in my opinion a contra-indication to a serious surgical operation, for the reason that it is pathognomonic of a disturbed nutrition due to insufficiency of the digestive fluids, and to fermentative processes in the intestinal tract.

An excess of *uric acid*, evident in the rosettes or rhombic or quadrate crystals (one-sixth objective), found in the urine *which has not been passed* more than three or four hours, has also a pathologic significance scarcely less than that of oxyluria. It indicates a condition of defective nutrition which is part of the gouty or rheumatic diathesis, predisposes to chronic nephritis and is one of the symptoms of various acute inflammatory processes, of leukemia, cirrhosis of the liver, gastrointestinal catarrh, and is often present in diabetes mellitus.

The chemistry and microscopy of the urine further informs us when ammoniacal decomposition of the urine is taking place within the bladder, suggesting insufficiency of this organ due to obstruction of the urethra or to atony of the bladder muscle. The large rhombic masses or stellate and cross-shaped rosettes of the triple phosphates only exist in these abnormal conditions of the bladder, and with the brownish colored thorn-like crystals or urate of ammonia are important aids to diagnosis.

The presence of epithelia from the various portions of the urinary or genitourinary tract, of spermatozoa and various bacteria chiefly pyogenic in character, are further and well-recognized evidences of the value of the microscope in surgical diagnosis. In rarer instances, the hooklets of echinococcus, the embryos of filaria and the ova of Bilharzia hæmatobium are thus discovered in the urine. I have been able once to demonstrate the presence of the eggs of the last-named parasite in the bloody urine of a missionary in Africa where he had by long residence acquired the disease.

From the laboratory we are taught the well-known tests for albumin and sugar by which all sources of error may be eliminated in determining not only their presence but the quantitative analyses as well. The pathologic conditions in which these substances are excreted are at times exceedingly grave, and it is of vital importance that their presence be discovered so that timely and judicious treatment may be instituted, or operation avoided which under such unfortunate conditions would be invariably fatal.*

In glycosuria the surgeon must know whether he is dealing with what Pavey designates as alimentary diabetes, in which the sugar eliminated by the urine is derived solely from the food as result of defective carbo-

hydrate assimilation; or whether that almost hopeless condition of composite diabetes in which abnormal disintegration is taking place, is present.

No less important is the estimate of the amount of urea which is being eliminated in a given quantity of urine. Employing the simple apparatus of Doremus with the sodium hypobromite solution† within a few minutes by the evolution of nitrogen gas in the presence of this, the amount of urea which is being carried off by the kidneys is readily demonstrable.

Nonparasitic chyluria (that form not due to the presence of filaria) is a rare affection, but it does exist, the fluid coagulating almost like jelly. In these conditions the microscope shows little that is pathologic excepting some minute granules and oil droplets similar to those in milk. (Osler.)

The presence of blood in the urine, even in the most minute quantities, can in almost all cases be recognized by the microscope, and in those exceptional instances of hemoglobinuria in which the corpuscles have disappeared, the blood-crystals of Teichmann may be recognized by the addition of a drop of strong acetic acid to a few drops of urine placed upon a watch glass. For this condition of blood pigment in the urine in which the blood-cells are absent, Osler suggests the name methemoglobin. He further states that when granular pigment or darkly-pigmented urates or fragments of blood-disks do not point clearly to the presence of blood, the 2 absorption bands of oxyhemoglobin, and more commonly, the 3 absorption bands of methemoglobin, of which the one in the red near G is characteristic, may be determined by the spectroscope. In general, however, the red and white blood corpuscles and filaments of clot are clearly recognizable with the one-sixth objective. Even without the microscope the presence of a very minute quantity of blood distributed through the urine can be recognized by Heller's test of adding a few cc. of urine to a drop or two of strong solution of caustic soda, and boiling the mixture. If blood is present a bottle-green color is produced and the phosphates fall to the bottom of the test-tube in fine flakes, tinged brownish-red by the coloring matter of the blood. (Hare.)

When blood is found in the urine as a complication of papilloma of the bladder, particles of the broken-down tumor are very frequently found in the urine, and under the microscope the epithelial elements of this neoplasm are easily recognized and point clearly to the source of the hemorrhage. In hemorrhage from the kidney substance blood casts tell unmistakably of its source.

Chemistry demonstrates in the urine the presence of indican or indoxyl sulfate of potassium, a product resulting from the decomposition of albuminous products in the intestinal tract under the influence of bacteria. It is always suggestive of persistent constipation, is found in obstruction of the intestinal canal, carcinoma of the liver or stomach, in peritonitis, and is one of the symptoms of pernicious anemia. Urine containing this substance if treated with 2 or 3 times its volume of hydrochloric acid turns a violet color.

A careful analysis of the various casts found in the urine under different conditions is of inestimable value. Blood-casts indicating not only hemorrhage from the kidney, but acute inflammatory conditions, and casts composed of pus corpuscles and studded with micrococci suggesting pyelonephritis, are most valuable results in laboratory research. It also tells us of the existence of granular casts which indicate a chronic or subacute inflammatory process in the substance of the kidney.

*To determine the presence of albumin, the nitric acid and heat test is classic and reliable. The simplest quantitative analysis as recommended by Hare is to fill the tube for the centrifuge to the 10 cc. mark with urine, to which is added 2.5 cc. of potassium ferrocyanid solution (one part to ten) 1.5 cc. of acetic acid is also added. After mixing the fluids well the centrifuge is rotated until the albumin is precipitated. Every 1 cc. mark on the tube represents 1% by bulk of albumin; that is, if the albumin extends up to the 3.5 cc. mark, the albumin amounts to 3.5%.

Fehling's test in the demonstration of sugar and the quantitative analysis by means of yeast fermentation is another important laboratory process, without recourse to which the surgeon in a certain group of cases can not satisfactorily work.

†Solution A. bromin and sodium bromite each 125 grams, water 1000 cc. Solution B. sodium hydrate 400 grams, water 1000 cc. Take of A and B each 1 part, water 3 parts. They are only to be mixed when needed for use. After the tube has been filled with the solution the pipette is filled with urine to the 1 cc. and the point carefully introduced beyond the bend. The urine in the pipette is then expelled by compression of the bulb, care being taken not to force any air into the tube.

which is accentuated when fatty casts are found, and that hyaline casts have a grave significance, as they are most frequently associated with chronic interstitial nephritis, and that the waxy variety is very common in chronic suppurative processes, usually in the bones and joints.

Today, one of the most attractive subjects of laboratory research is the blood, and although hematology is practically in its infancy, many valuable discoveries have already been made, and in the proper study of a patient, a knowledge of the blood is as essential as that of the urine. It may throw no light upon many cases, but the reward will be tenfold in that particular instance where the diagnosis is made definite and clear. It is necessary to know the normal blood thoroughly by constant practice in order to recognize the abnormal changes which may be present in a given case, and I can think of no more useful way of spending the time not taken up by practice than by going over these important features of laboratory technic.

A knowledge of hematology enables the surgeon to detect any form of anemia and to determine whether it is a type of blood impoverishment which can be corrected, or whether it is of the graver or more pernicious forms which would either preclude an operation, or if this were absolutely necessary, would enable him to announce to those entitled to information, the gravity of the outlook. In ordinary practice it is not always essential to differentiate between a pernicious anemia or a leukemia, or whether this latter condition is present in the lymphatic or splenic-myelogenous form, for the reason that all of these graver varieties call a halt to operative measures when these can be avoided. But the anemia which comes from malnutrition or malaria, or chlorosis, can be positively diagnosed by a study of the blood.

The richness of the hemoglobin may in a fair measure be determined by the comparative color test of the blood in proper solution, as observed through von Fleischl's hemometer. When a low percentage of hemoglobin is present, it is an indication to avoid any operative shock until the impoverished condition of the blood can be corrected by proper nourishment, by rest, or by medication, when this is positively indicated. This also suggests the aid of the microscope in a further investigation as to the condition of the corpuscular elements of the blood. It is advised by Mikulicz never to operate when the register of the hemometer shows less than 35, and it would probably be safer to place the standard 10 or 15 points higher. Even in the simple forms of anemia, the degenerative changes in the blood elements, especially in the red cells, are easily recognized, and are full of valuable suggestions.

When the red cells are near the normal count (about 6,000,000 to the cc.) they may still show certain characteristic deformities of individual cells (poikilocytosis) as well as variations in size in the presence of microcytes and macrocytes which appear in the field, and which are not seen in the normal blood. If the red cells are paler in color than normal, if they undergo crenation or breaking at the edges, and do not form rouleaux, it is evident that anemia is present.* The danger signals are still further in evidence when nucleated red cells (normoblasts) appear, and when there is added to these either the giant red cells (megaloblasts) or abnormally small microblasts, the condition is still more serious, since these corpuscles never exist in the normal blood.†

Hematology further enables us to differentiate with reasonable precision between chlorosis and pernicious anemia. In the former, though pale in color, the blood coagulates rapidly, while in the latter coagulation takes

place slowly, and the red corpuscles do not tend to the formation of rouleaux. The red cells in chlorosis (which are smaller and paler than normal and are frequently deformed) vary from 4,000,000 to 2,000,000, rarely falling as low as 1,000,000, while in pernicious anemia, in which the average diameter of the red cells is increased, the count rarely rises above 1,000,000, and often below this. Cabot gives 1,000,000 as the average number per cubic millimeter. The white cells are also diminished, varying from 4,200 to as low as 500, with lymphocytosis as a prominent feature. Megaloblasts are found in both conditions, but while plentiful in pernicious anemia, are rarely noticed in the milder disease, chlorosis. The more megaloblasts in pernicious anemia, the more hopeless the case.

The surgeon would be extremely unfortunate to fail in the recognition of these often obscure lesions, and if possible to correct them before subjecting his patient to the severe ordeal of an operation. In the early recognition of septic processes—chiefly pyogenic—surgery can no longer disregard the value of the blood count, especially the estimation of the leukocytes.

The relative number of leukocytes in a given quantity of blood, or their proportion to the red corpuscles can be readily determined by the use of the Thoma-Zeiss apparatus, which, as is well known, consists of 2 pipettes, 1 for the red and 1 for the white, with a well-outlined and peculiarly constructed slide or counting apparatus, and is employed with the ordinary $\frac{1}{4}$ laboratory objective. The differentiation by the use of the Daland hematocrit is not considered sufficiently exact to be satisfactory in the hands of the majority of hematologists. It is essential in making these differentiations to bear in mind the normal conditions that at the sea level the average number of red cells per cubic millimeter is 5,000,000 in men, and 4,500,000 in women, and 6,000,000 in the young and more vigorous adults, while the white cells average about 7,500 per cubic millimeter for each sex.

Certain conditions, not considered normal, influence the number of leukocytes since in the latter months of pregnancy they are moderately increased, and after parturition, and during the early weeks of lactation, a leukocytosis may be present, without pathologic significance. After hemorrhage the leukocyte count is increased, and in diphtheria, erysipelas, trichiniasis, all extensive forms of endometritis, and all acute pyogenic processes, leukocytosis exists except in those cases where the vitality of the individual has been overwhelmed by the severity of the septic process, under which condition the leukocytes no longer respond to the demand for the protection of the tissues, and are not present in the superficial blood in even normal proportions. It is probable that the application of this knowledge is more profitable at present in a study of the various lesions of the abdominal and thoracic organs. We know that in a certain proportion of cases of infection, temperature does not always indicate the increasing gravity of the lesion, while the degree of sepsis can be in great measure determined by the leukocyte count. In impaction of feces, extrauterine pregnancy, floating kidney, gallstone colic, renal colic, ovarian neuralgia, intussusception, volvulus, internal hernia, twisted pedicle, etc., there is no leukocytosis unless complicated with an acute septic process. In abscess of the liver the leukocyte count ranges from 12,000 to 48,000, while there is a well-marked increase in all the septic pyogenic processes of the lungs and the pleura.

In osteomyelitis the leukocyte count ranges as a rule from 15,000 to 25,000, and at times higher. Since in the early stages of this disease it is at times difficult by subjective symptoms to differentiate between rheumatism or gout, the leukocyte count is invaluable in demonstrating at once the pyogenic process.

In that very rare disease, trichiniasis, the leukocytes register sometimes as high as 30,000, but the special

*The average red corpuscle (normal) is 7 micro-millimeters in diameter.

†A normoblast is a nucleated red cell not over 10 mm. in diameter, with a nucleus not more than one-half the diameter of the same.

feature is the presence of a large number of eosinophile cells, sometimes as high as 50%, and in rare cases 67% of the total number of leukocytes being this form of corpuscle. A very considerable number of cases have been reported within the last year in which the diagnosis had been determined by the presence of eosinophiles.

Not only can the presence of *Plasmodium malarie* be recognized in the red blood cells, but hematology is already able to determine between the different varieties of the malarial parasite. It has been shown that the tertian organism takes 48 hours to develop and undergo sporulation; the quartan 72, while the estivoautumnal passes through irregular phases, varying from 48 hours to several days.

We are enabled to demonstrate also the presence of the spirochete of relapsing fever discovered by Obermeier in 1873. Although the corkserew or spiral threads are rarely seen unless the blood is examined in the height of the fever paroxysm, diplococcus-shaped bodies believed to be the spores of this organism are found in the periods of remission.

The time allotted has permitted hardly more than a suggestion of the methods of laboratory research, applicable in the daily routine of surgical practice. To me the moral of the lesson is that the *science* and *art* of surgery are inseparable.

THE PROGRESS AND TENDENCY OF HYGIENE AND SANITARY SCIENCE IN THE NINETEENTH CENTURY.*

BY

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Hygiene is a department of medicine whose object is the preservation and promotion of health and deals, therefore, with all the factors, likely to influence our physical welfare. It is not an independent science, but rather the application of the teachings of physiology, chemistry, physics, meteorology, pathology, sociology, epidemiology and bacteriology to the maintenance of the health and life of individuals and communities. The subject is very properly divided into personal and public hygiene. In the former the doctrines are applied to individuals; in the latter to communities and States.

This branch of medicine has received such an impetus within the last few decades that many persons regard it of modern origin; such, however, is not the case, for on turning to early history we almost invariably find that the health of the population has been made a subject of legislation. Hygiene was practised by the Egyptians, the old Indians and Hebrews, and a study of the habits of the primitive peoples shows that a desire to prevent disease is innate to all men.

The Greeks and Romans paid special attention to the physical culture of their youth. They also paid much attention to the water-supply, and Athens was provided with sewers at an early period of her history.

The teachings of Hippocrates, 400 B. C., doubtless bore many fruits, and whether it is true or not, as stated by Galen, that he ordered, during a pestilence at Athens, aromatic fumigation and large fires in the streets, we have at least his writings on air, water, soil, habitations and occupations, and his views of local and seasonal influences on sporadic and epidemic diseases. In Homer's "Odyssey," reference is made to Ulysses purifying his house with burning sulphur, and Aristotle, in his "Politica," shows his sanitary acumen when he says: "The greatest influence upon health is exerted

by those things which we most freely and frequently require for our existence, and this is especially true of water and air."

The Romans, amidst their military operations, found time to construct the "Cloaca maxima" about 2,400 years ago, which not only served for the removal of refuse, but also helped to drain many of the marshes, and constitutes the principal sewer of modern Rome. Aqueducts were made to cover miles upon miles of the surrounding plains, and their splendid ruins, many of which have been restored and are now used for their original purpose, attest the munificence and abundance with which the first of sanitary requisites was supplied to the Eternal City. It is stated that between 400 B. C., and 180 A. D., about 800 public baths were established, among them the "Thermae Caracallae," which alone would accommodate 3,000 bathers at one time.

During the reign of the Caesars, attempts were made to drain the Pontine Marshes. Sanitary officials and physicians to the poor were appointed, and homes for poor girls and orphans were established. In the meantime the true spirit of Christianity asserted itself, and we read of the establishment of hospitals as early as the fourth century. These were speedily followed by infant and orphan asylums and homes for the poor and incurables. During the Middle Ages sanitation received a decided check; ignorant and brutal prejudices appear to have been the ruling spirits and for many reasons it was the most unsanitary era in history.

PESTS AND UNSANITARY CONDITIONS OF THE MIDDLE AGES.

About this time most of the towns in Europe were built in a compact form, surrounded with walls; the streets were narrow and often winding for defensive purposes, shutting out light and air from the houses. The accumulation of filth was simply frightful. Stables and houses were close neighbors, human filth was thrown on the streets or manure heap. The dead were buried within the churchyards. Sewers and aqueducts having been permitted to fall into disuse, the inhabitants were compelled to resort to wells with polluted subsoil water. All the conditions were favorable for the spread of infectious diseases and in the fourteenth century alone the Oriental or bubonic plague, according to Hecker, carried off one-quarter of the population of Europe, or over 25,000,000 victims.

Although this disease had been described as early as the third century, B.C., a lamentable state of ignorance is shown, when we remember that the majority of people regarded the plague as the dispensation of God's providence, an evidence of divine wrath, which they hoped to allay by all sorts of self-inflicted punishments, and the Passion Plays of Oberammergau and elsewhere originated about this time. Others accused the Jews of being the cause, and hundreds were burned at the stake until Pope Urban IV placed them under his special protection. The Faculty of Paris attributed the epidemic to the conjunction of planets on a certain day in 1345, and the Faculty of Leipzig, with equal gravity, asserted that it was connected with earthquakes, unseen waves of air, inundations, etc. Venice, alone of all Europe, took a sensible view of the matter, and for the first time in history, in 1348, appointed 3 guardians of public health, and the rules adopted later to isolate infected houses and districts for 40 days has given rise to the term quarantine—from *quaranta giorni*.

The repeated invasion of the Oriental pest appears to have everywhere compelled some sanitary efforts and an imperial decree, in 1426, required the appointment of city physicians throughout Germany, whose duty it was to adopt preventive measures. A city ordinance of Nürnberg, in 1562, gives detailed directions as to the quality of bread, beer and wine offered for sale, the cleaning of streets and houses, the disposition of infected clothing

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and bedding, the fumigation with sulphur and straw of pest-houses, etc.

In 1685 Prussia established a central medical bureau, and appointments of health officers and privy medical counsellors were made, whose duties consisted in advising the men entrusted with the care of the government on matters relating to public health, and some of these titles are still in vogue in Europe. At the beginning of the eighteenth century, Prussia, upon being threatened with an invasion of the bubonic plague from Austria, created the "Collegium Sanitatis," popularly called the "Pest College," which was really the beginning of the present state board of health. In 1762 a sanitary council was established in every Prussian province, for the prevention of disease among man and animals. About the same time sanitary improvements in the way of widening streets for the purpose of supplying more air and light to the habitations, and better methods for the collection and removal of the wastes of human life were introduced, but, broadly speaking, at the close of the seventeenth century the habits of the people in Europe were generally filthy and in striking contrast to those observed among the most untutored savages of the present day.

In Madrid, we are told by Barcome, in his history of epidemics, "that not even a privy existed in 1760. It was customary to throw the ordure out of the windows at night, and it was removed by scavengers the next day. An ordinance having been issued by the king that every householder should build a privy, the people violently opposed it as an arbitrary proceeding, and the physicians remonstrated against it, alleging that the filth absorbed the unwholesome particles of the air which otherwise would be taken into the human body. His majesty, however, with commendable zeal, persisted, but many of his citizens, in order to keep their food wholesome, erected privies close to their kitchen fire-places."

With such unsanitary conditions we need scarcely be surprised that the mortality in towns was greater than their birth-rate and that the city population had to be recruited continually from the country. Toward the close of the eighteenth century many sanitary reforms were effected, however, especially in connection with infant and orphan asylums, and the management of schools and prisons. Of special importance is the brilliant discovery, or re-discovery, of vaccination by Jenner in 1796.

PROGRESS OF SANITATION IN THE NINETEENTH CENTURY.

The nineteenth century can boast of many advances in hygiene, particularly since the European invasion of cholera in 1830. The English towns which had been visited by this disease and those fearing similar scourges were willing to profit by their sad experience, and freely instituted sanitary reforms in the establishment of sewers, public water supplies, sanitary homes, etc.

The example of England was followed by all civilized nations, with similar results. The efforts of sanitation, as taught by Dr. Parkes, were demonstrated during the Crimean War and, as beautifully expressed by Virchow during our Civil War, reached "the highest point in humane efforts ever attained in a great war," and we may proudly add, have even been excelled during our late Spanish-American War.

PROGRESS OF SANITATION IN THE UNITED STATES.

While the people of the United States were not slow in adopting and originating sanitary measures of great value, our ideas of personal liberty, guaranteed to us by the Constitution, evidently prevented early legislation in matters of public health, for fear that such legislation might affect the personal habits of the citizen and lessen his freedom of action. Dr. Samuel W.

Abbott, in his masterly exposition of "The Past and Present Condition of Public Hygiene and State Medicine in the United States," records, however, the gratifying fact that the early colonists recognized the need of preserving their records, which constitute the foundation stone of public hygiene, by enacting a law in 1639 "that there be records kept of the days of every marriage, birth and death of every person in this jurisdiction."

The importance of vital statistics is not fully appreciated at the present day, and yet, as remarked by Dr. Billings, "when we wish to study the healthfulness of a city, whether it is getting better or worse, or judge correctly the effect of certain sanitary laws, we should not only know the number of deaths, but also the amount and character of the prevalent disease, together with accurate information as to the number of population at different ages." It is a matter of regret, therefore, that even now only 10 states, Connecticut, Delaware, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Rhode Island, and Vermont, have anything like a satisfactory system of vital statistics.

According to Abbott: "Up to the close of the eighteenth century and for several decades of the nineteenth, almost the only health legislation which was enacted in the different states in the Union consisted in a few laws relating to smallpox, since this pestilence was scarcely ever absent for many years at a time from any city or village, until after the general introduction of vaccination."

Dr. Waterhouse, of Cambridge, having secured a supply of vaccine lymph from Dr. Jenner, introduced vaccination in Boston in 1800, and Dr. Seaman in New York in 1801. In the same year President Jefferson received some virus from Dr. Waterhouse and was vaccinated by Dr. Grant, of Georgetown.

The invasion of cholera from Canada in 1832, and the epidemic of 1848-1849 here, as in Europe, aroused public interest in sanitary reforms, and the legislature of Massachusetts in 1849 appointed a commission to make a sanitary survey of the State, and we are told by Dr. Abbott "that this was done none too soon, for in that year the general sanitary condition of the State, as shown by the report of the commission, was deplorable and the death-rate unusually high. Only a few towns had then introduced public water-supplies. Cholera was beginning to appear again and dysentery and other infectious diseases were more destructive than they had been for many years."

HEALTH BOARDS.

New Orleans, having lost 8,000 victims of cholera in 1832, out of a population of about 55,000, and anxious to maintain a quarantine, secured the enactment of a law in 1855 for the establishment of a state board of health; in 1869 a more comprehensive board was established in Massachusetts, followed in 1870 by California, since which time nearly all of the states and territories—42 in number—have followed the example. *Pari passu* and in many instances preceding the establishment of state boards of health, sprang into existence our local boards of health, who adopted measures for the control and restriction of infectious diseases, for the abatement of local nuisances, for the sanitary inspection of the food-supply, schools, public buildings and institutions and tenements; street cleaning and removal of refuse, registration of vital statistics, supervision of burials and of municipal water-supply, sewerage, and sewage disposal, care of bathing establishments, regulation of offensive trades, etc.

EFFECTS OF VOLUNTARY ORGANIZATION ON SANITATION.

In September, 1872, the American Public Health Association was organized; in 1873, the Section on State Medicine of the American Medical Association

was created; since then the American Climatologic Association, the Sanitary Council of the Mississippi Valley, the American Sanitary Association, and the American Health Resort Association have been organized, and numbering, as they do, among their members some of the best minds in the profession, much good has been accomplished by these bodies, and the so-called "sanitary conventions" in molding public opinion and in framing and recommending health laws. There is no doubt, however, that all these organizations were stimulated into existence by the lofty tenets of our Code of Ethics,* in which the duties of the profession to the public were prescribed as early as 1847.

Indeed, the American Medical Association, according to Dr. N. S. Davis, Sr., gave prominent attention to State Medicine and sanitation from its first meetings. At the second annual meeting, in 1849, standing committees were appointed on forensic medicine and on hygiene and reported annually on these topics and on meteorology, medical topography and epidemic diseases until 1860, when work in sections was commenced. Dr. A. N. Bell, of New York, delivered the first address on State Medicine in general session of the Association in 1874, followed in 1875 by Dr. N. I. Bowditch,† of Boston. In this connection, I may say that there is need of reliable information on the geographic distribution of diseases like goiter, cretinism, etc., and county medical societies would contribute much to the common fund of knowledge by placing on record information of this character.

NATIONAL BOARD OF HEALTH.

The cholera epidemic of 1872 and 1873 resulted in the appointment of a commission by Congress. This, together with the yellow-fever epidemic of 1878 in the Southern States, affecting, according to Sternberg, over 74,000 persons, with 16,000 deaths, called attention to the necessity of some central sanitary organization. In March, 1878, Congress created a national board of health, whose duty it was to make investigations into the causes and means of prevention of contagious and infectious diseases, to indicate measures of national importance and to be a center of information for all matters relating to public health. For want of appropriation, this important body has ceased to exist, and since 1883 the duties relating to international and interstate quarantine have been discharged by the Surgeon-General of the United States Marine-Hospital Service; his bureau, apart from the management of hospitals and stations for the care of sick and disabled seamen of the merchant marine, has also undertaken the collection and dissemination of mortality statistics and sanitary information, scientific investigation into the causes of disease, the physical examination of immigrants under the law, excluding those affected with contagious disease—service in the office of consuls at foreign ports to assure the accuracy of bills of health—and other miscellaneous duties. Since Congress has failed to act upon the President's repeated recommendation and the petition of numerous medical societies for the creation of a national health establishment, there is no good reason why the scope of duties and powers exercised by the Marine-Hospital Service should not be enlarged. Indeed, the last Congress appropriated sufficient money for the erection of a laboratory "for the investigation of infectious and contagious diseases and

matters pertaining to the public health," which marks the beginning of a new era in national sanitary legislation.

NATIONAL AND INTERNATIONAL QUARANTINE.

The question of an efficient system of national and international quarantine against Asiatic cholera, yellow fever, smallpox, typhoid fever, bubonic plague, leprosy, has engaged the attention of sanitarians for years, especially since it became known that these diseases, particularly cholera, are generally carried along the highways of travel and commerce. Special efforts were made after the completion of the Suez canal and other rapid transit facilities, to guard Europe from the invasion of cholera from India, and since 1892 these efforts have been quite fruitful. At all events, with efficient quarantine regulations involving inspection of vessels, passengers and crew, the detention of the sick and disinfection of all others, including personal effects, cargo and vessels, and proper notification, we have been enabled to keep these diseases from our shores, and if other nations do the same, they should be restricted to their original home. General Wyman's plan, as outlined in his address before the Pan-American Medical Congress, contemplates an international system of sanitation; while his proposition refers especially to yellow fever in the Western Hemisphere, it is equally applicable to the home of cholera and the oriental plague.

In the light of the recent researches by Reed and Carroll as to the transmission of yellow fever by means of mosquitos, our views concerning quarantine and disinfection in this disease may have to be modified, but in the meantime the fight against the mosquitos will go on; whether this will be effectually accomplished by insecticides and screens, or the more rational method of drainage of the soil, remains to be seen; in either event malarial countries will likewise be benefited.

HAS HUMAN SUFFERING BEEN MITIGATED AND HUMAN LIFE GREATLY PROLONGED BY EFFORTS IN SANITATION?

Our answer is an emphatic "Yes." Professor Finkelnburg, of Bonn, estimates that the average length of human life in the sixteenth century was only between 18 and 20 years; at the close of the eighteenth, it was a little over 30 years, while today it is over 40 years; indeed, the span of life since 1880 has been lengthened about 6 years, as shown by statistics, in Mulhall's "Dictionary of Statistics" (fourth edition, London, 1899).

The mortality of London between 1660 and 1678 was 80 per 1,000 of inhabitants; from 1728 to 1780, 51 per 1,000; from 1801 to 1835 it was still 29, while at the present time it averages between 17 and 19 per 1,000.

INFLUENCE OF SEWERS AND PUBLIC WATER-SUPPLIES.

Without underestimating the brilliant achievements of Jenner's discovery of vaccination in 1796, which as a preventive measure has saved millions of lives, no 2 factors have contributed so much to the general result as the improvement of the air we breathe and the water we drink. Indeed, we have ample evidence that, with the introduction of sewers and public water-supplies, the general mortality in numerous cities, during the past 40 years, has been reduced fully one-half, the good effects being especially shown by a marked decrease in the number of cases of typhoid fever, diarrheal diseases and tuberculosis. The vital statistics of Great Britain furnish the proof. The mortality of Salisbury within the last 30 years has been reduced from 40 to 16 per 1,000; at Dover, from 28 to 14 per 1,000; at Rugby, from 24 to 10 per 1,000; at Croydon, from 28 to 15 per 1,000, and at Matlock, from 18 to 9 per 1,000.

The history of every sewered city shows a lessening of the typhoid death-rate subsequent to the construction of the sewers and that the typhoid rate is always higher in sections supplied with privy pits and box privies,

* Article 1, paragraph 1, reads: "As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations, the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases, and when pestilence prevails it is their duty to face the danger and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives."

† Information kindly furnished by Drs. N. S. Davis, Sr., and George H. Simmons, letter of April 18, 1901.

than in the houses connected with sewers. In 1895 the speaker pointed out that typhoid prevailed in the city of Washington and suburbs in 1 of 81 houses with privies, and in only 1 in 149 of those connected with sewers, and the health officer of Nottingham has since then presented similar evidence. The only reasonable explanation for this is that sewers carry away the filth that otherwise would contaminate the soil and ground water, but even if there were no wells, these makeshifts are still a source of danger in so far as they favor the transmission of the infection by means of flies, nor can the possibility be ignored that the germs in leaky or overflowing boxes may reach the upper layer of the soil, and with pulverized dust, gain access to the system. This conclusion, and the agency of flies in carrying the germs from box privies and other receptacles from typhoid stools to the food-supply, was enunciated in my report in 1895 and appears to have found ample support in the experience of the late Spanish-American War.

INFLUENCE OF IMPROVED WATER-SUPPLIES.

According to Dr. Abbott, the number of towns in the United States before 1800 having a public water-supply was only 16, supplying about 2.8% of the existing population; in 1850 there were only 83 public water-works, supplying about 10.6% of the census population; in 1897 the total number was 3,196, supplying about 41.6% of the population.

A summary of the evidence on this subject reveals the significant fact that cities, both at home and abroad, in which there has been the most marked decrease in typhoid fever death-rate, are those in which a pure supply has been substituted for a preexisting contaminated one. Thus, for example, the typhoid fever death-rate in Boston in 1846-1849 was still 17.4 per 10,000; in 1890-1892 it had fallen to 3.2 per 10,000, the city having in the meantime expended \$25,000,000 on its water-supply. The typhoid fever death-rate in Chicago from 1890 to 1892 averaged 12.5 per 10,000. After improving the water-supply it fell with every step in improvement until last year it was only 1.9 per 10,000, a total reduction of 84.8 during the decade. The rate from this disease in Lawrence, Mass., for 5 years prior to 1893, was 12.7 per 10,000. After the establishment of sand filters, in September, 1893, the rate fell during the first 12 months to 5.2 per 10,000.

Munich was notorious for excessive typhoid fever death-rate, it being 29 per 10,000 in 1856. With the introduction of a pure water-supply and improved sewer system it has fallen to less than 2 per 10,000. The experience of London, Berlin, Vienna, Albany and a host of other cities has been precisely the same.*

SEWAGE DISPOSAL AND RIVER POLLUTION.

When we remember that in 1893, 41% of our population lived in towns having public water-supplies, and only 28.7% in sewered towns, we fear that the municipal authorities have failed to recognize the necessity that a system of public sewerage must go hand in hand with the public water-supply, the neglect of which simply compels recourse to the various makeshifts for the collection and removal of excreta, and leads to soil pollution and all the other evils already referred to.

In view of the fact that self-purification of rivers is a slow and uncertain process, and the streams once polluted with excrementitious matter can not be considered a safe water-supply, it is high time for civilized communities to take steps toward removing the danger to be found in rivers, which are the sewers and at the same time the sources of public water-supply.

We know, from statistics collected by the Marine-Hospital Service, that the towns and cities located on

*In 25 cities using unfiltered water the average typhoid death-rate is still 7.7 per 10,000; in 5 American cities supplied with water filtered by the American process, the rate is 5.5, against a rate of 1.1 per 10,000 in cities supplied with water filtered by the natural or English method. The average rate of 5 cities in Europe supplied with mountain springs or deep wells from unpolluted source is only 0.7 per 10,000.

the banks of the Ohio, Potomac, Mississippi, Merrimac, Connecticut, Missouri, the Red, the Columbia and Wabash rivers show a marked prevalence of typhoid fever, confirming what has elsewhere been proved, that this disease, as also cholera, dysentery and diarrheal diseases can be carried from one town or city to another by means of water-courses. There were probably no fewer than 35,000 deaths caused by typhoid fever alone throughout the United States last year and, based upon an estimated mortality of 10%, it is within reason to assume a yearly prevalence of 350,000 cases of this disease. The average duration of a case of typhoid fever is not less than 30 days. If we calculate that an average of \$1 a day is expended for care, treatment and loss of work, and that the value of a human life is \$5,000, we have a total loss in the United States of \$185,500,000 per annum, from one of the so-called preventable diseases. Reduce the prevalence of this single disease $\frac{1}{2}$, which has been accomplished in England, and the oft-recurring question: "How is it our fathers got along without these so-called modern improvements?" will be satisfactorily answered from an economic point of view.

One of the most pressing needs is an investigation into the pollution of water-supplies when such pollution affects or threatens to affect the sanitary condition of the people of more than one State, because the individual States are powerless to protect themselves against the misdeeds of their neighbors. Mr. Barthold's bill for the appointment of a river pollution commission was defeated; yet that same Congress appropriated \$40,000 for the extermination of the gipsy moth. England enjoyed the benefit of such a commission as early as 1855, and, in order to prevent, remedy and remove the danger of polluted water-supplies, adopted a comprehensive system for the disposal of sewage and water filtration, the fruits of which have already been referred to.

No community or individual has a right to pollute streams used for public water-supplies any more than a man has to contaminate his neighbor's well. This principle is very well appreciated by some of the nations in Europe. Thus the inhabitants of a town in Belgium suffered from the effects of a river polluted by the French, and the French Government not only compelled the offending town to dispose of its sewage by irrigation, but also granted a subsidy for this purpose.

In the interest of public health it is to be hoped that every State in the Union will take steps toward the prevention of the river pollution, except when towns are located close to the sea, and no lower towns are obliged to use the water for drinking purposes.

In 1878 the British Government appointed a committee to inquire into the several methods of sewage disposal and concluded that it can be best and most cheaply disposed of by the process of land irrigation for agricultural purposes, but as this is not always practicable, other modes of dealing with sewage have been proposed.

It is a gratifying fact that within the past 10 or 12 years over 100 communities in the United States have established plants for the disposal of sewage. The first attempt was made in 1872 at the State insane asylum, Augusta, Maine, since which time 78 plants for the disposal by irrigation, and 15 by chemical treatment, have been established, and over 40 more projected.

PURE FOOD AND DRUG LEGISLATION.

The first movement toward securing comprehensive legislation against the adulteration of foods and drugs in this country was made in 1879. This is all the more surprising because Dr. Mann, in his "Medical Sketches of 1812," remarks that "the bread on the Niagara was made of damaged flour, such as was either not nutritious or absolutely deleterious." It was believed also that the flour contained in some instances an earthy substance, and that this adulterating substance was

plaster-of-paris. Again, during the Civil War, as early as the winter of 1861-62, an extract of coffee furnished the troops in the vicinity of Alexandria produced nausea and vomiting, and subsequently a government contractor, for having practised food adulteration, was sentenced to a protracted imprisonment.

Instances, therefore, were not wanting pointing to the necessity of such laws; nevertheless, it was not until 1881 that 3 States, New Jersey, New York and Michigan passed laws to prevent the adulteration of food and drugs. The law in New York commenced in the summer of 1882. At the close of the year, 286 samples of food and drugs had been submitted to the public analyst for examination, of which 194 had been reported on. Of 119 samples of food, 50 were found adulterated; while of 75 samples of drugs, 32 were adulterated.

Since 1883 quite a number of States have enacted similar laws, but I regret to say that in spite of the absolute necessity for national legislation, which has been agitated ever since 1892, so far every bill presented to Congress has failed to become a law, and food adulterated in one State can be taken to another and sold. It would lead me entirely too far even to touch upon all the frauds which are daily perpetrated. Some adulterations are harmful, others are not. I will simply refer to a very universal article of food, viz., milk. New York City obtains its milk supply from 5 States, and amounted in 1896 to nearly 729,000 quarts a day. Analysis of the milk sold some years ago showed an average dilution with 33% of water. The State inspector found 12% water added and 20% of cream removed, the fraud amounting to over \$10,000 a day. The results in St. Louis, Chicago and elsewhere were similar, and indicated the desirability of stringent laws to protect the pocket of the consumer, but when we remember the frightful infantile mortality, and the fact that the speaker has recently presented his conclusions, based upon 195 epidemics of typhoid fever, 99 of scarlet fever and 36 of diphtheria, and that 52 of these outbreaks occurred in this country since 1882, we see at once that the milk traffic should be under strict sanitary control.*

LAWS REGULATING THE SALE OF DRUGS AND POISONS.

Forty-two States and territories have enacted laws to regulate the sale of poisons, but a careful study shows that they should be amended, and greater restriction placed on the sale of poisons generally. A recent investigation by a committee of the Medical and Surgical Society into the extent of the opium and drug habit in the District of Columbia developed some interesting facts, and led to the conclusion that one class of subjects have developed the opium habit by the use of the milder preparations of opium and some of the various proprietary or secret remedies commonly employed as domestic remedies, such as paregoric, McMunn's elixir, chlorodyne, blackdrop, soothing syrup, diarrhea mixtures, pain-killers, etc. Those of another class have evidently acquired the habit by the constant use of prescriptions containing opium, or its preparations, for the relief of pain, the individuals being at first quite unconscious of the enslaving nature of the drug. Still another class of persons belong to the moral degenerates of fast men and women who have acquired the habit by contact with opium habitues, including opium smokers, and through solicitation, invitation and persuasion, have fallen victims to the vice. Since the opium habit is often established by the unauthorized and indiscriminate renewal of prescriptions containing opiates, the New York Legislature very wisely enacted, in 1886, a law that no pharmacist shall refill more than once prescriptions containing opium or morphin, or preparations of either, in which the dose of opium shall exceed $\frac{1}{10}$ grain, or morphin $\frac{1}{10}$

grain, except with the verbal or written order of a physician.

It is clearly the duty of the State to close opium dens and restrict the sale of poisons, and in regard to the sale of patent and proprietary medicines containing poisonous drugs, the contents should be expressed on the label and the word "poison" added.

PATENT AND PROPRIETARY MEDICINES.

By the term patent medicine, as properly employed in this country, England and Europe generally, it must be understood that the composition is known and can be seen at the Patent Office. The proprietary medicine is a secret preparation protected by a trade mark in this country, and hence preferred by the owner, but both are vaguely termed by the public patent medicines. Up to December 10, 1900, the United States Patent Office had issued patents on the following: Disinfectants, 321; extracts, 250; hair dyes and tonics, 48; insecticides, 180; internal remedies, 376; plasters, 56; topical remedies, 371; veterinary, 78. Trade marks: Drugs and chemicals, 319; medical compounds, 5,974, and increasing at the rate of about 250 a year.

The proprietary medicines are subject to the control of the State authorities, and if containing alcohol in sufficient quantity to be intoxicants are subject to internal revenue laws; but so far as my knowledge extends, little or nothing has been done in this country and in England to control the sale of secret remedies. Dr. G. Danford Thomas, Coroner of London and Middlesex, before the International Congress of Hygiene, in 1891, very justly urged that all proprietary medicines should be under the patent laws, because the composition is at least disclosed; he would abolish licenses to sell them and confine the sale to chemists and druggists only. In these matters we could certainly profit by the example of the Japanese, Italian, French and German laws. In the interest of public health the profession should demand adequate legislation; as it is now, hundreds of these proprietary preparations, the compositions of which need not even be disclosed to the Patent Office, are advertised in medical journals.

INDUSTRIAL HYGIENE.

The relations of occupation to health and life were studied as early as 1700 by Ramazzini, an Italian physician, and since then numerous monographs have appeared. We know to-day that persons habitually engaged in hard work, especially in factories and indoors, present a higher mortality than persons more favorably situated, and that the character of occupations influences, to a great extent, not only the average expectation of life, but also the prevalence of certain diseases. We know, for example, that tuberculosis is much more frequent among persons engaged in dust-inhaling occupations, and that the sharp angular particles of iron and stone dust are more liable to produce lesions of the respiratory mucosa than coal, flour, grain and tobacco dust. We know, too, that certain establishments, like slaughter-houses, glue, soap and candle factories, chemical factories, etc., are more or less productive of noxious and offensive gases, and that workers in lead, mercury, arsenic, phosphorus, poisonous dyes, etc., suffer especially from the injurious effects, and that other occupations, such as mining, railroading and contact with moving machinery, involve special danger to life and limb.

For all these reasons the laboring classes need special protection, and in order to render this efficient, it must be provided for by the enactment and enforcement of suitable laws. In 1864, 1867 and 1870 England enacted the so-called factory laws. According to Miss S. S. Whittlesey's "Essay on Massachusetts Labor Legisla-

*The results achieved by the health officers of every large city, notably by Reynolds, of Chicago, Wende, of Buffalo, and Woodward, of Washington, in the reduction of infantile mortality amounting in some instances to over 50%, show the advantage of pure food legislation.

*Information kindly furnished by Dr. J. B. Littlewood, of the Patent Office.

†Information collected from files of the United States Patent Office, by the author.

tion," child labor, here as in England, was the first aspect to receive attention in legislation as early as 1836. The first law as regards safety and sanitation was enacted in that State in 1877, since which time, from information kindly furnished by the Hon. Carroll D. Wright, of the U. S. Department of Labor, 32 States have enacted similar laws, including legislation requiring seats to be furnished saleswomen in stores and shops. Indeed, in some of the States the latter requirement is the only sanitary regulation. As a result of these laws, the majority of which were enacted during the last decade, commendable progress has been made in the way of ventilation, heating, lighting, removal of dust and injurious gases, means of escape in case of fire and prevention of injuries by moving machinery.

It is quite true there are other factors which affect the health and longevity of wage-earners adversely. So, for instance, unsanitary dwellings, faulty nutrition—the results of badly prepared food and cold lunches—can not fail to lower the power of resistance to disease, especially when the individual, in consequence of these very causes, has also become a victim of the alcohol habit.

SANITARY DWELLINGS FOR WAGE-EARNERS.

No field affords better opportunity for philanthropic work than the erection of sanitary homes for wage-earners at reasonable rentals, the encouragement of cookery schools, the establishment of sanitary lodgings, model eating-houses and other betterments of industrial conditions.

The vital statistics of London show that the mortality in the improved dwellings for wage-earners is far below the general mortality of the city, the difference being specially marked in the infantile mortality; the general average during the five years ending December, 1890, was 153 per 1,000, while in the "George Peabody" and the "Metropolitan dwellings" it was only 136 and 121 respectively.*

RURAL HYGIENE.

When we consider the fact that over 70% of our population reside in rural districts, that the "bone and sinew" of these are engaged in agricultural pursuits, and that they do not enjoy the benefits of enforced sanitation by local health boards, we see at once the desirability of the family physician extending useful suggestions on healthful building sites and homes, disposal of house wastes, the importance of a pure water supply, wholesome and properly cooked food, etc. As it is now, the diet is faulty, especially the hot biscuits, greasy fried dishes, while wells and privies are often dangerous neighbors. The undue prevalence of typhoid fever in rural districts could be materially checked by disinfecting the stools with 3 times the volume of boiling water and the adoption of the earth closet system. This is all the more important since infection is often spread through the milk-supply, and many of our urban population contract disease in the country during the summer months. While prompt disinfection of the excreta is

*At a recent meeting of the American Social Science Association, held in Washington, April 18, 1901, Mr. J. H. Patterson, Dayton, Ohio, read a paper on factory sanitation and described a large manufacturing plant of which he is the head, and their close adherence to the principles of hygiene and the uplifting of mankind. The interior of the factory is painted in cheerful colors, extra windows were made to give light, forced ventilation to afford plenty of fresh air, and all dust and acid fumes are carried away by exhaust fans. Bath-rooms and well-furnished toilet-rooms are on all the floors. All seats have backs. Clean aprons are furnished by the company, and a dining-room where hot meals are served, and a course in domestic economy is conducted. The grounds around the factory, and the houses of the employes, are healthful and attractive. "We have demonstrated," said Mr. Patterson, "that this system pays the employe, the manufacturer and the buyer; in the health of one, profit of the second, and the improved quality of the product purchased by the third." Bulletin No. 31, Department of Labor, November, 1900, contains an article on betterment of industrial conditions, showing what has elsewhere been accomplished, every effort being in the right direction, except that free medical attendance is being furnished by certain companies, involving a contract system with physicians, which ought never to gain a foothold on American soil, because it has proved a bane to the profession elsewhere.

the only rational method, we should also make an effort to get rid of the flies by prompt disposal of the horse manure in which they breed, the abandonment of open privies and surface pollution, removal of garbage and other fly-breeding matter.

SANITATION OF PRISONS.

Most commendable progress has been made in the construction and management of modern prisons. The mortality at the close of the last century, among prisoners in some of the French prisons, was 250 per 1,000; between 1840 and 1849 it was still 80.2 per 1,000, at St. Gallen, while today it is less than 30 per 1,000. Tuberculosis, typhoid fever, diarrhea, croupous pneumonia and mental disorders are the most prevalent diseases, but much will be done in future to reduce the excessive mortality by improved lighting, heating, ventilation, good food, bathing facilities, etc.

In some of the damp, dark and gloomy prisons of Germany over 50% of all the deaths are from tuberculosis. In the Millbank Prison of London, from 1825 to 1842, there were 175 deaths, of which no less than 75 were due to tuberculosis. Besides, 90 prisoners were set free on account of being hopelessly afflicted with pulmonary tuberculosis. In the Illinois State Prison, at Joliet, during the year 1895, 39 deaths were reported from tuberculosis; in 1900 only 8 occurred. This decrease appears to be due directly to segregation of tuberculosis subjects.

HOSPITALS, SANITARIUMS AND DISPENSARIES.

Perhaps no country in the world can boast of better hospital facilities than our own. Indeed, many of our institutions are perfect in sanitary architecture and equipment. There are in the United States no less than 1,776 hospitals, including 35 special hospitals for consumptives; 308 sanitariums, 213 dispensaries, and over 8,000 mineral springs, of which 727 are health resorts. Unfortunately the liberality with which medical charities have been supplied has given rise to shameful abuses, and persons who would shrink from seeking charity in any other form have abused the privileges offered by hospitals and dispensaries.

Correction of Abuses.—In 1896, speaking of the city of Washington, no fewer than 21% of the population received free medical treatment; the medical association in 1897 adopted certain rules compelling the attending staff of hospitals and dispensaries to require evidence of dependency; as a result of this system there has been a gradual but positive decrease in the number of charity patients, amounting to over 9,000 last year. It is the simplest, most just and effective remedy for the correction of this evil.

SCHOOL HYGIENE.

During the year ending June 30, 1900, there were 15,341,220 children enrolled in the common schools of our country. When we consider that the mental and physical vigor of a nation depends largely on the environments of childhood and youth, it seems strange that up to within 40 years little or no attention should have been paid to the hygiene of schools. The occurrence of so-called school diseases is not surprising when we reflect that children, on beginning school, enter upon a new life and environment. Up to this time they have been allowed to run and play in the open air, exercise the body and senses, without restraint, but now without a period of transition they are obliged to remain for several hours a day in close and sometimes unsanitary school rooms, taxing their minds and straining their eyes for near objects. Experience teaches and statistics confirm the conclusion, that quite a number of children suffer from certain physical defects and diseases, which because rarely observed before the school period, may be justly attributed to the school environments. Among the most common of these affections are myopia, lateral

curvature of the spine, dyspepsia, anemia, muscular debility, headache and nose-bleed, nervous affections and tuberculosis. Ware, of our own country, as early as 1812 called attention to the fact that myopia was most frequently developed in the school room, and during the past 40 years we have been enlightened as to the cause of this and other defects, and many excellent monographs have been written on the construction of school buildings, arrangement of recitation-rooms as regards light, ventilation, adjustable seats and desks, proper type for text-books, and more rational methods of mental and physical training. This, together with a commendable zeal on the part of the authorities to correct existing evils, has resulted in many reforms, the fruits of which are already apparent in a decrease of the diseases referred to.

Medical Inspection.—I cannot enter into details concerning the prevention of the spread of infectious diseases among school children, but desire to emphasize the necessity of medical inspectors, whose duty it should be to visit the schools, examine pupils, and give such directions as will reduce the dangers of spreading contagious diseases to a minimum; they should also make sanitary inspection of the buildings and present such recommendations as are necessary in the interest of the health of both the pupils and teachers, and as the physicians were perhaps the first to recognize the fact that "the system of education should be made to fit the child, not the child the system," the teachers may derive much aid from such consultations; among the cities that have inaugurated such inspections since 1894 are Boston, New York, Brooklyn, Chicago, Milwaukee, Louisville, St. Louis, Philadelphia, Jersey City, Brookline, Mass., Buffalo, Minneapolis and Salt Lake City, and they have proved of inestimable value.

SMALLPOX AND COMPULSORY VACCINATION.

In this connection, attention is invited to the undue prevalence of smallpox in the United States; the total number of cases reported to the U. S. Marine-Hospital Service during the past fall and winter, up to March 29, was 11,964, as compared with 7,279 cases for the corresponding period of the preceding year, and it is doubtless due to neglect in vaccination. Dr. Abbott estimates the vaccinated portion of the inhabitants of the United States at not far from 90%, and the revaccinated portion at probably 50%. With the introduction of glycerinated animal lymph every vestige of prejudice against vaccination should cease, and compulsory laws should be enacted in every State, so that smallpox here, as in the German army, may become practically unknown. While quite a number of States have enacted laws requiring that unvaccinated children shall not be admitted to the public schools, it is believed that these laws are not rigidly enforced.

VENEREAL DISEASES.

A careful perusal of Dr. Prince A. Morrow's article on the "Prophylaxis of Venereal Diseases" (*Philadelphia Medical Journal*, April 6, 1901) should stimulate our efforts in the prevention of diseases which affect not only the offender, but innocent wives, the offspring and not infrequently even the medical attendant. According to Fournier, one-seventh of the population of Paris is syphilitic, and Morrow, from statistics gathered in New York, believes it is quite possible that Fournier's figures, with some modification, may apply to New York. Neisser holds that gonorrhoea is, with the exception of perhaps measles, the most widespread of all diseases. Other German authorities have computed that fully three-quarters of the adult male population and one-sixth or more of the adult females have contracted gonorrhoea; that 80% of all deaths from disease of the uterus and its adnexes are of gonorrhoeal origin, while blennorrhoea neonatorum contributes a contingent to our asylums for the blind estimated at from 10 to 20%—from

40 to 60% before the Créde method was instituted—to mention the destructive effects on the procreative functions. Dr. S. M. Burnett, of Georgetown University, believes that 15,000 of the 50,000 blind persons in the United States lost their sight from this cause, which, according to his calculation, involves a financial loss to the commonwealth of 7½ millions annually.

The measures which have been proposed for the control of the social evil and the prevention of its consequences are numerous enough, but not so easy of practical application. On the whole, I believe the remedy lies in public education, and the task as usual falls on the medical profession, especially the trusted family physician. Public lecturers on the purity of man commit a serious mistake, however, when they picture the consequences of the social evil, without offering a suitable remedy. We should make a strong plea in favor of continence, and tell our young men that while the sexual passion is very strong it can be accelerated or delayed, excited or lowered by the influence of the will. We should assure them that by the cultivation of pure thought, removal of temptation, normal, mental and vigorous physical exercise, continence may not only become possible, but easy. And we can hardly go astray if we follow Dr. Parkes in advising a poor young man to make his home, after the age of 21, and thus secure himself both from the temptations and expenses of bachelorhood.

THE MANAGEMENT AND CONTROL OF INFECTIOUS DISEASES.

It is in the field of infectious diseases where preventive medicine has and doubtless will continue to achieve its greatest triumphs, and there is ample room, when we consider that during the census year of 1890 there were not less than 102,199 deaths from tuberculosis, 74,496 from pneumonia, 74,711 from diarrheal diseases, 41,677 from diphtheria, and 25,058 from typhoid fever. In spite of centuries of groping after facts, we knew nothing of the real nature of infectious diseases until the middle of the present century, and even 25 years ago the text-books still discussed the subject of miasma and contagions, whose nature had never been demonstrated to our senses. With improved microscopic lenses and the development of bacteriology, more especially the discovery of the anthrax bacillus by Davaine, Pollender and Brauell (1849-1855), scientific medicine had its birth, and today we know that such diseases as tuberculosis, glanders, leprosy, cholera, erysipelas, wound and puerperal infections, gonorrhoea, pneumonia, cerebrospinal meningitis, typhoid fever, diphtheria, malaria, influenza, dysentery, bubonic plague, and possibly carcinoma, are caused by living organisms, capable of reproduction within and without the body, and this is a strong argument in favor of the microbial nature of other infectious diseases, in which the specific organism has not yet been isolated.

The eradication of preventable diseases is the highest aim of scientific medicine today. The public should be made familiar with the nature and causes of infectious diseases, and be taught that many are a source of danger, against which it is entitled to be warned by proper notification through the health officer. This notification should be made compulsory in cholera, yellow fever, smallpox, chickenpox, typhus and typhoid fever, diphtheria and membranous croup, scarlet fever, tuberculosis, cerebrospinal meningitis, leprosy, glanders, bubonic plague, whooping-cough and measles. And let me say that a prompt and correct diagnosis is the first and most important step in preventive measures. The health department should have competent medical inspectors and a clinical laboratory for the verification of the diagnosis, and have the power in certain of these diseases to display warning signs, enforce isolation and disinfection, and to take such other steps in the way of immunizing agents as may be deemed necessary to limit their spread.

Isolation, to be effective, should extend to all persons

who have come in intimate contact with the patient, but this is rarely enforced except in smallpox, in the case of the attending physician, and the wage-earners of the family, but it is clearly their duty to take special precautions in the way of clothing and personal disinfection. Matters of this kind ought never to be left to the discretion of the family, nor the attending physician, for even members of the profession often entertain widely opposing opinions on the subject of quarantine and disinfection, but the principles which ought to be carried out, apart from being a matter of conscience, should be accepted in a practical sense and embodied in effective laws.

Disinfection.—Scientific disinfection had its inception with the labors of Koch and Sternberg some 20 years ago. Although, as we have seen, certain physical and chemical agents were used empirically for ages, now we know from laboratory experiments that they are effective, because they destroy the vitality of the germs. We also know that, in most of the contagious diseases, the infective matter is given off by the patient chiefly through the secretions and excretions, and it is evident that disinfection to be of value must be directed to these and all the media with which the patient has come in contact.

"IF CERTAIN DISEASES ARE PREVENTABLE, WHY ARE THEY NOT PREVENTED?"

My answer is, that while every scientific physician familiar with biologic research knows full well that if the methods of prevention recommended by sanitarians, including the prompt disinfection of the dejecta of every typhoid fever patient, the expectoration and excretions of diphtheria and tuberculosis patients, for example, were adopted, these diseases would be reduced to a minimum and probably eradicated in the course of a few years. The facts are, these recommendations have not been generally adopted, because the knowledge gained by experimental medicine is not sufficiently diffused. Nor are we responsible for the fact that so many of our States still permit every charlatan to practise one of the most difficult and responsible of all professions without a uniform and rigid system of examination. However, we owe it to ourselves and to humanity to take positive steps in behalf of higher medical education and laws regulating the practice of medicine. So long as we permit the existence of irregular and incompetent practitioners, so long will the public be deceived and will we be obliged to compete with incompetent men, and so long as we tolerate the exponents of so-called "Christian Science," osteopathy, and other quacks, infectious diseases will be spread as the result of ignorance and neglect.* A strong organization, such as is proposed for the American Medical Association and the various State medical societies will speedily accomplish this and other reforms.

FORECAST OF THE RESULT OF THE CENSUS WORK UPON THE MORTALITY STATISTICS.

Notwithstanding these and other disadvantages in the way of defective sanitary legislation, the American medical profession has reason to be proud of its work in the century's progress of hygiene and preventive medicine. It may be truly said that every hospital or

other medical charity owes its foundation and success to the activities of the medical profession. Nay, every law inscribed on the statute books, in the interest of public health in this and other countries is the work of our noble profession. Acting upon the lofty principle that the education and betterment of the people in sanitation is not less humane than the healing of the sick, the American medical profession has filled the measures of its philanthropy by advocating laws to "regulate the health and physical wellbeing of communities," and thereby lessen its own income, but the results attained during the last 10 years are sufficient recompense. By the courtesy of Mr. William A. King, Chief Statistician of the U. S. Census Bureau, I am enabled to give you a forecast of the result of the work upon the mortality statistics at the close of the century.

The mortality returns for the twelfth census, which relate to the year beginning June 1, 1899, and ending May 31, 1900, have not yet been tabulated in full, but sufficient progress has been made to permit a comparison of the preliminary results with the figures for 1890 for a portion of the country.

Considering these results for these States in which the returns were secured from registration records in both 1890 and 1900, there appears to have been an absolute decrease in the general death-rate of about 1.5 per 1,000 of population. This decrease seems to be most marked in the rates due to scarlet fever, whooping-cough, diphtheria and croup (combined), typhoid fever, malarial fever, tuberculosis, diarrheal diseases, and diseases of the nervous system, the decrease in the mortality from diphtheria and croup amounting to more than 50%. On the other hand, the rates due to carcinoma and tumor (combined), Bright's disease, heart disease and dropsy (combined), and pneumonia are apparently greater than in 1890, the increase being most marked in case of Bright's disease, carcinoma and tumor, and pneumonia.

The death-rate by age periods in the registration States has not yet been computed as the population figures are not yet available, but the effect of the decrease in the rates due to the causes specified is shown by a decrease in the proportion of deaths occurring at each period up to 30 years.

The results in the decreased rate of diphtheria, croup, scarlet fever, typhoid fever, whooping-cough, tuberculosis, malarial fever and diarrheal diseases are the direct outcome of preventive medicine and are as gratifying as they are striking. We note with regret the increased rate in Bright's disease, heart disease, dropsy and pneumonia, and may well pause to inquire whether our ever-increasing "National Drink Bill," averaging 17.68 gallons per capita, may not be a factor in the development of these diseases, especially since there is reason to believe that the habitual and immoderate use of alcohol, apart from increasing the connective tissue and causing cirrhosis, also produces fatty degeneration, especially of the heart, liver and arterial coats, probably because it promotes the conversion of albuminoids into fats.

Without wishing to underrate the brilliant achievements in surgery of the brain, stomach, intestines, liver, gallbladder and other abdominal organs, and even wounds of the human heart which have been successfully sutured in 4 of the 9 cases reported, what after all are the ultimate benefits compared with the results obtained by improved methods in sanitation?

Since our knowledge of the nature of infectious diseases has been more and more defined, scientific methods for their prevention have been applied. We have learned, too, that in addition to the germ there must be a suitable soil for its proliferation and that sanitation will not only destroy the environments for its development without the body, but also place the system in the best possible condition to resist its toxic action.

The application of this knowledge has saved millions

*During the year 1900 there were 119 regular medical schools in this country, with 1,079 female and 21,673 male students; of these 22,752 students, 2,327, or about 10%, had degrees of A.B. or B.L. Number of graduates last year, 4,720. The homoeopathic schools had 1,584 male and 325 female students, and the eclectics, 500 male and 52 female students. The number of registered physicians in the United States in 1900 shows an average for the whole of about 1 to 636 inhabitants. In 31 States and Territories, according to D. McIntyre, an examination is required, in 9 certain diplomas are accepted, all others must be examined; in 5 only a diploma is required, and in 5 the laws practically impose no restriction. In 1900 there were 150 National and State medical societies, 1,097 county and local medical societies, and 282 medical journals, of which 28 were exclusively devoted to hygiene and public health.

of lives besides an incalculable amount of human suffering and distress, not to mention the economic aspect of the question. When we remember all this and the fact that Jenner's discovery at the close of the last century of a fundamental and practical method of producing artificial immunity has been far eclipsed in the last 20 years, and that we possess today not only curative but also protective serums for diphtheria, erysipelas, tetanus, plague and possibly cholera, tuberculosis, typhoid fever, pneumonia, and a number of other immunizing agents for diseases of man and lower animals, we have reason to believe that the solution of the problem of immunity is only a question of time, and we may indeed expect great possibilities in our battle against infectious diseases.

To the solution of this problem, the labors of Salmon and Smith, Sternberg, Welch, Osler, Councilman, Reed and other Americans engaged in experimental medicine, have contributed their full share. Progress has crowned our past, we will not retrograde. Let our conduct raise no blush on the cheek of posterity. Let us hand in hand with heart and mind join in promoting the welfare of American medicine, until she has reached the proudest pinnacle in the world of science, until she has become the fountain-head of knowledge for the benefit of mankind. Then when at last we are called upon to pass through the portals beyond, Minerva Medica, in her sweeping robes of state, will proudly but reverently present us to the Supreme Healer of the Universe as types of the true physician.*

INTERNAL MEDICINE IN THE NINETEENTH CENTURY.†

BY

N. S. DAVIS, JR., M.D.,

of Chicago.

It is one of the duties of those who address you, as I do today, to review what has been newly discovered in the field of medicine or in some limited department of it. At this first meeting of the American Medical Association in the twentieth century, it seems most natural to review what has been accomplished in the last 100 years. The time at my disposal is too brief to read to you a complete history of the achievements of this wonderful epoch, for more of genuine advancement has been made in medicine during it than during all the preceding centuries together. It is only possible for me to point out some of the reasons for the rapid development of medicine, to recall to your minds some of the most important discoveries and applications of them.

A century is not so long a time as we are apt to think. Our grandfathers were vigorous men in the prime of life when the nineteenth century was born. Yet changes so great that they seem miraculous have occurred since then. In 1800 this great country was a wilderness, unknown even to the inhabitants of the few straggling settlements upon the Atlantic coast. Our land contained no great cities. There was little travel from place to place. There were no steamboats or railways; no telegraphs or telephones. Information traveled slowly by packet ship, canal boat and stage coach. The discovery of the wonderful properties of the x-ray could not then have been flashed over the world in a day and its genuineness and utility confirmed within a few weeks by experiments made simultaneously in all parts of the

world, as did happen at the close of the century. Today all civilized peoples are so united that knowledge has become the common property of them all. In former epochs geniuses delved alone, inspired only by their own enthusiasm. Often it was many years before their discoveries became widely known or appreciated; and many more before another genius standing upon land already found ventured upon its exploration.

All this has been changed. Learning is not possessed by a few, but by many. In earlier epochs men of genius towered above their contemporaries in learning. Today thousands crowd about their shoulders, so much higher is the average of learning. All scientific workers are now linked together by the rapid dissemination of news, so that no matter in what part of the world they may be, they are kept conversant with what is being thought and done in every other part and they are thereby inspired to greater mental efforts.

Knowledge is no longer isolated. It is cultivated in centers too numerous to count. Even in this new land universities with great libraries, finely-equipped laboratories, and corps of brilliant teachers and seekers after new knowledge are found in every part of it. Medical societies have been organized in every State and city, and in many counties and towns. But at the beginning of the century there were only 4 medical schools in this country, and 4 State societies, organized for the advancement of medical knowledge.*

These changes have been effected chiefly by the rapidity of communication which has been established in all civilized lands and by the greater concentration of the people in large cities.

But it is not in the United States only that the population has increased and concentrated. In 1801 the total population of England and Wales was less than 9,000,000. Of this number more than half lived in the country. At the end of the nineteenth century the population of the same countries was more than 29,000,000, and only one-fifth of this number lived in rural districts. These figures attract our attention to the social changes which have occurred in all civilized lands—changes which have effected not only a greater diffusion of knowledge but have also modified the conditions which produce and limit disease.

At the opening of the nineteenth century, "Cullen's Practice of Physic," written late in the preceding century, was the standard textbook. A glance at its contents will give us the clearest conception of the state of medical knowledge at that time. In an edition of this work printed in New York City in 1806 I find no description of structural diseases of the heart; even as a complication of rheumatism heart disease is not mentioned. A single page is devoted to nephritis, but in its description there is no mention of the chemie and microscopic changes in the urine upon which we depend to recognize it and to distinguish its forms. The affections of the respiratory organs were described with similar crudeness, under such chapter headings as "Of Catarrh," "Asthma," "Pneumonic Inflammation," "Peripneumonia Notha," and "Phthisis Pulmonalis," but the catarrhal inflammations of the nose, pharynx, trachea and bronchi were not differentiated from one another, nor were catarrhal and croupous pneumonia, brown induration, hypostatic congestion and edema of the lungs described.

The hypothetic explanation of diseases and their causes which prevailed at that time is well illustrated by the conclusion reached by Noah Webster, who in his "History of Epidemics and Pestilential Diseases," writes that typhus and nervous fever are due to "conversion of the perspirable fluids of the body into septic matter."

*In the preparation of this address I have been greatly aided by the Library of the Surgeon-General's Office, the historic monographs on hygiene, by Professor Kinkelburg, of Bonn, now deceased, and by Dr. S. W. Abbott, of our own country. I am also greatly indebted to Dr. W. T. Harris, the Commissioner of Education, and Dr. A. E. Miller, of his Bureau. Other acknowledgments have been made in the text and are gratefully renewed.

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*The colleges were medical departments of Pennsylvania, Columbia, Harvard and Dartmouth (founded 1797). The societies were New Jersey (1766), Massachusetts (1781), Connecticut and New Hampshire (1791).

Nothing will help so much to make clear the progress made in medicine in the last century as to compare the resources at the disposal of physicians of our day with those commanded by our grandparents. At the opening of the nineteenth century medical men knew nothing of the clinical thermometer, of percussion, auscultation, urinalysis, clinical microscopy, laryngoscopy ophthalmoscopy, of the sphygmograph, or Röntgen rays.

It was not until the year 1808 that Corvisart spread widely a knowledge of percussion as a means of discovering the physical status of the viscera, although the work of Avenbrugger which he translated, and which was the original description of percussion, had been published nearly 50 years before. The work of Avenbrugger and Corvisart was supplemented in 1819, when Laennec published the result of his labor with the stethoscope which he invented 4 years earlier. From this time dates our clinical knowledge of diseases of the lungs and heart.

In 1827 Bright pointed out the relationship of albuminuria, dropsy and diseases of the kidneys. At this point clinical chemistry may be said to begin.

At the beginning of the nineteenth century, compound microscopes were almost useless, for the images which their lenses made were so distorted and colored that they could not be properly interpreted. In 1812 Dr. William Hyde Wollaston combined 2 plano-convex lenses so as to correct the spherical aberration which a single double-convex lens produces; and nearly 20 years later Joseph Jackson Lister discovered the utility of combining lenses of crown and flint glass in order to produce an image in the microscope relatively free from distortions and fringes of color. The more recent invention of the oil immersion lens has made bacteriology possible and has solved many of the problems of infectious diseases which puzzled even our fathers in the fifties and sixties.

The dependence of medicine upon ancillary sciences is well illustrated by the sudden birth and rapid development of new branches of medical knowledge which are dependent on the perfection of the microscope.

This instrument has made histology, embryology, modern pathology and bacteriology a possibility. These departments of science are altogether products of the last century.

It was at the beginning of the century that Bichot divided the structures of the body into what he called "tissues" and showed that there were only a few of them. It is surprising that the great anatomists before him did not make the same discovery.

As modern anatomy has been dependent upon the microscope in order to explain structures, so physiology has been dependent upon experiments on living animals to explain function. It is true that in earlier epochs at considerable intervals of time experiments upon living animals were made, notably by Harvey, when he studied the circulation of the blood, but they were never made systematically until the discovery of anesthesia in the nineteenth century made them painless. No wonder, therefore, that the explanations made by physiologists in 1800 seem to us extremely crude. Haller, for instance, whose printed lectures formed the textbook of most students at that time thus describes the nature of blood: "Hydrostatic experiments demonstrate in the blood first a kind of volatile vapor or exhalation which immediately and continually flies off from the warm juice with a sort of fetid odor coming betwixt that of sweat and urine. This vapor, being caught and condensed in proper vessels, appears of a watery nature joined with a small tincture of an alkaline disposition."

A few pages further on what he says of the blood gives us an idea both of the state of physiologic and pathologic knowledge at that time: "For the blood in a sound healthy state, not injured by putrefaction or too violent a degree of heat, is neither alkaline nor acid, but mild and gelatinous and a little saltish to the taste; yet in some diseases it is sharp enough and comes near

to a state of putrefaction, as for instance in the scurvy, when it corrodes through its containing vessels, and in those who have ascites or dropsy whose waters are often much of an alkaline and corroding nature."

At the close of the eighteenth century the part which gland cells play in forming secretions was not comprehended. It was believed that "the albuminous or hardening juices are separated almost anywhere from the arteries themselves, into continuous excretory canals, with any intermediate organ or machine betwixt them." It was believed that all excretions existed primarily in the blood.

The physiologists of this period appreciated the importance of the lungs and the act of respiration, but their exact use they did not comprehend. Haller enumerates several possible functions which they might perform, yet he did not feel sure that any one of them was the real one. For instance, he says: "Our blood acquires its heat principally in the lungs, for that all animals which have lungs and 2 ventricles in the heart have the heat of their blood commonly twice that of the atmosphere. But does not this arise from the alternate extension and contraction, relaxation and compression of the pulmonary vessels by which the solid parts of the blood are perpetually rubbed together and closely compressed in the attrition that is made during expiration, as it is more rapidly moved and ground together during inspiration."

Our forefathers 100 years ago often endeavored to hide their ignorance in long names and resounding phrases, a common practice, indeed, in all times and not wanting to-day, for how much ignorance will our successors find hidden in words now so commonly used as are metabolism and auto-intoxication!

Pathology as a distinct department of scientific medicine originated in the nineteenth century. It was not until 1860 that Rudolf Virchow demonstrated conclusively his famous dictum: "*Omnis cellula e cellula.*" His studies of cells in disease laid the foundation and did much to rear the superstructure of cellular pathology. So rapidly has a knowledge of this subject grown that we can unhesitatingly say that we now possess very accurate and detailed information as to the anatomic changes which disease effects. The insight of physicians was so greatly extended into the nature of morbid processes by these pathologic studies that enthusiastic devotees of them felt that the application of the microscope to the study of disease would dispel its mysteries. Increasing information, however, soon demonstrated the limitations which exist as to knowledge derivable from a study of morbid anatomy. Most of us remember how, soon after the birth of bacteriology, it was also hoped that from it at least we would learn the true essence of disease. But we know now that in most ailments after the bacteriologist has discovered the offending microorganism the chemist must help us, for it is usually a product of its growth, not its physical presence in the tissues, that causes disease.

The production of disease by parasites imbedded in the tissues of the human body was suspected from early times, but was not demonstrated until the end of the first third of the nineteenth century, when James Paget, then a medical student, found unusual nodules in the muscles of a man whom he was dissecting. These Richard Owen demonstrated to be the cocoon of a minute animal which he called *trichina spiralis*. In 1847 Dr. Joseph Leidy, of Philadelphia, found them also in pork, and soon thereafter it was shown in Germany that men could become infected by eating pork containing *trichina*, and that in consequence there developed in them a definite train of symptoms.

In 1837 Latour in France and Schwann in Germany, almost simultaneously propounded the view that fermentation and putrefaction are due to the growth of microorganisms. Liebig, with all the weight of his authority, antagonized this belief in a "vitalistic"

explanation of these phenomena. Pasteur undertook to settle the dispute by methods of research, which proved to be the foundation of a new department of science—bacteriology. The results of his experiments were published between 1857 and 1869. He proved that without microorganisms there could be no fermentation, no putrefaction, no decay. These studies prompted many investigators to attempt to demonstrate the suspected relationship of microorganisms to disease. In 1863 Devaine succeeded in showing that the organisms, seen by him in 1850 in the blood of animals which had died of anthrax, were its cause. This, as some of those before me will remember, aroused a storm of controversy which was not settled finally until after my own student days.

Formerly such vague terms as "miasm," "humor" and "virus" were used to explain the communicability of contagious diseases, but they have had to be discarded or to be newly defined by the bacteriologist. It was in the sixties that Lister made his studies upon the relationship of microorganisms to wound infection. The brilliant, revolutionary results of those studies are too well known to you to require elaboration, besides they belong to the history of the nineteenth century surgery rather than to the history of internal medicine. They were, however, so important in settling the relationship of invisible parasites and diseases that they must be mentioned.

It was at this time, too, that Pasteur and Tyndall finally settled the controversy over spontaneous generation which had raged from time immemorial. The world at last felt convinced that even microorganisms could not exist where an antecedent organism had not been.

It is needless to recapitulate the long list of discoveries rapidly made from this time onward of the causes of infectious diseases, by such men as Koch, Klebs, Löffler, Fraenkel, Laveran, and many others.

Although medical men have been incited to search for the causes of disease in order that they might understand their nature better and therefore be able to treat them better, such studies naturally led more directly to the prevention than to the cure of disease. That is why the recent epoch-making bacteriologic discoveries have greatly stimulated the study of preventive medicine. It is true that the prevention of disease has engaged the attention of medical men and statesmen since the earliest times, but the subject was not studied systematically before the last century.

Hygiene as a separate department of medicine, with a literature of its own, was created only in the nineteenth century.

While, in the eighteenth century, much was done to improve the hygienic state of individuals, and as a result there began before its close to be a reduction in the mortality rate, which has continued up to the present time, public hygiene or attempts to prevent the spread of disease by State and civic interference, was not fairly established until very recently. Even today small communities have no health officers or sanitary inspectors, and few regulations which are intended either to inform the people as to the relative healthfulness of towns and hamlets or by which the spread of disease is to be lessened. These facts show how new and undeveloped as yet the field of public hygiene is. The mortality statistics which have been gathered in cities since the middle of the last century make it possible to point out which among them are the healthiest, and which diseases are the most destructive. It is to be hoped that these statistics in the future will be supplemented by reports of the kinds and amount of illness whether fatal or not, that may exist in a given place.

The knowledge recently acquired of infections and their spread has already been applied to their prevention. Such diseases as erysipelas, septicemia and tetanus no longer torment surgeons when they can make clean wounds. But as late as 1870 the first of these ailments

was common in the hospitals of France. Puerperal fever is today as rare as it was common formerly. Typhus fever no longer exists in America, although not uncommon at the beginning of the last century.*

Indeed, it is rarely seen in any civilized country today. At the beginning of the nineteenth century, smallpox was so common that few persons reached adult life without having had the disease, and the mortality from it in childhood was great. What is the status of this disease today? I venture to say there are many physicians in this audience who have never seen a case, and that a majority of them have not treated more than 4 or 5 cases during their whole professional experience. In the early days of this nation's history yellow fever spread to Philadelphia and New York, and provoked much discussion, for it was feared that it would prove as great a pest as cholera. A careful study of the disease and a consideration of the possibility of preventing it were referred to a committee of the New York Medical Society, which reported that yellow fever may be produced in any country by pestilential effluvia. How different is this conclusion from that of recent students of the subject, who assign to it a specific cause, which is transmitted from man to man by the mosquito, which is its host.

Cholera has been brought to our shores several times in the last few years, but its spread has been prevented in each case. In Europe it has also been limited to comparatively small areas. Within a year the plague has been found in this country, in Great Britain and France, but has caused little alarm, so great is the confidence that it will be successfully suppressed. (Let us hope that this confidence is not misplaced.)

What has been accomplished during the last 100 years by internal medicine the following statistics will show in part, although it must be remembered that mortality statistics gathered before the middle of the century are not reliable. It is estimated that in 1805, in New York City, from 35 to 40 deaths occurred in every 1,000 inhabitants. During the last decade it has averaged 20 in 1,000, and has been as low as 19 in 1,000. In 1847 the mortality in London from zymotic diseases was 23.26%; during the last 2 decades, 19% to 20%. In 1846 the deaths from tuberculosis were 12.67%; now approximately 9%. The mortality from diseases of the respiratory organs has been reduced in the same time from more than 12% to about 7%, and the mortality from diseases of the digestive organs has diminished from about 6% to less than 5%. In Chicago the mortality rate has fallen, with small fluctuations, from 46 and 64 deaths per 1,000 inhabitants in the cholera year of 1852 and 1854 to 14 in 1898. The following diseases are among those in which the deathrate has fallen progressively: Cholera infantum, erup, diarrhea, diphtheria, dysentery, malaria, measles, scarlet fever and whooping cough. These are ailments the spread of which has been controlled either by isolation or by insuring the people purer food and water. Although the general mortality of Chicago, which is typical of the great cities of civilized countries, has improved, there are some diseases which are increasing in prevalence, notably nervous diseases, heart diseases, cancer, Bright's disease, bronchitis and pneumonia. To the discredit of my native city must it be said that the mortality from typhoid fever reached its highest point at the close of the century, during 1890, '91 and '92, although its cause and its mode of dissemination, as well as its prevention, were well known.

The general lowering of the deathrate is due to the improved hygiene of communities. In what the improvement has consisted is best shown by recalling some of the conditions under which people lived in 1800. At that time few cities had an adequate public water supply. In London water could be delivered at any

*Typhus forms an item in the mortality reports of Chicago (and other American cities) as late as 1886. This is probably because it was confused with typhoid. Not during the first quarter, and rarely afterwards, genuine typhus occurred in this country.

house 3 times a week by one of the water companies; but most households depended upon wells. The sewerage system was quite as imperfect. Outhouses and cesspools were attached to each dwelling. The conveyance of sewage from houses by water did not become general until well into the last century. Ventilation of buildings, and especially of public halls, had attracted attention before the nineteenth century; but the real causes of danger from bad ventilation were not appreciated until bacteriology disclosed them.

In 1800, streets were not paved, and rarely cleaned. The habits of the people as regards eating and drinking were hestial. Excessively large quantities of food were consumed by all who could provide it. Alcoholic beverages were universally drunk, and generally in immoderate quantities. No disgrace attached to drunkenness; and it was customary for a man to drink several bottles of wine at a sitting.

Those who compose this audience appreciate how much illness must have been caused by these habits, and how much the relative abstemiousness or temperance of today has lessened the percentage of disease.

Prevention of diseases is only possible when a knowledge of their causes, their mode of dissemination, and methods for their suppression are possessed by all the people. Medical men alone cannot stop their spread, nor will the making of laws do it. Only the intelligent cooperation of those who are ill and those who are well can accomplish it. It must not be expected, therefore, that as soon as the cause of the disease is discovered, that ailment can be suppressed. Time is required in which to educate all classes of people on that particular subject. Unfortunately, many persons are so obtuse that they will not believe in methods of prevention even when the fullest demonstration of their success has been made. A noteworthy instance of this is seen in the recent repeal of laws in England which made vaccination compulsory. The ease with which drinking water may be become contaminated and the danger to health from contamination is not even now appreciated by the public. It is partly because such thorough knowledge is needed by the laymen that tuberculosis, diphtheria, pneumonia, typhoid fever, and similar troubles have not been better controlled in the past. In order that in the twentieth century the fruits of the great discoveries of the last may be gathered, all members of the medical profession must fit themselves to teach their patients what is known of disease and its prevention. Those who are especially adapted to do so must disseminate their knowledge by popular discourses and essays. When hygiene shall be regarded by all classes as necessary, and as much a matter of course as the use of the railroad, steamboat, the telegraph, telephone, and labor-saving machines, then, but not until then, striking results may be expected.

The wonderful, the revolutionary discoveries made by students of internal medicine during the nineteenth century are not always appreciated as they should be, for their results are often demonstrable only by statistics; and the dramatic rescue of individuals from certain death which the surgeon at times accomplishes, unfortunately cannot be effected by the therapist. It is not in the nature of his art. Great progress, however, has been made in the use of medicines and remedial procedures. Good reasons can be given for their employment, and their mode of action can be explained. Empiricism no longer governs their use as it formerly did. The placing of therapeutics upon a scientific basis began in the last century when the physiologic effect of drugs was first demonstrated by experiments upon animals.

No field of medical research needs cultivation so much or is more certain to yield a rich harvest than therapeutics. It is surprising that we have not a larger volume of accurate knowledge of the effect of drugs than we do possess. Of late pharmacology has been neglected

for studies which have temporarily been more enticing to experimenters, such as bacteriology and experimental pathology. Moreover, a knowledge of these subjects is essential to enable a clinician to apply his therapeutic resources to the mitigation of suffering, the support of strength, and the elimination or destruction of noxious substances. One can safely prophesy that the exact utility and the limitations of drugs and medical procedures will be defined in the present century.

To accomplish this, not only is more knowledge required of the physiologic action of drugs, but also better means of accurately measuring their effects when they are given to patients. We know when pain is relieved; we can sometimes measure effects produced upon the heart and bloodvessels and temperature. Beyond this we depend for knowledge upon the impressions of physicians, impressions which must be corrected and often reversed by a wide experience. Clinicians possess only a few appliances or methods for the exact study of the sick. It is to be hoped that more will be discovered, and that they will also make it possible to register with accuracy the effect of drugs. When this is accomplished, undoubtedly a smaller number of useful drugs will be employed, but these with greater exactness.

It is true that more drugs are used today than need be, because patients demand them as a fetish; but this will be changed when laymen learn that it is the function of the physician to teach them what to do to give nature the best chance to effect repair, what to do to make themselves comfortable and to preserve life. When they learn that it is a physician's function to teach them how to protect others from the same ailment, to foretell the possibility of recovery or death, and to avert or forestall complications. Medical men should include time and faith in their materia medica as important means of effecting a restoration of health. I do not mean faith in a fetish procured in an apothecary's shop, but faith in the wisdom, honesty and disinterested devotion of physicians which will enable them to accomplish all that can be done for the suffering.

Although the greatest discoveries in the field of internal medicine have been applicable to the prevention of illness in the masses, much has also been done to increase the chances of recovery of individuals who are sick. I need call attention only to a few of the improvements in treatment which have been effected to remind you of more. Typhoid fever, which has been a scourge in all civilized countries, and constantly present in all larger centers of population, has not only been greatly lessened, sometimes even suppressed by improved hygiene, but the chances of recovery of the one who is sick with it have been increased several fold by improved methods of treatment. Twenty-five years ago the mortality from typhoid fever in the hospitals of the world was from 20% to 35%; today it is from 5% to 15%. The better results are due to the cold baths which are used, to a more generous supply of fresh air, to proper feeding, and to protection against, or the prompt treatment of, complications.

One great therapeutic discovery has been made at the end of the nineteenth century—the discovery of antitoxins, the natural antidotes to the poisons of infectious agents. For a very long time it had been known that something developed in the human system during the course of many ailments which gave to the sufferer from them for a variable time immunity from a recurrence of the same disease. Until the existence of parasites and of poisons generated by them was proven, an antitoxin was of course unrecognizable. Moreover, the possibility of such a thing in diseases, one attack of which did not cause immunity to others, was not even suspected. But the diphtheria antitoxin, the most efficient of those of which we know anything, is one belonging to this last group of ailments. The chemical composition of antitoxins is yet to be discovered. Since antitoxin has been used the mortality from diphtheria has been reduced

about one-half. The most extensive collection* of statistics gathered from all civilized countries shows that when antitoxin is used on the first day of the disease, the mortality is 5%, increasing rapidly to 30% when used on the fourth day or later. Before its employment the average mortality of the disease was from 25 to 35%. To effect a still greater reduction in the deathrate from this ailment, it is necessary that it be recognized early, and that antitoxin be employed more generally as a preventive for those who have been exposed.

That tetanus antitoxin and plague antitoxin are valuable is admitted. Many others, such as pneumonia, typhoid, tubercle, scarlet fever, erysipelas and streptococcus antitoxins are still in the experimental stage. But even though it should be found that few natural antitoxins can be isolated for use as remedies, those already discovered confirm physicians in the hope that specifics will be found some day.

Another therapeutic discovery made at the close of the century which has thrown a flood of light upon some obscure points in physiology and pathology, and has restored to usefulness many who were formerly incapacitated and incurable, is that of internal secretions, and especially the role of the secretion of the thyroid gland. Ingredients in the thyroid, suprarenal bodies, and ovaries, produce as definite effects upon the living body as many extracts from plants or synthetic chemicals. The pituitary body, the thymus, and bone marrow may also have a value as yet undetermined. The rescue of those suffering from myxedema and cretinism by the administration of thyroid is one of the few happy dramatic incidents which fall to the lot of the practitioner of medicine.

That a much larger proportion of recoveries from tuberculosis occur today than formerly is evident from the statistics of this disease, but this lessened mortality is not due to prevention only. Trudeau has estimated that 18% of all persons have tuberculous lesions, because a reaction to tuberculin can be demonstrated in that proportion. This statement is confirmed by Councilman, who states that his autopsy statistics show that at least 17% of all who die have had this disease. But in spite of this prevalence the mortality from the ailment is lessening.

Rabies and tetanus are 2 diseases which, until recently, were thought to be incurable. Rabies can be suppressed by killing unknown dogs and by muzzling the rest. Upon this point the following statistics from England are very instructive. In 1887, 217 deaths occurred in Great Britain from rabies; in 1888, 160; in 1889, 312. A muzzling law was then enforced. In 1891 the deathrate from this disease fell to 129; in 1892, to 38. The muzzling ordinance was repealed, with the result that in 1894, 248 deaths occurred from mad dog bites, and 672 in 1895. Again muzzling was made compulsory. The deathrate once more diminished; in 1897 it was 151; in 1898, 17; in 1899, 9, and in 1900, none.

Pasteur's great discovery of a method of attenuating the virus of rabies and rendering those who have been bitten by mad dogs immune by rapidly accustoming them to stronger and stronger viruses has greatly reduced the mortality.

Tetanus, quite common in hospitals formerly, is now prevented by properly cleansing and protecting wounds. It has become so rare a disease that today most students do not see a case of it during their college course.

The nineteenth century will be known in the history of medicine as the century of experimental medicine, for it is in that field that the greatest discoveries of the age have been made. The names of Pasteur, Koch and Lister will forever be linked with it as representing its greatest achievements. But these achievements would not have been possible had not the physicist perfected the

microscope, and had not Virchow and his pupils explored the field of cellular pathology to its farthest limits. Around Virchow's name as a banner will historians gather the achievements in medicine during the early and middle portions of the century, and around Pasteur's those of its close.

If our greatest needs conditioned the growth of knowledge, we could prophesy what will be the great field of research of the twentieth century, but history teaches us that our needs can often not be met until some sister science has grown, or new methods of experimenting have been devised. Therefore, the future must remain a blank to us. However, we are more apt to accomplish what is needed if the problems are kept clearly in mind. We greatly need more exact methods of clinical study, more accurate knowledge of the effect of remedial agents and procedures, but more than all else we need a knowledge of the changes which take place in the living tissue in health as well as in disease.

The anatomist has resolved the cellular structure of the body; the physiologist, the laws which govern the action of its organs and the chemic changes which are wrought upon its surfaces; the bacteriologist has discovered the parasites that infest, and often destroy it; the pathologist has described the anatomic changes which disease produces; the clinician has linked all these facts together and has discovered ways of seeing with the intellectual eye disturbances of physiologic function, of determining their cause, and of anticipating the anatomic changes which they will produce. But this does not satisfy us; we want a knowledge of the atomic and molecular structure of cells, of the changes which take place in the atoms and molecules in health and in disease, and of the effect of medicines and remedial procedures upon them. This knowledge chemistry must give us. I feel sure that, standing as we do at the beginning of a new century, expecting greater developments in it than in the last one, we are halting before new discoveries in chemistry, waiting for new methods of studying metabolism in microscopic portions of tissue. When this knowledge is vouchsafed, medicine will make another stride as great as was made when, by the perfected microscope, cellular pathology and bacteriology became possible.

Let us look forward with confidence to the Virchow and the Pasteur of the future.

Good, Cheap Bread.—A society has been formed in Paris to promote the establishment of combination milling and baking houses in all the large French towns. It has for its object the production of 100 kilograms (220 pounds) of nutritious, digestible white bread from 100 kilograms of grain at the lowest cost, made by the Swiss system. Official analyses made by the National Agronomical Institute and by the Municipal Laboratory of Paris shows that Swiss bread contains more nutritive nitrogenous properties and more phosphates than ordinary baker's bread.

Carcinoma Inquiries.—At a recent meeting of the German Cancer Investigation Committee, held at Berlin, under the presidency of Professor von Leyden, it was reported that the material already accumulated was being analyzed and digested under the direction of Dr. Hirschberg, of the Berlin Statistical Office, and Dr. George Meyer, secretary of the Committee. It was further stated that an investigation on the lines of that organized in Germany had been undertaken in Holland, and that communications had been received by the Committee from England, America, Russia and Italy. The Berlin Assurance Institute had made a further grant of 500 marks for the year 1901. In his opening address at the German Surgical Congress recently held in Berlin, Professor Czerny, of Heidelberg, the President of the Congress, made the interesting announcement that Professor Levschin, of Moscow, has stated that a hospital for the care of cases of incurable cancer, with an institute for the investigation of the disease would shortly be established in that city. Funds to the amount of 700,000 roubles have been obtained by voluntary contributions. The results of the research carried out in the institute will be published in a special journal bearing the name of the hospital. Professor Czerny expressed a hope that a Meeenas might come forward and make the establishment of a similar institution possible in Germany. [*British Medical Journal*.]

*Das Oesterischen Sanitätswesen, No. 52, 1900.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

May 18, 1901. [No. 2107.]

1. Lower Uterine Segment and the Contraction Ring. W. J. SMYLY.
2. The Dangers and Diagnosis of Breech Presentation, and Its Treatment by External Version Towards the End of Pregnancy. HERBERT R. SPENCER.
3. Some Instances of Cystic Affections of the Breast, with Remarks. A. MARMADUKE SHEILD.
4. Some Remarks Upon an Analysis of 5,000 Cases of Death from Malignant Disease. E. N. NASON.
5. Erythema Multiforme and Vaccination. NORMAN WALKER.

1.—Smyly claims that the origin of the lower uterine segment is still uncertain, but that as labor sets in, the contrast between the 2 segments becomes more marked, the upper part being the contracting and the lower the distensible portion, allowing the fetus to descend; but so embracing the head, or presenting part, during the first stage of labor as to prevent the passage of anything between. This is one of its most important functions. When the lower segment does not thus embrace the presenting part, portions of the limbs or cord may be forced through, or it may cause funic prolapse. It is the unusual or abnormal development of the placenta in the lower uterine segment which leads to the dangerous condition of placenta previa. The lower segment of the uterus is the part most frequently involved in rupture. The constriction of the contraction ring may occur before, during, or after the expulsion of the fetus. But the most familiar example is the retention of the afterbirth by the so-called "hourglass contraction" of the uterus. The contraction which sometime occurs after the patient has been long in labor, is often a serious cause of dystocia and even danger. Smyly thinks it important that every practitioner should make a careful study of the lower segment and contraction ring and the dangers resulting from ignoring this subject. [W.K.]

2.—Spencer says the causes of the high rate of mortality of children in breech presentation are the low insertion of the cord leading to prolapse, sometimes asphyxiation and death, and injury to the soft thoracic and abdominal viscera from undue pressure, the soft buttocks not protecting them as does the harder head. He describes fully the method of diagnosing breech presentation by abdominal examination and its treatment by external version toward the end of pregnancy, preferably at the end of 7½ months. Contraindications to external version are multiple pregnancy, malformed uterus or placenta previa. This early diagnosis and treatment of breech presentation involves physical examination during pregnancy, and Spencer believes this examination should be a routine practice, as thus conditions may be recognized which can be obviated by timely interference. [W.K.]

3.—Sheilds reports 4 cases of cystic affection of the breast, with remarks on the diagnosis and treatment. Small deep-seated cysts often so closely simulate malignant disease that mistakes in diagnosis and treatment are not infrequent. Elasticity, variation in size and tenderness are important points in the differential diagnosis. The condition of the axillary glands is often misleading. As regards treatment, removal by dissection, followed by the establishment of sufficient drainage is preferable. Small cysts containing clear or straw-colored fluid may be treated by the injection into them of carbolic acid in glycerin. In doubtful enlargements of the breast the use of the exploring trocar and canula are advised. [J.W.M.]

4.—Nason points out what seem to be legitimate deductions from the analysis of over 5,000 cases of death from the various forms of cancer. Of these 62% occurred in the female and 38% in the male. The preponderance of female cases seems to be due to the frequency with which cancer attacks the uterus and female breast. In 40% of the female cases 1 of these 2 organs was affected. If the sexual peculiarities of both sexes be eliminated the inequality is reversed, 53% being male and 47% female cases. There is a general increase in cancer mortality and this increase is much more noticeable in males than in females. A table is given showing the percentage

in which the various organs are affected in males, females and persons. Of deaths from cancer in the male a large percentage is caused by cancer of the stomach and pylorus. Diagrams show the frequency with which the various forms of cancer occur at different ages. The following predisposing causes of cancer are mentioned: Prolonged local irritation; the immediate or after-effects of direct and sudden injury; syphilis and possibly other constitutional diseases which are associated with local tissue changes; the tissue degenerations of advancing years varying with the age; individual proclivity; the presence of fetal remnants, and the residence in the neighborhood of a sodden and sewage-soaked soil. [C.A.O.]

5.—Walker has had under observation 4 cases of erythema multiforme following a recent vaccination and all showing features which seem to make it certain that the vaccination was causally related to the eruption. The wound had entirely healed before the eruption appeared. Walker believes that a toxin is produced, which, circulating in the blood, produces erythema multiforme and especially that form described as erythema iris. [C.A.O.]

The Lancet.

May 18, 1901. [No. 4055.]

1. On the Pathology and Diseases of the Thyroid Gland. WALTER EDMUNDS.
2. Cases Illustrating the Surgery of the Thyroid Gland. HENRY BETHAM ROBINSON
3. A Pharyngeal Ponch of Large Size Removed by Operation. RICKMAN J. GODLEE.
4. Flies and the Science of Scavenging. G. V. POORE.
5. A Case of Symmetric Retinal Detachment Occurring During Labor and Associated with Albuminuria, Resulting in Complete Recovery. REGINALD G. HANN and R. LAWFORD KNAGGS.
6. Is the Murmur of Mitral Stenosis Systolic or Presystolic In Rhythm? HUGH WALSHAM.
7. Opothery in Gyneecology. JOHN PHILLIPS.
8. Some Questions with Regard to Acute Middle-ear Inflammation. P. MCBRIDE.
9. A Simple Form of Electric Light and Heat Bath, with 8 Cases of Osteoarthritis Treated by It. F. C. EVE.

1.—Edmunds, in the second Erasmus Wilson lecture on the pathology and diseases of the thyroid gland, considers the results of removing the parathyroid glands only. From a mass of observations it seems that excision of the thyroid gland and the parathyroid glands produces enophthalmos with narrowing of the palpebral fissures; total parathyroidectomy seems to produce the same, and so also (if it produces symptoms) does excision of the thyroid gland proper; but certain operations not fatal at the time, and especially those in which the parathyroids are interfered with, may be followed by exophthalmos widening of the palpebral fissures. Experiments undertaken to ascertain whether the internal secretion of the thyroid is under the influence of the nervous system disclosed the fact that it is, and that interference with the nervous supply produces very serious symptoms; whence it follows that we must be prepared to admit the possibility of defective innervation being the cause of serious symptoms and pathologic changes. Finally, there are detailed the results of excess of thyroid gland in the body noted by different observers and by himself. [A.O.J.K.]

2.—Robinson reports some cases illustrative of thyroid gland surgery. The first refers to 3 cases of parenchymatous goiter, in which a general almost symmetrical enlargement of the thyroid gland occurs, giving rise to dyspnea on exertion and difficulty in swallowing. One case improved under thyroid extract; in the others the isthmus was removed and the lobes rapidly diminished in size. In both cases tracheotomy was necessary and in both thyroidism occurred, due to absorption of glandular secretion. He also refers to adenoma of the thyroid gland, which may be solid or cystic, bilateral or unilateral, usually the latter. The most satisfactory treatment is removal by enucleation, or by removing the entire lobe. Tapping, with the injection of iodine and drainage has been tried but is not recommended. [J.W.M.]

3.—Godlee reports the removal of a large pharyngeal pouch. The patient was a man 31 years of age, who 10 years ago first became conscious of a swelling on the left side of his neck, which moved up and down on swallowing. It disappeared and reappeared suddenly at varying intervals, and later gave rise to difficulty and pain in deglutition. By squeezing it a squeaking sound was produced and an uncomfortable sensation experienced while the tumor was reduced in size. It was tympanitic on percussion and the patient could inflate it slightly at will. It was removed by dissecting the pouch from the surrounding structures and invaginating the tubular pedicle. The communication with the pharynx was not found. These pouches arise from the incomplete closure of visceral clefts. [J.W.M.]

4.—Poore, writing of flies and the science of scavenging, advocates strongly the disposal of excreta in camps in narrow and superficial trenches, and insists that the burial of the feces must be done methodically and carefully, precisely as a gardener plants his seeds when intent upon raising crops. Some herbage may be grown and the waste water of the camp may be utilized to water the soil. He mentions many details that go to show that the method advocated is entirely practical. He believes that the presence of flies in large numbers should be a rebroach to us for not putting organic refuse to its proper use. [A.O.J.K.]

5.—Hann and Knaggs report a case of retinal detachment occurring during labor and associated with albuminuria, which condition is one of the causes of blindness during parturition. Retinal detachment during labor generally ends in recovery, while such an accident occurring during an attack of renal disease is usually a prelude to a fatal result. This accident is labor is explained as follows: During the pains the return of the venous blood must be retarded and a considerable back pressure exerted on the capillary circulation. [F.C.H.]

6.—Walsham, in an endeavor to determine whether the murmur of mitral stenosis is systolic or presystolic in rhythm, made use of combined examination by the x-ray, palpation and auscultation. He details first the x-ray appearances presented by the normal heart during the different phases of its cycle—there occurring with the auricular systole an advance to the left of the left border of the shadow, with an abrupt recession toward the median line with the ventricular systole. By the combined method of investigation it was found that the murmur in mitral stenosis begins at the moment when the shadow is advancing toward the left, that is, during the auricular systole, and that it ends abruptly when the shadow retreats toward the median line—that is, with the ventricular systole. Such examination in a number of cases of mitral stenosis have convinced him that both the thrill and the murmur are presystolic in time. [A.O.J.K.]

7.—Phillips prefers the term ophoterapy to organotherapy. The indications for the administration of thyroid, ovarian and mammary extracts are detailed. [F.C.H.]

8.—McBride discusses some questions with regard to acute otitis media, and reports a case in which an empyema of the antrum of Highmore seemed to be an important factor in keeping up a middle ear suppuration. Otitis media may arise from acute rhinitis or pharyngitis, adenoids, and the existence of adenoid tissue between and around the eustachian orifices. The treatment suggested in otitis media after spontaneous perforation, consists in the use of Politzer's bag, and in catheterization of the eustachian tube where drainage is difficult, and the nasopharynx does not contain infective material. In the question of mastoid operation, 2 conditions suggest its necessity: (1) Profuse discharge; (2) a small opening in a bulging membrane. [J.W.M.]

9.—Eve describes a form of electric light and heat bath, and reports 8 cases of osteoarthritis, in which its use was followed by the relief of pain and stiffness. The apparatus consists of 3 32-candle power lamps fixed on an aluminum base, and protected by a wire cage. A wire connects it with any lamp-holder. It may be used to heat a single limb or the entire body. The temperature of the chamber, formed by covering the cradle with several blankets, can be raised in 30 minutes from 200 to 250°, and, as a rule, the body-temperature rises 2 or 3°, especially

when the whole body is treated. The following advantages are claimed for the apparatus: (1) Little cost; (2) lightness and portability; (3) no odor; (4) high temperature; (5) the current can be obtained from the domestic electric light; (6) the production of intense light as well as heat, which is of sudorific and therapeutic power; (7) by changing the cradle the one apparatus can be used for different parts of the body; (8) the patient can be treated at his own home. [J.W.M.]

The Journal of the American Medical Association.

June 1, 1901. [Vol. XXXVI. No. 22.]

1. Movable Kidney: Its Cause and Treatment. M. L. HARRIS.
2. The Appendix Vermiformis and Cecum: A Comparative Study. B. MERRILL RICKETS.
3. Zoology in the Medical School Curriculum. CHARLES WARDELL STILES.
4. Antipneumococcal Serum Treatment of Pneumonia, with Report of Cases. G. E. TYLER.
5. How to Treat Muscular and Joint Sprains of Railway Employes. HALDOR SNEVE.
6. Diagnosis and Symptomatology in Appendicitis in Children. THOMAS H. MANLEY.
7. Is it Possible by Proper Dietetics and Hygiene to Exterminate Tuberculosis? J. E. KINNEY.
8. Variola and Varicella. M. A. AUSTIN.
9. Photographing the Eye-ground. SHIRLS JACKSON.

1.—The normal movement of the kidney varies from 2 to 4 cm. The technic of palpation and the 3 degrees of mobility are described. The usually mentioned etiologic factors of movable kidney are shown to have little or no influence. The essential cause lies in a particular body form. The measurements of Becker and Lenhoff are not sufficient to give a correct idea of this. More reliable results are obtained by dividing the jugulo-symphysis distance by the abdominal circumference at the level of the lowest point of the tenth rib. A more accurate index still is obtained by dividing the lateral diameter of the lower plane by that of the upper plane bounding the middle zone of the body cavity. The chief characteristic of this body form is marked contraction of the lower end of the middle zone with lessened capacity. This depresses the kidney so that the constricted outlet comes above the center of the organ and all acts, as coughing, lifting, etc., which adduct the lower ribs press on the upper pole and crowd it still further downward. Repetition of these internal traumas gradually produce movable kidney. It is never the immediate result of external trauma. The measurements of 153 patients in whom the kidney was palpable are tabulated. In cases requiring operation the tendency has been to fix the kidney too high up. This may cause recurrence or, if not, more severe symptoms than the original condition. The selected location should depend on body form. The author's operation for contracting the pouch in which the kidney moves is described. [H.M.]

2.—The presence and character of the cecum and vermiform appendix in various mammals, birds, reptiles and fish are noted. Carnivora, as a rule, have an appendix. Herbivora possess a rather large cecum. The continued presence of the latter in the higher orders of vertebrates is nature's attempt to use an organ that has lost its original function. The anatomy of these organs in man with the greater development of the appendix in infancy and of cecum in middle life is described. [H.M.]

3.—American medical schools should give the same recognition as the European in their curriculum or requirements to the practical and intimate relation of zoology to disease and public hygiene. As in the fields of chemistry and botany special attention is given to toxicology and bacteriology, so should we have courses on animals which produce disease including lectures and laboratory work. This would include lectures on the protozoa of various fevers, etc., and disease-producing worms and insects. Knowledge of these is of added importance, owing to the growing dissemination of tropic diseases. The subject of animal parasitism should be treated either by a professional zoologist or by a physician with general zoologic training. [H.M.]

4.—The paper opens with an account of the discovery of **antipneumococcal serum**. Conflicting opinions are quoted, but it may be concluded that it is not a bactericide but prevents the development of symptoms due to the formation of pneumotoxin, either by rendering it inert or by counteracting its effects. It is prepared much the same as diphtheria antitoxin and treated with trikresol. The statistics of cases treated are reviewed and 6 new cases reported. When those with complications, etc., are excluded, the mortality is 4.7%. Its value is indicated by the increase of leukocytes in the blood. It will prevent toxic symptoms if given before the advent of the pneumococcus in the blood which occurs on the third to fifth day. It does not affect the lung except possibly preventing involvement of new areas. [H.M.]

5.—Statistics of these injuries are given, showing their frequency. Ligaments are rarely torn and never stretched. There is rupture of areolar and connective tissue around the joint and contusion of the lining. In muscular **sprains** there is rupture of the tissue elements. Muscles continue functioning when immobilized, and waste products should be removed. In **sprains** there should be passive exercise the first few hours or days and active exercise after that. In the majority of cases active exercise is indicated from the first. Plaster casts should be used only when needed to maintain proper position after fracture. Ice compresses the first few hours, followed by hot fomentations or the Scottish douche are of great value. Static electricity with massage is the best treatment for a strain. The average time for recovery from ankle sprains is from 6 to 12 days. [H.M.]

6.—In **children** the **symptomatology of appendicitis** is more complex and indefinite than in later life. The position of the cecum is more indefinite, its lax attachment to the iliac fascia allowing greater range of motion. In childhood, intussusception and tubercular peritonitis are the 2 diseases most likely to be confounded with it. Floating kidney, perinephritic and psoas abscess, and typhoid fever are also mentioned. Umbilical abscess is generally of appendiceal origin. Pressure on the ureter, or perforation into the bladder, may lead to wrong diagnosis. Examination of the blood has no practical value in diagnosis. Physical examination reveals flexion of the right leg, abdominal distension is generally present, and with peritonitis the respirations are frequent and shallow. In most cases tumefaction is made out. Deep puncture is unreliable. By rectal examination under an anesthetic any localized fulness below the umbilicus may be made out in a child under 10 years. The constitutional symptoms are those of peritonitis. The disease often begins with symptoms of obstruction. Three types or stages, with symptoms and physical signs, are described: Acute appendicitis in the congestive or plastic stage; appendicitis with gangrenous, ulcerative perforation and suppurative typhlitis; and perforation of the appendix directly into the peritoneal cavity. In the first type, free evacuation of the bowels and bladder will often establish convalescence. The second type seldom presents urgent symptoms except when there is fecal extravasation or great quantities of pus burrowing into the retroperitoneal tissues, or bursting of the pyogenic membrane into the peritoneal cavity, when the patient may sink from toxemia in spite of operation. In the third, could we always determine when perforation occurs, probably every life might be spared. [H.M.]

7.—In 632 cases of **tuberculosis** seen by Kinney in private practice, with the exception of those following pneumonia, 88% gave a history of gastric or intestinal disturbance existing from 3 months to several years before involvement of the lung. In the remaining 12%, cases of over 3 years' duration, there was marked digestive disturbance. The trouble was intestinal in 78% and gastric in 22%. The history is often difficult to elicit owing to the absence of pain, especially in the intestinal cases, patients being unobservant frequently of other symptoms. The essentials of perfect digestion are a proper anatomic and physiologic condition, proper foods and applied nerve force to run the digestive apparatus. Depleted conditions result from improper proportions and quantities of foods and from eating in conditions of physical exhaustion. The practitioners should always think of food before medicine and give it the place of

importance in his directions. In the treatment of tuberculosis the nitrogenous foods are essential. The importance of the early diagnosis of digestive disturbances, of the study of dietetics and of the education of patients and public are considered in relation to prophylaxis.

Medical Record.

June 1, 1901. [Vol. 59, No. 22.]

1. The Diagnosis and Surgical Treatment of Prolapsed Kidney, with Demonstration of a Simple Method of Examination for its Detection. AUGUSTIN H. GOELET.
2. The Climate of Long Island. LE GRAND N. DENSLOW.
3. Superheated Air in the Therapeutics of Chronic Catarrhal Otitis Media. GEORGE W. HOPKINS.
4. Three Cesarean Sections: Recovery. J. F. BALDWIN.
5. Ether as an Anesthetic. EDWARD JUDSON WYNKOOP.
6. A Few Observations from the Lorenz Orthopedic Clinic. LEONARD W. ELY.
7. Case of Membranous Angina, due to Streptococci, followed by Paralysis of the Soft Palate. MOSES KESCIENER.

1.—Goelet believes that the **examination for the detection of a prolapsed (movable) kidney** should be made with the patient standing and with the body inclined slightly forward so as to relax the abdominal muscles. The examiner sits in front and a little to the right of the patient, grasps the right loin with his left hand, with the 4 fingers behind the right lumbar region and the thumb in front just below the border of the ribs. The patient is now directed to take several deep inspirations and to expire to the extreme limit. When expiration is complete he presses the thumb well into the abdominal wall under the ribs, depressing it as much as possible so as to reduce the space between it and the fingers posteriorly. If the kidney is out of position, it must be below his thumb, and he can feel the kidney slip into position as it is pushed upward by the fingers of the right hand. His observations have led to the following conclusions, viz.: (1) That prolapsed kidney is more frequent than is generally supposed; (2) that it is often not suspected, because it does not always give rise to symptoms directly referable to the kidney; (3) that frequently it is not discovered because, by the usual methods of examination, only an expert can detect it unless the kidney is much enlarged or the subject is thin and the abdominal wall relaxed; (4) that palliative measures are of no avail and therefore useless and unwise if the degree of prolapse is sufficient to produce symptoms; (5) that lumbar fixation is the correct method of treatment when there is no contraindication; the operation being simple, devoid of risk, and successful when properly executed and the patient is given careful preparation and proper attention during convalescence, extending over a period of several months. [C.A.O.]

2.—Tables of mean temperature, frost, precipitation, sunshine, cloudy days and relative humidity for many **health resorts** on the Eastern and Western coasts and interior of the United States are given, showing the marked advantages of Eastern and Southern **Long Island** in these respects. The geologic conditions with reference to drainage and pure water supply are also shown to be very favorable. Its best field would be in heart, lung, kidney and rheumatic troubles in which a sunshiny, dry, slightly stimulating climate at a low level is desirable, in which from May till October almost every day may be passed out of doors with comfort. [H.M.]

3.—**Superheated air** was first used 4 years ago by the author in a case of **ankylosis of the ossicles** and since then in 62 characteristic cases with but 4 failures. The ear is cleaned, packed with gauze, a gauze pad placed externally, and then covered with a canvas-sleeve hot air conductor, and the temperature gradually raised to 400°; a gas or oil room-heater and a funnel shaped top being used. There must be a perforation in the sleeve near the ear for the removal of dead air. The contraindications are arteriosclerosis, serous effusion into the tympanum and perforation of the latter. The intense heat seems to stimulate the circulation, causing absorption of articular deposits, removing atrophy and relieving rigidity of the tensor tympani. [H.M.]

4.—Baldwin reports 3 cases of Cesarean section: the first, in 1889, was by Porro's method, the first operation of the kind in

Ohio. In the other 2, the incision was made transversely across the fundus, the child delivered, incision sutured, and fallopian tubes removed into the horn on each side so as to prevent future pregnancies. The children all lived and the mothers recovered. [w.k.]

5.—Wynkoop, in discussing the subject of ether as an anesthetic, arrives at the following conclusions: (1) Ether from its physiologic action is the safest of anesthetics; (2) more care is necessary in preliminary examinations, and more care in regard to the position and condition of patients during narcosis; (3) a good inhaler, the simpler the better, is needed, with fresh ether made by a reliable firm, and for this purpose the small ½-pound cans are the best; the ether is to be added in small quantities frequently, beginning the narcosis with the inhaler a short distance from the patient's face and gradually bringing it down; (4) the more detailed study of this important subject is called for in our schools and hospitals; (5) the presence of a trained anesthetist at all operations is necessary. [C.A.O.]

6.—Ely gives a few observations from the orthopedic clinic of Lorenz in Vienna. He says many of our well-established ideas are ridiculed, and appliances adopted which we would consider clumsy and unscientific. Where we use plaster Lorenz uses a brace, and for our brace he substitutes plaster. In spinal caries he advocates the use of a corset made of perforated celluloid, strengthened by metal bands. In the treatment of diseases of the other joints, plaster is the favorite material. A plaster spica is used in hipjoint disease. Lorenz is particularly noted for his treatment of congenital dislocations. Much of his work is done without the use of the knife, and the results are at times brilliant. He looks forward to the time when these patients will be brought earlier for operation, and believes that failures then would be few. [C.A.O.]

7.—The patient presented the classic symptoms and signs of local diphtheria, with profound systemic infection shown in maniacal delirium. Repeated examinations at the hospital and New York Health Department excluded the Klebs-Loeffler bacillus. Paralysis may have been due to pressure from the inflammatory process, or from a toxic neuritis generated by the streptococcus. [H.M.]

Philadelphia Medical Journal.

June 1, 1901. [Vol. 7, No. 22.]

1. Two Successful Cases of Secondary Suture, 1 of the Posterior Interosseous Nerve and 1 of the Median and Ulnar Nerves. W. W. KEEN.
2. Pancreatitis. A. W. MAYO ROBSON.
3. The Examination of the Blood in Relation to Surgery of Scientific, but Often of no Practical Value, and May Misguide the Surgeon. JOHN B. DEEVER.
4. Complicated Fractures, Their Diagnosis and Treatment. THOMAS H. MANLEY.
5. Pityriasis Versicolor, with Special Reference to Allen's Iodin Test. JACOB SOBEL.
6. The Biceps Tendon Jerk in Locomotor Ataxia. MOSES BEHREND.

1.—Keen reports 2 successful cases of secondary suture of nerves. In the first case there was division of the posterior interosseous nerve and common extensor muscle of the fingers, followed by total loss of extension of the fingers; suture after 3 months; entire restoration of function. In the second case the median and ulnar nerves were divided; secondary suture after 6 months; entire recovery. [C.A.O.]

2.—See page 335, Vol. 1, No. 8, AMERICAN MEDICINE.

3.—See page 292, Vol. 1, No. 7, AMERICAN MEDICINE.

4.—Manley discusses the following points in speaking of the diagnosis of complicated fractures: (1) History of case; (2) inspection of patient; (3) posture, attitude or position; (4) manipulation, palpation, pressure, torsion, and traction; (5) narcotic relaxation of the muscular system; (6) x-rays; (7) exploratory incision; and (8) a consultation. In the treatment of those fractures not attended with marked displacement, he does not use splints, and reports most satisfactory results. [C.A.O.]

5.—Sobel, in his paper on pityriasis versicolor, says the old theory that only hidden parts are affected is no longer tenable.

He believes Allen's iodine test to be of great value not only for class-room demonstration and for bringing into relief pale and hidden lesions of pityriasis versicolor, but also for differentiating parasitic or presumably parasitic skin affections from those of a nonparasitic nature. Recurrences are in the main due to the overlooking and nontreatment of the suprapubic region and to the use of desquamative agents to the exclusion of penetrating ones. Both must be combined if a cure is desired. Tuberculous subjects, while affected in great measure on account of the hypersecretion of sweat, do not form the greater part of these patients. It occurs in all degrees of health and disease, a marked hyperidrosis, however, predisposing towards it. Children and the very old are occasionally, though rarely, attacked. It may occur in all shades from a very light pink to almost coal black (pityriasis nigra), the color being influenced by the condition of cleanliness, the circulation of the skin, the occupation of the patient, and the color of the underclothing. [H.H.C.]

6.—In an article on the biceps tendon jerk in locomotor ataxia, Behrend states that the ataxia in the arm is, as a rule, more marked when the biceps tendon jerk is absent and is usually marked when the same is found in the legs. In these the biceps tendon jerk is absent. In the presence of the biceps tendon jerk with slight ataxia in the arms, ataxia in the legs is invariably well marked. Sensation is usually normal in those cases with normal biceps tendon jerk, and the sensory losses are usually found when the biceps tendon jerk is absent. Arthropathies are only found in the advanced cases and astereognosis is only present in the markedly ataxic. The loss of the sense of position is almost constant in the advanced cases of tabes and the shooting pains in the arms bear no relation to the degree of ataxia. The marked ataxics seldom show the loss of weight sense. The intensity of the symptoms is not dependent on the duration of the case, but rather upon the extent of the sclerotic process. [H.H.C.]

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended June 1, 1901:

SMALLPOX—UNITED STATES AND INSULAR.			
		Cases	Deaths
California:	San Francisco.....	May 11-18.....	5
Illinois:	Chicago.....	May 18-25.....	7
Iowa:	Clinton.....	May 18-25.....	2
Louisiana:	New Orleans.....	May 18-25.....	7
	Shreveport.....	May 18-25.....	1
Maryland:	Baltimore.....	May 18-25.....	2
Massachusetts:	Boston.....	May 18-25.....	3
	Fitchburg.....	May 18-25.....	1
	Marlboro.....	May 18-25.....	1
	New Bedford.....	May 18-25.....	2
Michigan:	Detroit.....	May 18-25.....	67
Minnesota:	Minneapolis.....	May 18-25.....	9
	Winona.....	May 11-18.....	1
Nebraska:	Omaha.....	May 11-18.....	9
New Hampshire:	Manchester.....	May 18-25.....	5
New Jersey:	Camden.....	May 18-25.....	1
	Newark.....	May 18-25.....	2
	Passaic.....	May 18-25.....	1
New York:	New York.....	May 18-25.....	134
Ohio:	Cincinnati.....	May 17-24.....	4
	Cleveland.....	May 18-25.....	39
Pennsylvania:	Erie.....	May 18-25.....	1
	Lebanon.....	May 18-25.....	8
	Philadelphia.....	May 18-25.....	3
	Williamsport.....	May 18-25.....	1
Tennessee:	Memphis.....	May 18-25.....	2
	Nashville.....	May 18-25.....	6
Utah:	Salt Lake City.....	May 11-18.....	5
Washington:	Tacoma.....	May 12-19.....	1
West Virginia:	Huntingdon.....	Apr. 13-May 24.....	48
Wisconsin:	Green Bay.....	May 19-25.....	6
Philippine Islands:	Manila.....	Mar. 23-Apr. 13.....	35
Porto Rico:	Ponce.....	Apr. 27-May 4.....	5
SMALLPOX—FOREIGN.			
Austria:	Prague.....	Apr. 27-May 4.....	3
Brazil:	Rio de Janeiro.....	Apr. 1-12.....	5
Belgium:	Antwerp.....	Apr. 27-May 4.....	5
China:	Hongkong.....	Apr. 6-13.....	6
Ecuador:	Guayaquil.....	Mar. 30-May 11.....	3
Egypt:	Calro.....	Apr. 15-May 6.....	4
France:	Paris.....	Apr. 27-May 4.....	5
Gibraltar:	.....	May 6-12.....	2
Great Britain: Eng.,	Liverpool.....	May 4-11.....	2
	London.....	May 4-11.....	1
	Scotland, Dundee.....	Apr. 27-May 11.....	10
	Glasgow.....	May 3-11.....	4
Italy:	Naples.....	Apr. 30-May 12.....	296
Mexico:	Mexico.....	May 11-18.....	1

Nicaragua:	Grenada.....	May 16.....	Present.
	Manaya.....	May 16.....	Present.
	Managuas.....	May 16.....	Present.
Russia:	Moscow.....	Apr. 21-27.....	9 3
	Odessa.....	Apr. 27-May 4.....	5 2
	St. Petersburg.....	Apr. 20-May 4.....	21 4
	Vladivostock.....	Oct. 1-31.....	1
	Warsaw.....	Apr. 20-27.....	7
Spain:	Malaga.....	May 4-11.....	1
	Valenela.....	Apr. 27-May 11.....	2
Straits Settlements:	Singapore.....	Mar. 30-Apr. 13.....	3
Uruguay:	Montevideo.....	Mar. 16-23.....	6
YELLOW FEVER.			
Brazil:	Rio de Janeiro.....	Apr. 1-15.....	31
Colombia:	Panama.....	May 6-20.....	7
Cuba:	Havana.....	May 11-18.....	3
PLAGUE—INSULAR.			
Philippine Islands:	Cebu.....	Apr. 4.....	1
	Manila.....	Mar. 23-Apr. 13.....	76 64
PLAGUE—FOREIGN.			
Japan:	Formosa.....	Apr. 21-28.....	170 111
Turkey:	Basra.....	May 13.....	3

Changes in the U. S. Marine-Hospital Service for the 7 days ended May 30, 1901:

CARTER, H. R., surgeon, to inspect the local quarantine station at Baltimore, Maryland—May 25, 1901.
 WOODWARD, R. H., surgeon, granted 2 weeks' extension of leave of absence from May 26—May 25, 1901.
 VAUGHAN, G. T., surgeon, detailed as delegate to represent the service at the meetings of the Association of Military Surgeons of the United States, May 30; and American Medical Association, June 4, at St. Paul, Minn.—May 27, 1901.
 COBB, J. O., passed assistant surgeon, relieved from duty at Fort Stanton, N. M., and directed to proceed to Portland, Oregon—May 29, 1901.
 WERTENBAKER, G. P., passed assistant surgeon, detailed to represent the service at meetings of the Association of Military Surgeons of the United States, May 30; and American Medical Association, June 4, at St. Paul, Minn.—May 27, 1901.
 GARDNER, C. H., passed assistant surgeon, detailed to represent service at meeting of the Washington State Medical Society at Seattle, Wash., June 16 to 20, 1901, inclusive—May 27, 1901.
 DECKER, G. E., assistant surgeon, granted leave of absence for 10 days—May 28, 1901.
 HOB DY, W. C., assistant surgeon, to proceed to Thomson, Ga., for special temporary duty—May 27, 1901.
 HARGIS, J. W., acting assistant surgeon, granted leave of absence for 4 days from May 26—May 27, 1901.
 OLSEN, E. T., hospital steward, granted leave of absence for 15 days from June 13—May 22, 1901.
 SPANGLER, L. G., hospital steward, to proceed to Delaware Breakwater, Del., and report to medical officer in command for duty and assignment to quarters—May 28, 1901.

Appointment.

SPANGLER, LEWIS G., of Ohio, appointed junior hospital steward in the United States Marine-Hospital Service—May 27, 1901.

Changes in the Medical Corps of the U. S. Navy, for week ended June 1, 1901:

DIXON, W. S., medical director, commissioned medical director from April 28, 1901.
 HERNDON, C. G., medical inspector, commissioned medical inspector from April 28, 1901.
 ARMSTRONG, E. V., passed assistant surgeon, detached from the Vermont, May 20, and ordered to the Key West Naval Station for duty with detachment of marines at Dry Tortugas, Fla., as relief of Assistant Surgeon R. B. Williams.
 LIPPITT, T. M., assistant surgeon, ordered to the Washington Navy Yard, June 1, as relief of Assistant Surgeon W. M. Garton.
 WILLIAMS, R. B., assistant surgeon, detached from duty at Dry Tortugas, Fla., June 3, and ordered home and to hold himself in readiness for sea duty.
 IDEN, J. H., assistant surgeon, ordered to duty at the naval hospital, Chelsea, Mass.
 MORRIS, C. Jr., assistant paymaster, detached from the Abarenda, upon reporting of relief, and ordered home and to wait orders.
 GOODHUE, E. E., assistant paymaster, detached from the Mare Island Navy Yard, June 10, and ordered to the Abarenda, as relief of Assistant Paymaster C. Morris, Jr., via the Philadelphia.
 COSTIGAN, J. F., passed assistant surgeon, detached from the Yorktown and ordered home and to wait orders; resignation to be accepted after arrival home.
 GARTON, W. M., assistant surgeon, detached from the Washington Navy Yard, June 1, and ordered to the Indiana.
 IDEN, J. H., assistant surgeon, appointed assistant surgeon from June 4, 1901.
 SHIFFERT, H. O., assistant surgeon, ordered to the Nashville.
 THOMSON, E., assistant surgeon, detached from the Petrel and ordered to the Solace.
 MCCLANAHAN, R. K., assistant surgeon, ordered to the Culgoa.

Changes in the Medical Corps of the U. S. Army for the week ended June 1, 1901:

The following assignment of medical officers is ordered: Major John R. Hereford, surgeon, to duty at Balanga, province of Bataan; Major Wm. H. Cook, surgeon, to duty at Santa Ana, province of Pampanga; Captain Frank W. Dudley, assistant surgeon, to duty at Orani, province of Bataan.
 LONG, Captain CLARENCE H., assistant surgeon, will proceed to Carangan, province of Nueva Ecija, P. I., for duty.
 COMEGYS, Major EDWARD T., surgeon, is relieved from command of the 1st reserve hospital, Manila, P. I., and is granted leave for 3 months on surgeon's certificate, to take effect upon arrival in the United States.
 GLENNAN, Major JAMES D., surgeon, now in Manila, is assigned to the command of hospital No. 3, Manila, relieving Major John S. Kulp, surgeon.

HEIZMANN, Lieutenant Colonel CHARLES L., is granted leave for 1 month and 14 days, with permission to visit Japan.
 BRATTEN, Captain THOMAS S., assistant surgeon, is relieved from duty on the transport Indiana and will report for duty at the Santa Mesa Hospital, Manila, P. I., for duty, relieving First Lieutenant Percy M. Ashburn, assistant surgeon, who will report at 1st reserve hospital, Manila, P. I., for duty.
 BARTLETT, COSAM J., contract surgeon, will proceed to the Presidio, for duty at the Army and Navy General Hospital.
 MOSES, HOMER C., contract surgeon, will proceed to the Presidio for temporary duty.
 GARRETT, NEVIL M., contract surgeon, Fort McDowell, will proceed to his home, Frankfort, Ky., for annulment of contract, at his own request.
 LAINE, Major DAMASO T., surgeon, is granted leave for 1 month, with permission to go beyond the limits of the department of Cuba.
 HENDERSON, CLINTON F., hospital steward, Fort McDowell, will be discharged by way of favor.
 BELL, JOSEPH L., contract surgeon, is granted leave for 15 days.
 PLUMMER, Captain G. R., assistant surgeon, is granted leave for 1 month, with permission to go beyond the limits of the department of Cuba.
 KENDALL, Major WILLIAM P., surgeon, having reported his arrival in New York City, will repair to Washington, D. C., on business pertaining to the medical department of the army, and upon the completion thereof will proceed to Fort Slocum.
 HATCH, HERBERT W., contract surgeon, is relieved from duty in the department of Alaska, and will proceed to San Francisco, Cal., and report by letter to the surgeon general of the army for annulment of contract.
 COLLINS, First Lieutenant CHRISTOPHER C., assistant surgeon, is relieved from further duty at the United States general hospital at Presidio, and will proceed to Fort Bayard and report at the United States general hospital for duty.
 SMITH, ARTHUR B., contract surgeon, is relieved from duty at the United States general hospital, Fort Bayard, to take effect upon the arrival at that hospital of First Lieutenant Christopher C. Collins, assistant surgeon, and will then proceed to his home, Ravenna, Ohio, for annulment of contract.
 STONE, FRANK P., contract dental surgeon, will proceed from Washington, D. C., to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.
 HESS, First Lieutenant LOUIS T., assistant surgeon, is relieved from further duty at the United States general hospital, Presidio, and will proceed to Fort Bayard, and report at the United States general hospital at that place for duty.

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The St. Paul Meeting of the American Medical Association was the best that has ever been held. We know that the elation following each annual meeting makes such praise habitual, but there is a unanimity and emphasis this year that we have never seen equalled. This feeling is undoubtedly due to the acceptance of the new Constitution and By-laws prepared by the committee on reorganization, and to the limitation of the number of papers on the programs, whereby there was gained more time for the consideration of each, with a resultant improvement of the entire scientific work. There was a thorough leveling-up of the standards most gratifying, and this is better than the straining after brilliant discovery or incomplete research. Those who attended the section-meetings came away with a consciousness that much indefiniteness had been cleared up and many perplexing questions, if not settled, at least put in the way of decision. There was everywhere manifest the desire to limit the social features, and the politics and discussions of the general sessions, and to regret that the section-work had to be interfered with. Under the new order of proceedings next year this will be done, as after the first day the general sessions will not interrupt section-work. The profession of St. Paul and Minneapolis greeted the Association members with a hospitality and perfection of arrangements which insured the gratitude of every visitor.

The Reorganization of the American Medical Association, according to the recommendations of the Committee, is a cause for profound gratification. The long labors of the Committee, motivated by the sincerest desire to put the Association upon a basis that would insure reform and progress, ended in a wise general plan and a perfection of detail that disarmed criticism and reduced opposition to a minimum. Before the session had convened that so quickly adopted the new Constitution and By-laws, hardly anyone supposed the body would have so soon found its mind and heart at once, but when the strongest opponents, feeling that the inevitable was upon them, seconded the motion for adoption, there were few negative votes left. The chief advantage of the new business arrangements is that the real legislative work of the Association will hereafter be confined to a compact body of about 150 delegates, elected for that purpose by the local State organizations. The Association will thus get its work done, the legislation and business by men selected directly as representa-

tives and sitting uninterruptedly for those ends, while the scientific programs will be carried out by those who come to the meetings with such objects in mind. Dr. Reed has been an exceptionally able and effective President, and under him has been instituted a reform which will, we prophesy, vastly increase the power and growth of the Association.

Success in Desperate Cases by Conservative Treatment is the lesson often repeated, and yet never quite sufficiently learned by any physician or surgeon. The infinite ingenuity behind the healing processes, the never-renounced struggle toward normality is an ever-renewed source of wonder. All that is needed to elicit it is confidence in it, delay in doing anything radical, watchfulness to follow up the hints to action as they begin to show themselves. We know of a living and happy patient who ten years ago had albuminuric retinitis from long-existing Bright's disease, despite what all the textbooks say as to "two years" in such cases. "Don't do the irrevocable thing until forced to do it," is the warning that has saved many organs and lives. Above all, never proceed with surgery ("the despair of medicine") until physiologic and medical methods have been exhausted. The *Wiener klinischer Wochenschrift* tells of the success of Herr Heller, director of an asylum for the blind, in educating the remnant of visual power retained by a "blind" child. There was only perception of light in a narrowed field left, but this, by education, was made to yield such indications to the eager mind that after fourteen months of endeavor the boy has very useful vision, can distinguish colors and forms, and even can read. There are possibly thousands of blind people who have renounced vision instead of cultivating it to a degree that would render the blind types useless.

The Selection of Summer Clothing is a matter of considerable importance not only from the influence it may have in comfort, but also in promoting health. Yet this is a matter to which most people give comparatively little attention, and the question of style and appearance is certainly more considered than the effect on health. From the hygienic standpoint we are concerned with the questions of what form and quality of clothing will maintain the proper body-temperature, protect from changes of temperature and absorb the sweat with the excretory products contained in it. In both summer and

American Medicine

winter, as a general rule, too much, too heavy, and irrational clothing is worn by most people. This keeps the body overwarm, and promotes free sweating, thus the skin is most of the time kept covered with moisture, but a condition in which it reacts most readily to changes of temperature and which is liable to become suddenly chilled. The frequent summer coughs and colds, most of them, arise in this way. Besides weight of clothing, the ventilation of it is very important. Goods of loose texture, loosely fitting, and without constricting collars or bands allow free circulation of air and escape of perspiration vapor. Clothing which is not properly ventilated retains a layer of steam-like perspiration which gives a feeling of oppression. The sweater is an example of a properly ventilated garment, and every athlete knows how warm and comfortable a sweater is. Its loose mesh permits of free escape of perspiration, the skin dries rapidly, but without becoming cold. Very little clothing is needed to maintain the bodily temperature in summer, but it is necessary to protect against sudden changes in our changeable climate. Wool, cotton, linen and silk each have their enthusiasts and advocates. Experience has very certainly shown that woollen garments are better adapted to protect those whose occupations subject them to very sudden and considerable changes of temperature, especially if accompanied with much exertion. But it is unfortunate that practically no light loose mesh woollen undergarments are to be had that have any durability; and thus for persons engaged in sedentary occupations the lighter cotton and linen mesh are better adapted. For both cleanliness and health very frequent changes of undergarment are needed, thus keeping the skin in the very best condition to eliminate as much waste matter as possible, and this is fully as important as the material of the garment worn.

Less clothing, looser mesh garments, fewer stiff collars and constricting bands are needed reforms in summer clothing for our hot cities. If sensible people will demand such clothing, the demand will not long remain unsupplied and what sensible people wear soon becomes to a certain degree at least, the fashion. A better perception of light and heat is to be had by wearing less clothing.

Major surgery should be done in hospitals; few will question this, though at present there is still a good deal of work done by some surgeons with large private practices in the homes of their patients. A surgeon of great reputation and experience recently made the statement that within a month he had been able to save the lives of two patients who would certainly have died had they not been operated upon with all the facilities of a hospital immediately at hand. In the surgery of the present day, perfect aseptic technique is the factor of greatest importance. For the proper preparation of dressings, sponges, sutures, ligatures, etc., for the sterilization of instruments, the preparation and after care of the patient, and for a thousand other details, the busy surgeon must chiefly depend upon his assistants. Most operators have their own special methods which they prefer for preparing supplies for operation, and few care to depend upon the sterilized materials which are everywhere for sale. Trained assistants accustomed to the

operator's methods and specially prepared materials are hard to find outside of hospitals, and on these depends much of the most important part of operative technic. The management of large public institutions for the selfish interests of a few men is an evil not infrequently seen, but because some men misuse the opportunities entrusted to them for the public good is no reason why such public institutions should not exist. In our large cities the hospital facilities are for the most part of a good as any in the world, and even in smaller towns of ten thousand inhabitants many little cottage hospitals are

being built. More of these smaller hospitals are specially needed to provide for emergency cases such as acute appendicitis, intestinal obstruction, or ruptured extrauterine pregnancy, in which the delay necessary to transport patients to a distant city would prove fatal. If properly administered, such hospitals will be not only a means of saving lives, but will be a convenience and a help for the entire profession. It is difficult to understand how a surgeon can consent to operate in a critical case at the patient's home if it is possible to take advantage of the conveniences of a good hospital. I refer to no papers on the subject of the program of the Chess Club. The mental breakdown of three of the world's greatest chess players suggests queries as to the value of chess as a game and especially as to the evil of exhibitions (and match games). There is something highly abnormal in the powers demanded in championship games. Clearly the game of chess is not worth the candle of sanity and life. The military, medieval, and royal types of life upon which the imitation battles are founded, are, moreover, no longer desired in modern civilization. Evolution has gone beyond all that, and the commercial, scientific, and democratic ideas of civilization are so different that the mental exercises that mimic and stimulate the old and outworn phases of human activity are precisely those that do not conduce to progress and success. Peasants are no longer pawns; castles are in ruins; and if a king is checkmated, why, there are thousands of better men fitted to rule under the title of President, Governor, etc. Physiologic or biologic problem-solving is not helped by the peculiar intuitions and ingenuities of the chess player.

A resolution according to the recommendations of the Association of the Little Knowledge of the History of Vaccination would extinguish the rabidity of all but the wildest antivaccinationists. Will not some one write such a history designed for popular use and scatter it broadcast over the world? Every year intelligent legislators and governors have to fight the shameless attempts of the fanatics to enact laws for breeding smallpox and killing the innocent by bit. Yet a half-hour's reading of the history of smallpox and its ravages before the time of Jenner should deny in any but those of unsound mind that the vaccination of the world has been free from its greatest curse. In 1707 for instance, 86% of the inhabitants died of smallpox in London; from 1660 to 1679 it killed 14,170 per million, and remained at about this figure for over 100 years. Similar figures or estimates are made for the whole world. Serpents and crawling people could not get employment if they had not had the disease. How is it with us now? In Russia where

vaccination and revaccination has been compulsory since 1874 the mortality has been reduced to 7 per million and in the army where the law is absolutely carried out there has been no smallpox mortality at all for many years. The only answer the cranks have to such facts is that the disease is a filth-disease and that its cessation is due to sanitation, etc. Of course we know that all the filth in the world could not generate the disease without the specific poison. How the argument of sanitation and isolation worked in Gloucester, England, in 1895-6 is well known to all. In a largely unvaccinated town of 42,000, there were 1,979 cases and 434 deaths. If the antis could only be allowed their will on themselves without endangering the rest of the world the logic of fact would soon be most convincing!

Coffee and Tobacco.—If we form a comparative table of the average number of pounds of tobacco and coffee consumed per inhabitant we find the figures as follows:—

Country.	Tobacco.	Coffee.
Holland	6.92	23.00
United States	4.40	10.55
Denmark	3.70	15.00
Belgium	3.15	11.00
Germany	3.00	6.00
France	2.05	4.00
England	1.41	1.00

We thus see that as a general rule the consumption of coffee and of tobacco increases in nearly a uniform ratio throughout the civilized world. The apparent exceptions would probably disappear with more accurate statistics. The figures suggest some intimate physiologic law or necessity of the organism underlying the fact, and this is made apparent when one observes the money the world spends in these two items. Of coffee alone, there is annually consumed about 1,500,000,000 pounds, of which our country uses more than one-half, *i. e.*, more than all the rest of the world.

The Cause of Cancer.—By a curious coincidence, there have appeared almost simultaneously two important articles, or monographs, on the cause of malignant tumors; one in the United States, by Gaylord, of Buffalo, the other in Germany, by Schüller, of Berlin. This remarkable synchronism reminds us of the discovery of Neptune, accomplished almost at the same moment, but independently, by Adams and Leverrier. Whether the observations of the two pathologists will bear the scrutiny of time as well as the discovery of the two great astrophysicists is not altogether removed from the realm of doubt. We have already referred to Gaylord's studies, and shall at this time speak primarily of those of Schüller.

In a brief communication dated March 15, 1900, Schüller announced that by a happy circumstance he had succeeded in cultivating from sarcoma and carcinoma a well-defined parasite, probably animal in nature. By selective methods of staining, he had also been able to demonstrate the presence of this parasite in all tumors examined, and had undertaken animal experiments; but at the time of the preliminary communication these were not in a state of completeness, and a further

detailed report was promised. This has just appeared in the form of a monograph of 128 pages, with three plates and 64 text illustrations. It contains a description of the parasite discovered by the author, of the methods of cultivation, and of the results of animal experiments.

The failure of others to discover the cause of cancer Schüller ascribes to improper methods of study. He cultivated the organism in the tumor tissue itself, in the following way: Immediately upon the removal of the tumor, while the latter is still warm, a piece is cut out of the center and placed in a sterile glass vial, which is at once transferred to an incubator and kept in the dark at 37.50° C. In his earlier investigations, Schüller introduced the vial into the peritoneal cavity of an animal, but found that a well-regulated incubator would satisfactorily replace the living body. After a few days colonies appear on the sides of the bottle, in the form of fine, sago-like granules or droplets. Under the microscope these colonies are seen to be made up of large, golden-yellow capsules, occurring singly or in chains or masses; and of small, spherical bodies, having a dark greenish-yellow or greenish-brown color, and a radially striated margin. There are only minor differences between the capsules obtained from carcinoma and those from sarcoma. Those from the former appear to be a little smaller, and their walls are less thick. In the protoplasmic contents of the capsules a nucleus can sometimes be seen. The contents of some are granular, of others made up of small angular or rounded bodies. These latter increase in size and stretch the capsule until it bursts at one or more points, giving the bodies their freedom. This represents a cycle of development, and the small bodies are the young organisms of the parasite. In the hanging drop the small bodies are golden-yellow, and invariably strongly lustrous. The border is double-contoured, and presents a radial striation. The organisms also possess cilia, by means of which they keep up a constant wavy motion. Peculiar appearances are produced by the degeneration and disintegration of the parasites. The cultures may be kept alive for months by the addition of fresh normal human blood. On the addition of rabbits' blood the organisms die. Careful studies of organisms suspended in human blood were made by means of the hanging drop. Various phases of development could be traced by that way. The color of the organism, which seems to be an invariable characteristic, is produced by a ferruginous pigment of the nature of hemosiderin. By the examination of teased preparations, on a warm, sterile slide kept upon a warm stage, the organisms could always be demonstrated in fresh tumor tissue. The parasites were also found in the urine of a patient in whom a carcinoma of the uterus had ruptured into the bladder. For the demonstration of the parasite in sections, it seemed most satisfactory to clear the tissue in one of the ordinary oils (especially oil of lavender) without preliminary staining. For purposes of staining, hematoxylin-alum was most serviceable. The striking features in all sections are the large capsules, which occur in rows or as a meshwork throughout the tissue, often forming honeycomb-like structures. In some carcinomas what appeared on superficial examination to be trabeculas of connective tissue, on careful study proved

to be made up of compact rows of capsules. In the neighborhood of the capsules young organisms are found in abundance. In the hardened tissues the form of the latter is considerably altered by pressure and contraction. They frequently permeate the tissues in long rows, and occur between as well as within the cells. They are found not alone in the original tumor, but also in the regional lymph-glands, even in such as present no macroscopic alteration. Schüller thinks that they may be carried to the lymph-glands within epithelial cells, the multiplication of which they stimulate in the new environment; yet he is inclined to revive the long-abandoned hypothesis of a metaplasia, and to assume that the parasites are capable of causing a transformation of connective tissue cells into epithelium. Numerous parasites in the capsular and the free stage are constantly found in the pearly bodies of the epitheliomas. Studies of the border zones of carcinomas give an insight into the earliest phenomena of cancer development, and show that the parasites bear a most intimate etiologic relation to the tumor growth.

The animal experiments, the details of which are only briefly given, were made with the sterile cultures obtained in the manner previously described. In order to exclude the possibility of transplantation of tumor tissue, the material was taken from vials in which the cellular elements had been entirely destroyed and dissolved. One experiment, in which the injection was made directly into the kidney, gave rise to the development of a carcinomatous nodule in the organ. The cells of the growth contained the young parasites, as well as the capsules. Even the appearance of epithelial pearls was produced. In the same animal, the lymphatic glands in the neighborhood of the portal vein showed alterations that could be interpreted as incipient carcinoma. In some of the animals which had received intraperitoneal injections, the pancreas was the seat of carcinomatous transformation. Even the regional lymph-glands showed epithelial cell accumulations. The livers of the animals contained the parasites in large numbers, but there was no actual development of carcinoma. One animal received an injection of sarcoma culture into the peritoneal cavity. The liver was filled with parasites of the same nature and having the same pigment as those of the original tumor—a pigmented giant-cell sarcoma of the jaw. The interlobular connective tissue showed distinct transformation into sarcoma.

Regarding the nature of the parasites discovered, Schüller is noncommittal. They are not yeasts, nor are they to be identified with Plimmer's bodies, which on culture present the appearances of blastomyces. The biologists of Berlin, to whom Schüller has shown his cultures, were unable to classify the supposed organisms. Schüller leans to the view that that they are protozoa. After discussing the mode of entrance of the organisms into the human body, the monograph closes with a few brief remarks regarding prophylaxis. The illustrations, although somewhat crude, are truly startling, particularly those depicting the changes, *i. e.*, the malignant tumors, produced in experimental animals by inoculation with the parasite.

On the face of things it must be admitted that Schül-

ler's discovery fulfils all the requirements that could be demanded of a parasitic agent. He found it in the primary disease, cultivated it (of course, only after a fashion), reproduced the original disease in the lower animals, and recovered the organism from the experimental lesions. Whether it is the cause of cancer and sarcoma, however, can be demonstrated only by the corroborative testimony of other, unprejudiced, investigators.

An interesting question at this time is, What relation do Schüller's bodies bear to those described by Gaylord? So far as we can determine from reading the respective articles, they are not identical. Gaylord identifies the organisms discovered by him with Plimmer's bodies; but it seems to us that the bodies found by him in the fresh tissue and in cancerous fluid are entirely different from the parasites observed in the stained sections, and are, perhaps, the same as those depicted by Schüller, differing from them principally in the absence of color. As mentioned above, Schüller finds that his parasites are different from those discovered by Plimmer. If the bodies described by Gaylord and by Schüller are not identical, they cannot both be the cause of cancer. As far as Schüller's bodies are concerned, no one in this country has, presumably, checked his observations by personal examination, nor are we aware that Schüller has presented his specimens to any medical society. Until then, an attitude of scepticism is eminently justifiable. It is different with Gaylord's observations. His work has been more or less constantly under the eye of other authorities, and has been freely submitted to the scrutiny of disinterested men. His recent article, however, is silent concerning the appearances of the parasite on culture, and as to the results of animal experiments with the organism in a pure state. Plimmer claims to have isolated his parasite, and the cultures are those of a yeast; yet it is maintained by Gaylord that the organism discovered by him—identical with Plimmer's body—is not a yeast. We are thus left in doubt as to the nature of the organism, and must defer judgment until the impatiently awaited appearance of Gaylord's second article.

Trusts not organized for money-making but for philanthropic purposes, a new product of our times, are fortunately growing more and more common. The last is a public house trust in London to reduce the consumption of alcohol by the restriction of licenses, lessening the profits of the liquor sellers, etc. Prohibition, most desirable for the individual, has, in the belief of many, increased the evil it would kill, or has engendered other and worse ones.

There is still danger that the Legislature of Pennsylvania may "amend" the anatomy act in the interests of so-called "friends" of the deceased. There is no injustice whatever to the real friends in the present law. It should be remembered that bodies have often been offered and perhaps have been sold by "friends" before death has taken place, and a possibility of great abuses will be opened up by the pernicious laxity of the proposed change of the law.

AMERICAN NEWS AND NOTES

GENERAL.

The Jamaica Hospital has hitherto had a mixed staff of 10 physicians, 7 regulars, and 3 homeopaths. Recently the homeopaths were requested to resign. It is reported that strong protests against the action of the board will be made by friends of those who resigned.

Plague on an Army Transport.—The War Department has been advised from Nagasaki that the delay in the departure of the transport Kintuck from that place had been due to a discovery of a case of plague on board. The vessel carries Company D of the Forty-third Volunteer Infantry.

Tuberculous Immigrants Debarred.—An order has been issued by the Superintendent of Immigration debarring tuberculous immigrants from all ports of the United States. The supervising surgeon of the Marine Hospital recently declared tuberculosis of the lungs to be a dangerous contagious disease and the law required such to be debarred. Under the old ruling they were debarred only when they were likely to become public charges.

Manila Hospital.—Surgeon-General Sternberg, of the Army, has been advised of the shipment from Manila of a complete model of Hospital No. 3, an admirably equipped and well managed institution which has been under the command of Major John S. Kulp, surgeon of volunteers and captain of the medical department of the Regular Army. It is intended to place the model in the Army Medical Museum in Washington. The model is built upon a single square of Narra wood, and is built to the scale of 1 to 250, showing all elevations, drainage and sanitation. The model includes, besides Hospital No. 3, the hospital corps company of instruction and the hospital corps camp of casuals, which are adjacent and under the same command. The details are made from the original material of the buildings and walls which they represent.

The Army Board which has been in session in Washington for the examination of candidates for appointment in the medical corps of the Army, will hold its final meeting during the week of June 17, and then adjourn till September. The results of the board's work has been disappointing in the few candidates who have met all the requirements. Since February, not more than 40 young physicians have proved their ability to receive commissions as assistant surgeons, and some of these were acting assistant surgeons in the service in the Philippines. The report of the board at Manila has been received at the War Department, and after all the appointments have been made, there will remain still 80 vacancies in the 129 new positions, which are created by the Army law of February 2.—[*Army and Navy Review*.]

Food for American Soldiers.—Major G. W. Ruthers, in a report on the conditions governing the subsistence of troops in Northern Luzon and the best foods adapted for the soldiers, says that the supply of frozen beef has been sent to every point possible. On one line it leaves the railroad and goes by bull carts 60 miles into the interior. From another line it is carried in carts and then for 20 miles over mountains by pack mules. Wherever beef goes 100 pounds of ice for each company is supplied. The troops endorse this frozen beef as the finest beef in the world. The beef stew, with vegetables, is the finest component of the ration ever put in the hands of troops. With the addition of some hard-tack, coffee, sugar, salt and baked beans, you could cut an army loose from its transportation for some time. The standard emergency ration has given very good satisfaction. The use of it alone has enabled the commands to operate during the constant rains and to go through water and mud up to their necks. Experience shows that the American soldier serving in these islands needs the full army ration, including the full allowance of fresh beef; his health cannot be maintained without it.

Obituary.—J. L. Acomb, of Tidiloute, Pa., aged 70.—BART BYRD, of Lexington, Miss., June 2.—JAMES MURRAY STONE, of Govanstown, Md., June 5, aged 80.—SETH B. SPRAGUE, of Jersey City, aged 61.—W. SYLVESTER, of Middleville, Mich., June 1, aged 60.—ROBERT H. CHILTON, of Dallas, Texas, June 6, aged 55.—SAMUEL S. BENSON, in New York, June 1, aged 64.—JOHN E. COMFORT, in New York, May 29, aged 64.—JOHN S. PENNY, of Stapleton, N. Y., May 31, aged 56.—FRANK CRAMP-TON HOYT, of Mount Pleasant, Iowa, May 21, aged 43.—MARIE J. MERGLER, of Chicago, May 18.—HUGH STOCKDELL, of Petersburg, Va., May 23, aged 66.—W. S. WITHAM, of South Lebanon, Ohio, May 24, aged 23.—D. C. THOMAS, of Adrian, Mich., May 30, aged 66 years.—R. B. ARCHIBALD, of Purdy, Mo., May 31, aged 53.—J. A. HEALD, of Denton, Tex., May 29, aged 80.—J. W. ALLEN, of Guthrie, Ky., May 28, aged 45.—WILLIAM H. DALY, of Pittsburg, Pa., June 9, aged 59.—A. A. BLOCH, at Denver, Colorado, June 8, aged 34.—E. P. SALE, of Memphis, Tenn., June 8.—W. S. CALDWELL, of Freeport, Ill., June 7, aged 69.—HARRY SMITH, of Northampton, Mass., June 9, aged 39.

EASTERN STATES.

Worcester City Hospital will be closed to all patients, as far as possible, until June 23, because of smallpox. Patients needing treatment will be taken to St. Vincent or Memorial Hospital.

Hospital for Chronic Diseases.—A petition of Mayor Thomas N. Hart and others was presented to the Massachusetts House, May 20, asking that the act of 1858, authorizing Boston to establish a city hospital, be amended by providing that the city be authorized to erect and maintain a hospital for the treatment and care of persons suffering from chronic disease.

Cigaret Smoking not Injurious.—Dr. William J. Robinson, of New York City, says that cigarettes are not any more injurious than cigars and when used in moderation in cases of extreme nervousness and irritability they produce a distinctly soothing effect. In one case where he prescribed cigaret-smoking as a remedial measure it gave more relief than the bromids or valerian.

Hospitals for Contagious Diseases.—The Connecticut Board of Health in its argument for the necessity of every town having a hospital where contagious disease patients can be isolated and receive proper treatment, draws attention to the fact that in that State in 693 cases of typhoid fever, there were less than 7% of deaths, while in 1,163 cases under private treatment there was a mortality of 20%.

Summer Home for Children.—St. James' parish, of New York, has built a new summer home for children at East Norwalk, Conn. The home cost over \$11,500 and will accommodate over double the number that the former house could. It is now hoped that every child in the parish needing it will reap the benefit of at least 1 week's outing in the pure air. The old house used for this purpose will be sold.

The Little Sisters of the Sacred Heart, a French Community, has established a branch at Springfield, Massachusetts. These sisters will nurse the sick in their homes, care for the homes during the sickness of the inmates, and help the families of the sick while in need of household assistance. They give their services to any who need their help, irrespective of religion, the remuneration depending on the ability of their patrons to pay.

\$1,950 for Preserving a Leg.—In the Superior Court of New Hampshire recently a druggist secured a verdict of \$1,950 for preserving in alcohol the amputated leg of the late John H. Pearson, a wealthy resident of Concord. In 1887 the druggist was instructed to preserve the leg, in 1899 it was buried with its owner, and the druggist sent a bill of \$3,450 to the executors of the estate. They refused to pay the bill and the verdict is the result.

NEW YORK.

West Point.—It is said that 25% of the young men who have applied for admission have been unable to meet the physical qualifications.

A Bronze Statue in memory of Dr. A. J. C. Skene is proposed for Prospect Park, Brooklyn. Effort is being made to raise \$25,000 for that purpose.

Cornell University Medical College.—The third annual commencement was held recently. The degree of M.D. was conferred on 26 graduates, many of them women.

Mid-air Cremation.—Lieutenant James M. O'Kolley is the inventor of the Navohi, a peculiar balloon-like apparatus, the object of which is to cremate bodies high in mid-air.

Bellevue Hospital's insane pavilion will be abolished and the necessary legislation will be made to secure a separate hospital under the supervision of the State where mental and nervous diseases may be treated.

The New York State Hospital for the care of crippled and deformed children was formally opened at Tarrytown, May 17. Bishop Potter, the President of the Board of Managers, presided and made the opening speech.

Williamsburg Hospital.—The festival of the Plattdeutscher Volksfest Verein, of Brooklyn, was opened recently in Ridgewood Park, L. I. The greater part of the proceeds will go to the new German Hospital at Williamsburg.

Emergency Hospital.—The Brooklyn Rapid Transit Company is contemplating the establishment of an emergency hospital for the immediate use of passengers injured on the company's lines. An ambulance trolley service will also be provided.

Death Due to a Camphor Ball.—Carl Gondeck, 3 years old, of Flushing, L. I., mistook a camphor ball for candy and swallowed it. The ball lodged far down the throat and caused death in a short time. A physician was called but was unable to remove the ball.

The Medical Society of the County of Rensselaer, at the annual meeting held May 15, at the Court House, Troy, N. Y., elected the following officers: President, George A. Bradbury; vice-president, Aaron D. Davidow, secretary, H. E. DeFreest; treasurer, Reed B. Bontecou.

Oleomargarine Dealers Convicted.—For selling oleomargarine as butter in New York, 4 wholesale dealers of Jersey City were recently convicted by the Court of Special Sessions. The punishment imposed was a fine of \$150, or 60 days in prison to 3 of the offenders, and the fourth was sentenced to 3 months imprisonment.

Playroofs.—In the downtown portion of New York the children of janitors, who have charge in the unusually high buildings, find fresh air and recreation on the roofs. These are often fitted up with swings, doll houses, etc., and these, with the view before them of Staten Island, Long Island and the grand march of the river to the sea, are wonderful indeed to these little ones, who cannot play on the surface streets.

Free Medical Library.—The Medical Society of Kings county, N. Y., has opened its library, founded in 1845, to the public daily (Sundays and legal holidays excepted) from 10 a. m. to 10 p. m. The library contains over 30,000 volumes, 15,000 pamphlets and some 500 current medical periodicals, and appeals for contributions to a permanent library endowment fund and for gifts of medical books from authors and publishers.

Mount Sinai Hospital.—The corner-stone of the new buildings of the Mount Sinai Hospital, Fifth Avenue and One Hundredth Street, was laid May 22 by Isaac Wallach, president of the hospital. It will consist of 10 large fire-proof buildings, each 5 stories high, all separate and distinct from one another, yet connected by passageways, under and overhead. The total cost will be \$1,335,000, the present site having been bought for \$532,000.

Smallpox.—It is reported that Dr. A. S. Zabriskie, Health Officer of Suffern, Rockland County, N. Y., is being investigated by the State Commissioner, with a fair prospect of removal, for diagnosing a number of cases of smallpox as Cuban itch. The Anchor liner Britannia, recently from Genoa, Leghorn, and Naples, with 654 Italian immigrants, is detained at Quarantine owing to smallpox among her steerage passengers. The surgeon reports 5 cases of the disease in a mild form. Steamer Tartar Prince is in quarantine because of 1 case of smallpox among the steerage passengers. The Queen's County grand jury is investigating the alleged negligence of the health authorities in the case of John Chariton, of Woodside, who, while suffering from the smallpox, was allowed to remain 52 hours at his home before being removed to the pest-house. The Health Department officers declare that they are badly handicapped there, having no ambulance and no reception hospital. Since the outbreak, 5,182 school children have been vaccinated. The whole number of persons vaccinated is 10,213. The number of cases of smallpox in Queens reported up to yesterday is 53.

PHILADELPHIA, PENNSYLVANIA, ETC.

Memorial to Dr. Bartine.—The citizens of Merchantville, N. J., propose to perpetuate the memory of the late Dr. D. H. Bartine, who practised his profession in that town for 35 years. The tablet will cost \$1,000.

Swallows False Teeth.—A lady in Scranton recently swallowed her false teeth. X-rays at the Lackawanna Hospital located the plate in her stomach. An operation will be performed for their removal.

Infectious Diseases.—The health report for the week ended June 9 shows 120 new cases of typhoid, scarlet fever 77, diphtheria 63. Diphtheria is widespread on the west side. For the week there were 410 deaths.

Allentown Hospital.—At a recent meeting of the trustees of this institution a letter was read from James K. Mosser, announcing that he would contribute \$33,000 for the erection and completion of the west wing of the building.

Pure Milk Supply.—The Philadelphia Pediatric Society has appointed a commission of its members—C. J. Marshall, veterinary inspector; M. P. Ravenel, bacteriologist, and Henry Leffmann, chemist—to inspect the milk submitted to them by dairymen and certify the result of such examination. It will be examined in relation to percentage of proteids, fat, sugar, mineral matter and water present, as well as tested for the number and nature of contained bacteria. The veterinary inspector will have oversight not only of the health of the cows and the nature and quality of the food given them, but also of the health of the employes on the dairy farm and of the care and cleanliness observed in milking and of the utensils employed. Satisfactory methods of delivery will be used and guarantees that the milk furnished is of the proper standard.

SOUTHERN STATES.

Dr. Kunst has been appointed to succeed Dr. Stathers as superintendent of the Hospital for the Insane at Weston, W. Va. He will take charge of the institution July 1.

The Bedford County Medical Association met at Shelbyville, Tennessee, June 3. The future meetings are to be held the third Thursday of each month. At the next meeting, Dr. J. M. Cunningham will present an essay on smallpox, and Dr. J. S. Newlin one on dysentery.

First Volunteer.—Dr. Charles F. Rand, of Washington, was the first volunteer to enlist for the Civil War in response to Lincoln's call for 75,000 men, and he possesses the first medal of honor ever presented by Congress for gallantry on the battlefield.

Medical Examination for School Teachers.—On May 9, the School Board of Louisville, Ky., adopted a measure prohibiting the employment of teachers who suffer from deafness, tuberculosis or contagious diseases. Medical examinations will be made whenever it is considered advisable.

Home Doctoring.—The tendency of the people to drug themselves with patent and proprietary medicines has been commented upon by the Louisiana State Medical Society. It is stated that the manufacture of these medicines, the composition of which is generally kept secret, has increased 500% in the last 10 years.

The Progress of the Negro Race in Washington is shown to be commendable by a recent investigation made by the Union League into the status of the colored population in business and in maintaining organizations. Among them are 53 physicians, 12 trained nurses and 10 dentists, and among their organizations are a medical society, a dental society and a society of trained nurses. Of the colored families, 15% own their own homes.

The location of the Lepers' Home on the Gustine plantation, Louisiana, lately bought for that purpose, is so strongly opposed by the citizens of Jefferson and St. Charles parishes for 7 miles around that they met in a mass meeting and adopted resolutions asking that it should not be established in so populous a vicinity. It is stated that there never have been more than 20 lepers in the home, while, according to recent returns, there are not less than 400 at large in the State living in various parishes and many of them moving about at pleasure.

Mental Therapeutics.—The Secretary of State of North Carolina has refused to charter a new "College of Science and Healing"—the first institution of the kind proposed in the State, and he is sustained by the Attorney General. The purposes of the college, as stated in the application, are as follows: "To educate and graduate its students in the science of treating disease without the use of medicine or surgery; to practise the same and educate and authorize them to teach and practise the same; to confer upon each of said students, as its faculty think proper, any or all of the following degrees, namely: doctor of psychotherapeutics, suggestive therapeutics, mental therapeutics, massage therapeutics, magnetic therapeutics, hypnosis therapeutics, anatomy, diagnosis, professional nurse, psychologic therapeutics, and metaphysic therapeutics."

A Remarkable Case of Combustion.—A case that must certainly prove of interest to the medical world generally is contained in a letter from Dr. B. C. Wilson, of Soldier, Ky., to Dr. Samuel E. Woody, professor of chemistry at the Kentucky School of Medicine. It relates to a case of spontaneous combustion in connection with the customary treatment of severe burns. His letter, in part, is as follows: "A child 4 years old was burned on the fire. The burns in each locality being of moderate severity and strictly superficial were not sufficient to have caused a fatal result. The burns were dressed in the following manner: First dusted with subnitrate of bismuth, then linseed oil was freely poured on, and the parts wrapped in cotton batting and a sheet wrapped around it, and, lastly, a quilt was wrapped around this. The child was put to bed and instructions were given not to remove the dressing. The child complained bitterly all night long, the parents thinking that the suffering was due to the original burn. About daylight they saw smoke arising from the bed, but, being very ignorant people, thought it was the 'fire leaving the burn,' and did not remove the dressing until later, when the child was dying. Upon removing the dressing they found the inner aspect of the sheet was scorched, the cotton batting burned almost entirely up (over the abdomen) and still smoldering. The child was burned into the intestines in 3 places and died in a few minutes. There was not the least evidence or the remote possibility of the second fire originating from the outside, and there was absolutely nothing used but the bismuth and linseed oil." Dr. Woody said in reply: "Under the circumstances it must have been spontaneous combustion of the linseed oil. The bismuth subnitrate and cotton divided finely, distributed the oil and exposed a large surface to the action of the oxygen of the air. The warmth of the body added to the heat and hastened the oxidation, and the covering confined the heat until the oxidation became an actual combustion."

WESTERN STATES.

Hospital for the Tuberculous.—The citizens of Chicago who are interested in this movement have already collected \$22,983.

Excision of Lung.—Reports come from Santa Anna, California, that doctors have successfully removed the entire lung of a patient suffering from pulmonary tuberculosis.

Iowa State Hospital for the Insane.—Dr. C. F. Applegate has been appointed superintendent of this institution at Mount Pleasant. The vacancy was made vacant by the death of Dr. F. C. Hoyt.

Michigan University will have a psychopathic ward for the treatment of acute mental disorders, as Governor Bliss has recently approved the bill appropriating \$50,000 for its establishment.

Public Hospital.—Cedar Rapids, Ia., will have a public hospital. Abraham Slinner, of Waverly, has agreed to duplicate, up to \$50,000, whatever sum the city may raise. Already \$25,000 has been secured.

Beautifying Back Yards.—Several of the Women's Clubs of Wisconsin have initiated movements to interest the children of the cities in beautifying the back yards of residences and keeping them clean.

Western Reserve University is the recipient of \$12,000 from H. M. Hanna, a brother of Senator Hanna, to establish a research fellowship in its medical school in the departments of pathology and physiology.

Tuberculosis Among Cattle.—The State authorities have found many cases of tuberculosis among the cattle in the neighborhood of Chippewa Falls, Wisconsin. The disease was carried there by cattle shipped in.

New Hospital.—Staubenville, Ohio, is the recipient of a fine hospital, fitted with the latest improvements at a cost of \$35,000 through the gift of Congressman J. J. Gill. The public is expected to maintain the hospital.

New Medical Building.—The authorities of the University of Michigan have decided to expend \$100,000 for the erection of new medical building. On account of its historic associations the old structure will be retained and will be connected with the new building by a tunnel.

Gift for Hospital.—It is said that P. H. Anderson and John Brynteson, 2 missionaries who have made fortunes in the old fields of Alaska, will give \$25,000 to build a hospital. The site for the institution has not yet been definitely determined, but Chicago will in all probability be chosen.

Glucose and Honey.—Merchants of San Francisco petitioned the Board of Health recently to be allowed to use glucose in storing honey, as it, they claim, prevents granulation of honey. The decision of the board was that it had no power to revoke the law prohibiting such adulteration.

Physicians Appointed.—In accordance with the recent actment creating a State board of medical registration, the Governor of Kansas appointed as members Drs. O. T. Lewis, George F. Johnson and S. W. Williston. From the homeopaths, Drs. H. W. Roby and D. P. Cook. From the eclectics, Drs. H. Hatfield and E. B. Packer.

Clean Streets for Chicago.—Prominent men and women of Chicago have consented to act as volunteer inspectors of streets and alleys under the new clean-city ordinance and great enthusiasm is manifested in the work which is vigorously prosecuted by millionaires, merchants, bankers, judges, society women, physicians and a venerable bishop.

Cincinnati Hospital.—The exinternes celebrated their fiftieth anniversary as an association June 1. One member was on duty in the hospital in 1849. An interesting program was carried out, and the following officers elected: President, A. E. Thrasher; vice-president, W. W. Vinnedge; secretary, A. E. Frieberg; treasurer, J. C. Oliver.

Arrest of Development.—A remarkable instance comes to us in the death of Aurelis Rodriquez, June 4. He was born August 10, 1879, in Eagle Pass, Texas, and was an ordinary healthy baby. A few months after birth he ceased to grow, and at 22 years he remained a baby. He never talked or walked, never developed any muscular power, could not turn over in bed, and was always fed liquid food.

Chicago Chronicle Sued.—John Murdock recently entered suit against the Chicago Chronicle Company for \$5,000 damage for an alleged libelous publication relative to his degree as a physician. The Chronicle, it is charged, in its issue of June 5, published an article in which it called the Metropolitan Medical College of Chicago, a "diploma mill," and in the same article it spoke of Dr. Murdock as a graduate.

Gastric Ulceration.—The physicians of Chicago assert that gastric ulceration is markedly on the increase. They blame our methods of hasty lunch eating. Though known to the profession but a few years the increase has been 200%.

Dust in Chicago Streets.—So much dust follows the efforts of the street cleaners of Chicago that doctors are discussing this menace to public health and the City Commissioner has determined to abate the nuisance. Orders have been issued that all sweeping be done after the crowds have left the streets and that sprinkling precede sweeping. It has been suggested that asphalt pavements should take the place of the granite blocks.

Faith Curists Responsible.—Exhumation of the remains of Mrs. Emma L. Judd showed that her death and that of her infant were due to neglect. Her husband, 2 nurses and "Dr." Dowie, of the Christian Catholic Church of Chicago, all of them faith curists, were held criminally responsible. Evidence showed that ordinary medical treatment could easily have saved both the lives of mother and child. The men were each held in \$10,000 bail and the women each under \$5,000.

The Lane Lectures, consisting of 10 lectures delivered yearly on 5 consecutive days at the opening of the Cooper Medical College in San Francisco, were inaugurated about 5 years ago, and since then have been held by Mr. Christopher Heath, Dr. Clifford Allbutt, and Sir Michael Foster, while Mr. Malcolm Morris is the lecturer appointed for the present year. Mr. C. B. Ball, Regius Professor of Surgery in Dublin University, has been appointed "Lane Lecturer" for 1902; his subject will be "Diseases of the Rectum."

Necessity for a Hospital.—The officers of the Cleveland Society for the Relief of Crippled Children say that hospitals for efficient work are greatly needed. They ask the cooperation and support of the people of Cleveland for this necessary work. Arrangements have been made by which as many beds in other hospitals as can be supported are at the disposal of the society. Six beds are already occupied, but there is a large list of little ones waiting to be helped. These will be taken care of as soon as the adequate funds have been provided.

To Nurse Lepers.—Mrs. Laura Schwichtenberg, of Detroit, has decided to devote her life to the leper colony on the island of Cebu, one of the Philippine archipelago. Some time ago she received, at her urgent request, appointment, as government inspector of hospitals in the Philippines, at which time she visited the leper colony, declaring that her commission took that in, as the whole colony was a hospital. She was greatly impressed with the lack of sanitary conditions prevailing and with the hopeless condition of the 30,000 lepers congregated here.

Pauper Practice.—The physicians of Pana, Ill., have entered into an agreement, signed by every physician in the city, that they will not bid for pauper practice and that they will not attend the paupers at a less rate than the regular established and recognized fee bill of Pana. It is also understood that no one physician shall be favored in the distribution of pauper practice, but that the patient shall be given the privilege of choosing his own physician. This agreement has been published in the 2 daily local papers and the consensus of opinion is with the doctors.

Indiana Mortality and Morbidity for May, 1901.—Reports to the State Board of Health show 2,556 deaths in May, a rate of 11.9. For the preceding month 2,839 deaths were reported, a rate of 13.7. For May, 1900, 2,536 deaths were reported, a rate of 11.4. According to ages, there were deaths, under 1 year, 347; 1 to 5 inclusive, 151; 65 years and over, 640. From important causes: pulmonary tuberculosis, 354; other forms of tuberculosis, 48; typhoid fever, 33; diphtheria, 21; scarlet fever, 7; measles, 35; whoopingcough, 15; pneumonia, 250; diarrheal diseases, under 5, 13; cerebrospinal meningitis, 27; influenza, 40; puerperal fever, 17; cancer, 76; violence, 136. All cities, representing a population of 847,302, reported 1,023 deaths, a rate of 14.3. The country, representing a population of 1,669,160, reported 1,523 deaths, a rate of 10.8. The tuberculosis rate in the cities was 186.6 per 100,000, and in the country 155.5. Typhoid fever had a rate of 16.7 per 100,000 in cities, and 14.8 in the country. Influenza, cities 17, country 23; puerperal fever, cities, 4.1, country, 9.8; cancer, cities, 35, country, 41; pneumonia, cities, 116, country, 134. Special morbidity reports show a decrease in sickness of about 10% as compared with the preceding month, and the mortality reports sustain the conclusion. The decrease appeared in pneumonia, typhoid fever, scarlet fever, measles, croup, cerebrospinal meningitis, influenza, whoopingcough and puerperal fever. Diphtheria increased slightly, also diarrheal diseases. Smallpox appeared in 19 counties, at 60 different points. The number of cases was 238, with 3 deaths.

CANADA.

The Militia Department, in its arrangements for opening camps is taking the utmost precautions that none of the companies or corps in districts where smallpox is prevalent shall be called out.

FOREIGN NEWS AND NOTES

GENERAL.

South Africa.—It is reported that the casualty list of the British Army in South Africa for May included 25 officers and 709 men, who died either from military operations or disease.

Obituary.—ARTHUR LLOYD MACLEROY, at South Devon, England, May 19, aged 49; ROBERT SKIMMING, of East Molesey, England, May 23, aged 58; ROBERT WEBB WATKINS, of Towcester, England, aged 76; JOHN D. WILLIAMS, at Cardiff, Wales, May 21, aged 36; ROBERT JOHN SPRAKELING, at Bootle, Liverpool, England, May 9, aged 68; WILLIAM HAY, at Zyrardow, Poland, May 12.

GREAT BRITAIN.

Gift to Universities of Scotland.—The annual income of the gift of £2,000,000, made by Andrew Carnegie to the Universities of Scotland, is £104,000. Half of this income will be expended in strengthening the faculties of science, medicine, history, modern languages, and literature, until these become as strong as similar faculties in the universities in Germany and the United States. The second half will probably be expended in paying the ordinary class fees of Scottish students, female as well as male. Any surplus will be spent in extending lectureships at evening schools outside the universities.

Glasgow Smallpox Epidemic.—The outbreak is practically at an end. A new case is an exceptional event and the number in hospital has fallen to 45. The minutes of the Health Committee contained a recommendation that a new smallpox hospital should be erected and that the committee should be authorized to visit and to inspect sites suitable for this purpose. This was approved.

Housing of the Poor.—In Bristol several years ago a committee was established to promote the better housing of the poor. Great good has been accomplished in the way of obtaining the repair of dilapidated cottages and the closing of those beyond repair. A warning note has been raised with regard to the provision by municipalities of working-class dwellings, the rental of which were not sufficient to pay the interest and repayments on the original outlay.

The Croonian Lectures on the "Chemical Side of Nervous Activity," will be given by W. D. Halliburton, before the Royal College of Physicians of London, on June 11, 13, 18 and 20. The Goulstonian Lectures on "Certain Mental States Associated with Visceral Disease in the Sane," will be given by Dr. Head on June 26, 27, and July 2. The subject of the Bradshaw Lecture on Prognosis in Relation to Diseases of the Nervous System, will be delivered by Dr. Judson Sykes Bury.

Cost of Smallpox.—In Glasgow where the epidemic is steadily decreasing, there being only 75 patients under treatment on May 13, the cost of the measures used in stamping out the disease has been estimated as follows: The cost of treating the patients in hospital and of isolation, £5,000 to £6,000; the cost of erecting reception houses and temporary pavilions, £7,000; the cost of prophylaxis, including vaccination and revaccination £30,000 to £35,000.

A Psychologic Department has been established in connection with the Pathologic Laboratory of the London County Council Asylums at Claybury, with W. G. Smith, M. A., Edin., Ph. D., Leipzig, in charge. It is proposed to study the problems of pathologic changes in mental states, such as memory and association of ideas, especially in those suffering from alcoholic dementia and the phenomenon of reaction time in normal and abnormal individuals as studied both by the measurement of the duration of mental processes and by analysis of the motor phenomena by the graphic method.

CONTINENTAL EUROPE.

M. Laveran, the discoverer of the hemozoon of malaria, has been elected a member in the section of medicine of the French Institute to succeed the late Prof. Potain.

"The Medical Echo" is the English title of a trilingual monthly review of medical literature, edited by Dr. S. A. Arany, which has come into existence lately in Budapest.

Leprosy.—Brittany and Savoy, according to the report of Dr. Besnier of the Académie de Médecine, are centers of leprosy, a disease which 20 years ago was scarcely known in France.

Röntgen Ray Therapy.—An institute for the light treatment and Röntgen ray therapy has been opened in the Dermatologie Clinic of the University of Berlin and E. Lesser named as director.

Education of Criminals.—At the Pan-Russian Congress of Criminologists, held recently in the Moscow University, a compulsory law for the education of adult criminals was decided upon.

The University of Paris.—It is reported that Prof. Brouardel, who is an ardent nationalist, and who is at present dean of the medical faculty, has resigned his position because Pozzi, the celebrated gynecologist and republican senator has been recently made full professor.

A League Against Syphilis has been founded recently in Paris with Professor Fournier for president; M. Bérenger, Professor Brissaud and M. Pileur, vice-presidents, and Dr. Barthélemy, secretary-general. Among the members are Drs. Barbe, Emery, Bizard, Balzer, Champetier de Ribes and Gaucher.

Remedy for Mosquito Bites.—Professor Voges, the Director of the National Board of Health at Buenos Ayres, according to German papers, has found by accident that naphthalene neutralizes the poison of mosquito bites even when the spot bitten is greatly inflamed, and when applied to fresh bites no swelling occurs.

Sulphur Water.—Armand Gautier, the French chemist, is reported to have announced to the Paris Academy of Sciences his discovery that pulverized volcanic stones treated by water at a temperature of from 250° to 300° C. yield a liquid identical in composition with the ordinary sulphur water of mineral springs, except that it is stronger.

Virchow's Eightieth Birthday.—Preparations are being made for a suitable celebration by most learned societies of the scientific world. The Austrian Aergtekammer has refused to take part, however, the reason given being that Virchow, as a member of the German Reichstag, favored laws permitting unrestricted medical practice and thus used his influence against the best interests of the medical profession.

Antimalarial Campaign.—The Italian Red Cross Society has succeeded in collecting by voluntary subscription the greater part of the sum necessary for renewing the summer campaign against malaria in the Agro Romano. Some 5,000 lire are still needed to make the scheme practicable, and an appeal for funds is being made to the Government by the society and others interested in the undertaking.

Cremation in Basel is said by the *Luzerner Tagblatt* to be free for the citizens of Basel. The number of cremations is not increasing, however. In 1898 there were 17 cremations, and in 1899 only 14, with 1,689 burials. This is thought to be partly due to prejudice and partly to the fact that the person concerned must express the wish to be cremated, though the wishes of the relatives are usually respected by the Sanitary Department.

Texas Fever, previously known only among the cattle of Texas, Roumania, Finland and Sardinia, has been identified recently by Dr. Ziemann, in the Neuenburg district of Oldenburg in North Germany, where it has been known throughout the Ammerland district for more than 100 years under a local name. The disease, which is due to a bacillus, is ascribed by the local veterinary surgeons to the eating of poisonous plants, as it usually proves fatal.

To Regenerate the Human Race.—Count Alexander Louis St. Ouen de Pierrecourt, lately deceased, left among other bequests to his native city of Rouen, 50,000 francs a year to the 2 healthiest children in that city and 100,000 francs paid yearly to the healthiest pair of young giants who shall marry and have children. The will specifies that candidates for the prize must be proved by medical examination to be perfect specimens of the human race, and that the legacy shall be divided equally between the contracting pair. The Count's testament sets forth that the amelioration and increase in size of the human race is a needed work.

Colors and the Nerves.—French scientists have made some very interesting experiments in connection with the effects of certain colors on the nervous system. M. Henri de Parville, of Paris, asserts that the red end of a spectrum excites the nerves, while violet, green and blue are calming. Dr. Donza goes further and attempts to cure nervous diseases by the use of certain colors. Melancholia he treats with red, violent mania with blue, and nervous prostration with violet. The very grave question arises as to how the woman already nervous will regard unbecoming color. Dr. Dor, another experimenter, has brought on vertigo in patients by the use of red lights, and relieved the symptoms by changing the ray from red to green.

Leprosy Increasing in France.—The report read by Dr. Besnier at a meeting of the Académie de Médecine revealed the disquieting fact that leprosy—which 20 years ago was practically unknown in France—has within recent years become so prevalent in this country as to convince the public authorities that urgent measures are imperative to prevent its further spread. In Paris alone there are 14 lepers in treatment at the Hôpital St. Louis, and in parts of Brittany and Savoy there are localities with recognized leper centers. Dr. Besnier in his report states that the suppression of the foul contagion in France can only be secured by the most complete isolation and by taking effective measures against further possible leper importations.

SOCIETY REPORTS

AMERICAN MEDICAL ASSOCIATION.

ANNUAL MEETING AT ST. PAUL, MINN., JUNE, 1901.

[Specially reported for AMERICAN MEDICINE.]

General Session.

FIRST DAY.

The Session was called to order by the President, Dr. Chas. A. L. Reed, at 10 o'clock. After prayer by Bishop H. B. Whipple and an address of welcome by Mayor Smith, the presidential address was delivered by Dr. Reed. The address (published in the issue of AMERICAN MEDICINE for June 8) was most heartily applauded.

Dr. Pennington presented an oil portrait of Dr. N. S. Davis, "The Father of the Association," who is now 85 years old and still in the practice he entered upon 65 years ago. Upon motion a committee was appointed to secure, without expense to the Association, the portraits of all the ex-presidents of the Association.

The Secretary's report, by Dr. Simmons, showed that there are now about 10,600 members, an increase during the year of between 1,500 and 1,600.

The report of the Executive Committee, by Dr. Bulkley, showed that this year there are 391 papers upon the program, a great reduction over the number of previous years. But there have been presented only 196 abstracts of these papers, and the committee recommends that hereafter no title be printed unless an abstract of the paper should also have been furnished. This recommendation was adopted.

The report of the Board of Trustees was read by Dr. Happel. The report showed a profit for 1900 of \$13,344.91. The Board also reported that they ordered enough money invested to make the investment, when added to the \$10,000 in United States bonds, about equal to the sum of \$25,000 par value. Toward securing a permanent home for *The Journal*, there is invested in gilt-edged securities \$25,000, which yearly grows by the interest at least. The sum total of the items mentioned, viz., pressroom, proofroom and office furniture and fixtures, and machinery and plant, less 5% for wear and tear, after all additions, amounts to about \$21,000. The office, with the addition of 1 or 2 small motors which the editor was authorized to buy, is almost complete, and can now do all of its own work. Its quarters are crowded, and for that reason some things cannot be done to the best advantage. There has been a steady growth in *The Journal*. An effort has been made by the trustees and editor to increase the quantity and quality of the reading matter in *The Journal*. It should be the best medical journal published in the world. With the support of a united profession it can be so made. The following comparative statement indicates the increase in advertising collections during the past 12 months: Collections for 1899 were \$33,760.82; for 1900, \$44,060.70; showing a gain of \$10,299.88. The advertising collections for 1898 were \$23,629.71, thus indicating an increase of \$20,430.99, nearly doubling the revenue from this source in 2 years. The frequent changes made in the program of the work of the sections, all of which work is done in *The Journal* office, adds much to the expenses incident to printing of the *Journal*. It has been deemed best to instruct the editor to make no changes in the program after May 4 of each year. It is suggested also that too many papers are on the programs of some of the sections, and many of them are read only by title, and yet they must be treated and published, as if read and discussed by the section. The board suggests that such papers should be treated as volunteer papers, unless the writer can give a satisfactory excuse for not appearing to read his paper. Especially should this apply when more than one paper is furnished by the same author at any annual meeting. In arranging the programs of the work of the different sections the board suggests that the secretaries give preference to those who write for only one section, over those who have furnished or propose to furnish, papers for 2 or more sections. This will limit the number of papers, and will tend to improve the quality. This course will become a necessity in view of the increased number of sections, and the fact that each section will be furnished a reporter so that all discussions can be reported in full. Under an order from the Board of Trustees, all stenographers will be employed by the editor, to enable him to control all papers, and abstracts of the same. The board having directed an enforcement of Section 7 of the By-laws, in regard to the publication of papers, no paper will be published in *The Journal* which has appeared in full or in abstract form in any other journal, and no stenographer will be reemployed who furnishes any such abstract to any other journal. Unless some curtailment of the number of papers to be published in *The Journal* can be obtained along the lines just suggested, the publication of many valuable papers read at our annual meetings must of necessity be delayed for nearly a whole year, a thing pleasant neither to the writer nor editor. The Association might come to the relief of the editor by limiting by by-law or otherwise the number of papers

in each section to 35. In order to still further improve the quality of the material, to eliminate as far as possible all that would be of little value to our readers, and to fix the responsibility for all that is admitted to the pages of *The Journal*, the trustees suggest that hereafter no paper presented to any section shall be printed until it has received the approval of the 3 members of the Executive Committee from that section, evidenced by their signatures to said paper.

The recommendations of the Board were adopted.

The report of the Committee on National Legislation, by Dr. JOHNSON, was read and adopted.

The report of the Committee on Reorganization, the essentials of which were published in AMERICAN MEDICINE May 25, was read by the chairman of the committee, Dr. McCORMACK, and after a somewhat excited debate was by motion referred to a joint committee, consisting of the Executive Committee and the Committee on Reorganization, a meeting of which was held at 3 p. m., for the purpose of considering all arguments for or against the plan proposed by the committee. The joint committee is to report to the Association at to-morrow's general session. Adjourned.

SECOND DAY.

The meeting was called to order at 11 a. m., by President REED. Governor Van Zant was introduced and in a witty and patriotic speech he welcomed the Association to the State.

The report of the Joint Committee, to whom was referred the report of the Reorganization Committee, was called for. Dr. WALKER reported that the Joint Committee unanimously advised that the report as a whole be adopted. Dr. WALKER then read the draft of the Constitution and Bylaws as made by the Reorganization Committee. The essential portions of this Constitution and Bylaws were printed in AMERICAN MEDICINE, issue of May 25. After the reading, Dr. HARRIS (New York) moved that the Constitution and Bylaws be adopted.

Dr. BULKLEY, who had been opposed to the recommendations of the Reorganization Committee, stated that he was now in favor of their acceptance, and he seconded the motion for their unanimous adoption. The motion carried, and thus after the close of the present session the new Constitution and Bylaws become the future law of the American Medical Association. In order to avoid bringing up the question again at this session, Dr. McCORMACK moved that the vote should be reconsidered and laid upon the table.

The new Constitution was ordered to be printed and sent to every member of the Association.

Dr. WYETH, of New York, then read the address of surgery, which was printed in the issue of AMERICAN MEDICINE for June 8.

The reports of several Standing Committees were read and adopted.

A resolution against the abolishing of the army canteen was laid upon the table, and the subject was referred to the Committee on National Legislation.

THIRD DAY.

The meeting was called to order by President Reed at 11 o'clock. After the reading and approval of the minutes of yesterday's session, Miss Susan B. Anthony and Rev. Annie B. Shaw were by courtesy allowed to address the association in behalf of *The Suppression of Vice in the Philippines and Other New Possessions of the United States as Regards the Soldiers*. They earnestly sought the sympathy and cooperation of the association and of the medical profession in the regulation and suppression of vice.

Dr. SEAMAN (New York) protested that the ladies were misled, that since the suppression of the army canteen the number of cases of venereal disease had doubled.

Dr. McCORMACK (Kentucky) moved that the association endorse the plan of reorganization so far as it applies to State and county societies, and that the secretary shall be instructed to open correspondence with the officers of these societies, and report the results at the next annual meeting.

Dr. GOULD moved that the Board of Trustees be authorized to expend \$400 for the necessary expenses of the Committee on Reorganization.

Dr. BULKLEY (New York) read the report of the Executive Committee, and by vote the recommendations of the committee were taken up singly.

A committee was ordered to draft commemorative resolutions concerning the deaths of the ex-presidents, Drs. Stille, Sayre, McGuire, and Cole.

A resolution authorizing the procuring of the portraits of the past presidents of the association without expense, was passed.

The incorporation of the association was ordered.

It was moved that the resolution that a committee of 3 be appointed to revise the code should be laid upon the table. To ensure the voting only of delegates, Dr. HAPPEL (Tennessee) moved that the roll call of the delegates should be made. This would have consumed several hours, and Dr. BISHOP (Pennsylvania) moved that the roll-call should be postponed for 1 year. Carried.

A resolution disapproving of the action of Congress in degrading the rank of the medical department in the army corps was passed.

The Committee on Scientific Research, Dr. WELCH (Balti-

more), chairman, was voted \$500 for the expenses of their work during the coming year.

The project of a psychophysical laboratory, advocated by Dr. MACDONALD (Washington), under the Department of the Interior, was endorsed.

Several recommendations of the Committee on Legislation were approved.

The fusion of the 2 sections on Physiology and Dietetics, and on Pathology and Bacteriology, into a single section, was ordered.

The Committee on Pathologic Exhibits was voted \$500.00 for its expenses during the coming year.

The oration on Medicine, by Dr. Davis, of Chicago, published in our present issue, was then delivered.

The recommendations of the Nominating Committee were as follows: For President, Dr. John A. Wyeth, of New York; First Vice-President, Dr. Alonzo Garcelon, of Maine; Second Vice-President, Dr. A. J. Stone, of Minnesota; Third Vice-President, Dr. A. E. Jones, of Nebraska; Fourth Vice-President, Dr. John R. Dibrell, of Arkansas; Treasurer, Dr. Henry P. Newman, of Illinois; Secretary, Dr. George H. Simmons, of Illinois; Librarian, Dr. George W. Webster, of Illinois.

Board of Trustees, term expiring 1904: Dr. W. W. Grant, of Colorado; Dr. John F. Fulton, of Minnesota; Dr. T. J. Happel, of Tennessee.

The oration in Surgery, Dr. Harry Sherman, of California; the oration in Medicine, Dr. Frank Billings, of Illinois; the oration in State Medicine, Dr. J. M. Emmert, of Iowa.

The place of the next meeting, Saratoga, N. Y. The Chairman of the Committee of Arrangements, Dr. G. F. Comstock. Adjourned.

FOURTH DAY.

The session was called to order at 11 o'clock by President Reed. After the reading of the minutes of the previous session, the oration on State Medicine, published in June 8 number of AMERICAN MEDICINE, was delivered by Dr. GEORGE M. KOBER.

Upon the recommendation of the Executive Committee, a vote of thanks was tendered Mr. Rockefeller for his gift of \$200,000 for scientific research, under the charge of Dr. William H. Welch.

Adjourned.

Section on Practice of Medicine.

FIRST DAY.

Address of the Chairman.—Dr. J. M. ANDERS (Philadelphia) pointed out a few lines on which organizational and professional progress must be conducted. He believed that if the American Medical Association hopes to be one of the great powers of the country, that it was of great importance that the proposed reorganization scheme should be promptly affected, and due efforts made to establish and maintain proper respect and forbearance between the various sections to the end that they may work in perfect harmony with one another.

Appendicitis.—Dr. JOHN B. DEEVER (Philadelphia) read a paper in which he stated that the appendix was the most vulnerable of the abdominal organs, and this for several causes, as follows: It is a structure in the progress of retrograde metamorphosis. It is deficient in blood, nerve, and lymphatic supply. It is long and its caliber is small, hence its drainage is easily interfered with. It is subjected to traumatism by the movements of the psoas muscle upon which it lies. It is apparent that the appendix may easily become the target for the destructive microorganisms when from any cause these are incited into activity; and it is specially noteworthy that a hollow glandular organ remains intact only so long as the production and evacuation of its secretions continues normally. When this function is deranged there are serious results: (1) Retention, stagnation, and decomposition of the appendix contents; (2) pressure, leading to impairment of the appendix wall; (3, and most important) the bacteria, especially the colon bacilli, are so increased in number and virulence that they are able to penetrate the coats of the appendix and set up their irritant processes in varying degrees. Such he considers to be the brief pathogenesis of appendicitis. The following classification was suggested as convenient and well founded:

Acute Appendicitis:	First—Catarrhal.
	Second—Interstitial.
	Third—Ulcerative.
	Fourth—Gangrenous.
Chronic Appendicitis:	First—Catarrhal.
	Second—Interstitial.
	Third—Obliterating.

He frankly admitted that we could not always distinguish between the different pathologic varieties of appendicitis. Apparent inconsistencies were explained by the fact that most symptoms were due to peritoneal inflammation by extension. The majority of appendix inflammations are chronic in nature, and many of the so-called acute cases represent exacerbations, a relighting of a quiescent focus. He had never seen much good from the efforts of nature to cure. The abscess itself, by its tendency to infect the peritoneum, is a grave menace and even if the abscess ruptures into a hollow viscus the situation is not much better. A short sketch was made of certain features

of the pathology of appendicitis and 2 points were specially emphasized: First, the practical nonexistence of any form of inflammation which by obliterating its lumen renders the appendix harmless; second, the appalling rapidity and suddenness with which the appendix may suffer bacterial invasion and necrotic degeneration with resulting general peritonitis. Upon these facts he based proper treatment and the justice of claiming appendicitis as a purely surgical affection. The following word of caution was made: No frequent disease presents its signs and symptoms in such varied form and locality as appendicitis. Make it a rule, therefore, in all abdominal cases to first exclude appendiceal irritation, because careful examination will often reveal as due to it affections otherwise apt to be classified as "enterocolitis;" "acute dyspepsia;" "cholera morbus," etc. In all inflammations of the appendix not entirely chronic there are 3 cardinal symptoms, viz.: pain, tenderness and rigidity. Pain is in every variety by all odds the most significant; so much so that he regarded with suspicion every clinical history with bellyache, inflammation of the bowels, neuralgia of the stomach and similar terms. But the pain of appendicitis has certain characteristics. Above all it is paroxysmal, cramp-like and colicky and may at intervals almost disappear. It is usually first referred to the umbilical and epigastric regions, becoming localized in the right iliac fossa, only after the lapse of several hours and that not in all cases. First examine away from the seat of disease, and slowly and gently approach the tender area. A localized spot of extreme tenderness he considered to be the surest indication of pus formation; conversely abrupt cessation of such pain is apt to denote complete gangrenous change and a paralysis of peripheral nerve filaments by toxin absorption. After considering briefly some of the other symptoms of appendicitis he said that he did not depend to any extent upon blood-examinations; a leukocytosis of over 20,000 indicates pus usually unless either shut off by adhesions or the individual is overwhelmed by septic absorption. The symptoms of appendicitis were seldom in proportion to the appendix lesions; therefore it should suffice to diagnose early the inflammatory involvement, which is of itself proper enough indication for rational treatment. There is but one treatment for appendicitis, the aseptic scalpel of a surgeon, and it should be called upon as promptly as the diagnosis is made.

Discussion.—DELANCEY ROCHESTER (Buffalo, N. Y.), made a strong plea for the value of the blood count in the diagnosis of these conditions during the acute inflammatory state and particularly during the development of pus. Another interesting point he made was in reference to the variation of the temperature with the blood count; when there was an elevation of temperature there was a higher leukocytosis. He believed the aseptic scalpel to be the only treatment for appendicitis when operation was possible.

Dr. J. B. KELLEY (Philadelphia) did not think that any medical man should treat a case of appendicitis after the first 24 hours.

Dr. J. A. WITHERSPOON (Nashville, Tenn.), said that if the medical treatment of appendicitis is Christian Science that any man with a little pain in his belly and with a little elevation of temperature and with very few local signs who submitted himself to operation is as brave as Julius Cesar with the faith of a Daniel. We should realize that appendicitis is both a medical as well as a surgical condition. There were many cases in this disease that get well, not by medical treatment, but by placing a man in bed at once, stopping all nourishment, applying ice bags over the belly, and keeping him perfectly quiet.

Some Phases of Malaria.—Dr. J. B. McELROY (Stovall, Miss.) read this paper, in which he cited a case in detail in order that he might discuss some of the phases of malaria suggested by it.

Perniciousness in Malaria. It is well known that in these infections the estivoautumnal parasites are found in exceedingly large numbers. There are usually two predominating broods of parasites in the blood of patients with pernicious fever, but Marchiafava and Bignami report cases in which the viscera, as well as the peripheral circulation, show a very small number of parasites. So it is evident that we must look for the causes of malignancy in another direction than merely in the large quantity of parasites. These causes may be found in what has been termed the biologic characteristics of the estivoautumnal parasites. The first of these is their capacity for rapid propagation. It is another characteristic of these parasites to disappear from the peripheral circulation to complete their cycle of development in other vascular areas. We should take into account another factor in the other forms of pernicious malaria, the virulence of these parasites. Many attempts have been made to demonstrate a malarial toxin, and there is good evidence to believe that such a malarial toxin exists, although it cannot be demonstrated. Therefore, it is probable that this property of the estivoautumnal parasites, more than any other, accounts for malignancy in malaria. Another proof of the great virulence of these parasites is the occurrence of hemoglobinuria in these affections. But the blood offers other evidences of malarial infections than the parasites in it, viz.: the presence of pigmented leukocytes and the characteristic leukocytic variation of malarial infection. In all the cases studied by him there were pigmented leukocytes. After considering this subject quite in detail, he said that if pigmentation and leukocytic variation are evidences of malarial infection when the parasites

are few or absent in the peripheral circulation, hemoglobinuria must be malaria, and, being malaria, is a most striking evidence of the extreme virulence of the estivoautumnal parasites. Phenomena occurring in these infections after the disappearance of the parasites, which have been termed postmalaria, are also evidence of the toxin theory. Not infrequently it has been stated that the negro is relatively immune from malarial infections, and sometimes that he is absolutely so. These statements were not in accord with his experience of 8 years with the negro in the southern Mississippi valley. On the plantation where he resided there were 24 whites last year, and, of this number, 41% were infected with malaria. Of this number, however, 5 who did not have malaria were away from home during the greater part of the malarial season. So, excluding these, the percentage of malarial morbidity would be about 53% amongst the whites. There were 184 blacks, and of these 61 were infected. Professor Osler classifies 3 groups of gangrene: First, in connection with Raynaud's disease; second, multiple spontaneous gangrene, in association with the acute infections, like measles, typhoid fever, typhus fever, scarlet fever, diphtheria, and malaria. Multiple spontaneous gangrene of the limbs in young and middle-aged people may occur without any obvious cause. The case he reported was one of multiple gangrene in estivoautumnal infection. He saw another case of spontaneous gangrene last year which from the clinical history he regarded as one in association with malaria. He then gave an abstract of the case.

SECOND DAY.

The Chemic and Microscopic Examination of the Blood: Dr. W. D. KELLY (St. Paul, Minn.) said the blood-serum containing serumalbumin and serumglobulin is subject to chemical change in puerperal septicemia, and in febrile disease serumglobulin is less subject to change than serumalbumin. The pathologic variation in the phosphates of the serum is but slight; of the chlorids not very great, although this principle is chiefly responsible for the isotonic relations of cells in serum. A high percentage of chlorids is usual in anemia. The larger the proportion of plasma the greater is the percentage of chlorids in the blood. Sodium salts are principally found in the plasma, being usually increased in the watery blood. Potassium found in the red cells is diminished in hydremic conditions. Seegan, Chauran, Cavazanni and others found in normal blood traces of glucose, which was increased by a diet of carbohydrates and diminished by muscular exertions. The diastase ferment of blood is found in the red cell and serum is found by Preeka and others to have the power of coagulating the blood; it is inhibited by the nuclein and increased by sodium sulfate and chlorid. Fat has been demonstrated in the blood after a hearty meal. The occurrence of free fat both in health and disease has been frequently observed. Acetone has been found in fevers. Jaksch demonstrated fatty acids in the blood of leukemia, acute atrophy of the liver, and infectious diseases. The poisonous symptoms developed in cholemia have been referred by most authorities to the presence of biliary acids. Isotonic tension and increased resistance of the red cells are peculiar characteristics of red blood in jaundice. Bile acids affect the union of hemoglobin and with the stroma of the red cells, rendering hemoglobin more easily soluble; this accounts for the solution of red cells in jaundice, as well as in other conditions. Icteric blood has also an increase in the nitrogenous bodies. Well-marked cholemia may be detected by the inspection of serum or foam on heating to 50° C. Bilirubin may be changed to biliverdin by that process. By the intravenous injection of glacial acetic acid in the rabbit he has been able to get an acid reaction several hours afterward by the phenolphthalein test. The specific gravity of the blood may be increased by sweating, lack of food, muscular exertion, and may be decreased by freely imbibing water or fluids. Homberger found that albumins, phosphates and chlorids behave differently after changing osmotic conditions. When a little acid is added to blood, albumin and phosphates pass from red cells to serum, while chlorids pass from serum to cells; but when alkali is added the opposite transfer is induced. In order to make a satisfactory examination of the blood the following things are necessary: Apparatus must be absolutely clean. The various stages of the process must be performed rapidly because the cell coagulation of the blood will interfere with any of the tests. The work must be done accurately. By making large quantities of the stain and keeping some in glass-stoppered bottles, will standardize the solution, and so one will receive minimum variations in intensity of stain. Fixing a specimen by continuous heat, with a slight degree of variation in distributing the heat as possible.

Pernicious Anemia: Report of a Series of Cases: Dr. THOMAS McCRAE (Baltimore) read this paper, which was a report of 40 cases that have occurred in the service of Dr. Osler, at the Johns Hopkins Hospital, in Baltimore, in a period between 10 and 11 years. During the same time there were about 12,500 medical patients. Of the 40 patients, 32 were males and 8 females. Two were colored. The ages varied from 10 to 70 years, the largest number occurring in the fifth decade. As to the etiology, worry and mental strain were only present in 3 cases. Pregnancy was associated in one instance. Oral sepsis was not invariably present in the recent cases. Among the symptoms the most frequent were weakness, change of color

and loss of weight. The latter occurred in more than one-half of the cases, and emaciation was marked on examination in 10 of the series. Pigmentation of the skin was found in 8 and petechia in 4 instances. In the abdomen the liver was felt in 2 cases and the spleen in 6, but in none was the enlargement at all marked. When the cases first came under observation the hemoglobin averaged 30%, the red corpuscles 1,560,000, and leukocytes 6,920 emm. Of the 16 cases with a count below 1,000,000 only 4 recovered. The average differential count for 36 cases was polymorphonuclears, 61%; small mononuclears, 31%; large mononuclears and transitionals, 4%; eosinophiles, 2% and a fraction of a percent of myelocytes. The average number of nucleated reds per 1,000 leukocytes was 37, of which 23 were normoblasts, 5 were megoblasts and 9 were intermediary forms. In a comparison of the fatal and the nonfatal cases the average percentage of small normoblasts was rather higher in the cases that recovered, but the number of megaloblasts was 11 times greater in the fatal cases. There were nervous manifestations in 14 cases. These varied from slight sensory disturbances only to complete paraplegia. It was not possible to group the cases under any division as the symptom varied so. The prevailing type, however, was of a more or less spastic condition, with some incoordination and marked sensory disturbances. In some, the nervous symptoms seemed to vary with the state of the blood. As to diagnosis, the distinction from gastric cancer may be difficult. In this the higher count of the red cells usually found, lower color index, lower percentage of small mononuclear and absence of megaloblasts are all important factors. Certain cases showing some features of splenic anemia are hard to place, of which 3 were cited. They had a prolonged course, markedly enlarged spleen, ascites in 2, and the general blood conditions of pernicious anemia. They were not included in this series. The average duration of 17 fatal cases was 12 months. In 8 the course was under 6 months. One patient recovered and came under observation 7 years later with cancer of the stomach and one is in good condition 6 years after the onset. The treatment given may be summed up as rest, fresh air, good food and arsenic.

The Leukocyte Count in Hemorrhage: Dr. GEORGE DOUGLAS HEAD (Minneapolis) wished to place on record some experimental work upon the leukocytes in hemorrhage which gave results somewhat different from the generally accepted views. In his experiments upon dogs the same law seems to govern the increase or decrease of leukocytes in the circulating blood as in man. There is a leukocytosis of digestion and one following septic infections in dogs as in the human being. The variation of leukocytes in the circulating blood of man is the same as in dogs. In all probability the conclusions arrived at from his experiments in dogs would apply equally well to human beings. He formulated the results of his work as follows: (1) In dogs a diminution in the number of white cells in the circulating blood immediately follows a profound hemorrhage; (2) this initial leukopenia is followed sooner or later by an increase in the number of leukocytes in the circulating blood; this is the so-called posthemorrhagic leukocytosis of all writers; (3) this leukocytosis of hemorrhage continues for at least 7 days, and in some cases much longer. The writer believed that what he had demonstrated in dogs is equally true for human beings. Namely, that in human beings, immediately following hemorrhage, there is an increase in the number of leukocytes in the circulating blood which has hitherto been overlooked because hematologists have failed to make their counts early enough after the hemorrhage took place.

Discussion.—Dr. W. T. HIGGINS (Courtland, N. Y.) says that some of the gentlemen were inclined to doubt Hunter's theory and the importance of the mouth conditions in pernicious anemia. Hunter's success in the treatment of this disease seemed to offer something in favor of his theory. He had treated one very marked case on the lines laid down by Hunter with complete recovery. He was impressed with the securing aseptis, not only of the mouth, but of the nose and upper air passages, as well as the teeth.

Dr. W. D. KELLY (St. Paul) referred to the importance of keeping the air from the veins of rabbits; if air gained an entrance death would ensue in a few seconds.

Dr. McCRAE, in closing, said that he agreed with Hunter in his theory, but he also believed that it was important to pay attention, too, to the intestinal tract. Brilliant results had been obtained from the use of arsenic. One patient he had had in 1880 who is alive today. Another patient treated returned 6 years later with cancer of the stomach. He has now one case under observation for 6 years. He had seen cases recover when treated by rest, fresh air, good food, Epsom salts and arsenic. He emphasized the importance of oral aseptis.

Osmotic Pressure and its Relation to Uremic Manifestations: Dr. HEINRICH STERN (New York) read this paper and stated that he thought we were laboring in the wrong direction when we tried to fasten the origin of uremia and kindred affections upon a purely physiologic-chemical basis. Most of the effete products *per se* are little toxic. Potassium, it seems, exerts the greatest poisonous qualities. Intravenous injection of urine for experimental purposes has shown what we did not know before, namely, that uremia is *not* the consequence of one, but of the retention of all those substances which normally enter into the composition of urine. We do not encounter in the blood of uremia any other factors but those prevalent in the normal state. The only difference is the quantity. *Uremia is,*

therefore, rather a physical than a chemical anomaly. **Osmotic Pressure in the Body Fluids:** All organic matter is saturated with water. The cells of the body are more or less permeable for water. If the contents of the organism are soluble salts and, in water, remain unaltered, so that for a certain period neither salts nor water are introduced nor eliminated, all the watery constituents of the organism would become one homogeneous liquid, and the same osmotic pressure would prevail over the entire system. The molecules of a number of compounds, when dissolved, are divided up, are dissociated into "ions." The higher the dilution the more perfect the dissociation, as a general rule. There is no vital process in which diffusion, or osmosis, does not participate. Conditions for the evolution of osmotic pressure always exist in the organism, for whenever 2 solutions come in contact by means of a semipermeable wall, osmotic tension is displayed. When the excretory activity of the kidney is materially interfered with, the products of catabolism are retained in the blood. The great number of molecules dissolved in the plasma exert a high osmotic tension, and tend to diffundate (?) toward the less concentrated body liquids. Ultimately all the fluids of the body exhibit a similar degree of concentration. This degree of concentration is accompanied by a series of manifestations coordinate and successive, which have been grouped together under the name of "uremia." *This is really, if we may call it so, a mechanical intoxication, not one of chemical origin, but one due to an abnormal increase in osmotic tension of the blood plasma and the fluids of the body.* The phenomena which occur in the blood after the injection of large amounts of concentrated salt solution are the same as those in uremia; they make their appearance, together with the increase in the concentration of the blood, when the elimination of the accumulated substances from the blood, on account of the extraction of the resorbative qualities of the tissues does not occur any longer. Noss already noticed in dogs tonic and clonic convulsions after intravenous injection of 10% sodium chlorid solution, and in such events that the blood had attained twice its former concentration.

Circulatory Disturbances Accompanying Cirrhosis with Inosulation of the Portal Branches with Systemic Veins: Dr. CHARLES G. STACKETON (Buffalo, N. Y.) read this paper, from which some practical conclusions may be drawn from the data given, some of which it would not seem necessary to call attention to but for the fact that they appear to have been somewhat overlooked. First, the normal blood-pressure in the portal vein is low; when it is raised suddenly it is apt to be followed by symptoms of toxemia, and these symptoms may be primarily relieved by purgation. The second important conclusion is that when the vascular changes, and the raised portal blood pressure, that permit the passage of the portal blood into the systemic veins, are brought about gradually, and then the subject is better able to resist toxemia, becoming as it were immunized to the offending portal blood, hence the symptoms are less striking, and with proper care as to diet and laxative, may be practically overcome.

Cirrhosis of the Liver due to Metallic Poisons: Dr. VICTOR C. VAUGHAN (Ann Arbor, Mich.) said that lead and copper are the substances which should be considered among the metallic poisons, so far as their effects upon the liver are concerned, and especially upon the changes in the connective tissue of the liver. Alcohol is one of the most important factors in the production of the cirrhosis of Laennec. The metallic poisons, lead and copper, generally, if not always, produce changes in the liver-cells, which are characterized here by a fatty degeneration or fatty deposits in the liver-cells. There has been considerable discussion as to whether the first changes take place in the hepatic cells or in the connective tissue. But so far as the metallic poisons were concerned, he thought that the changes in the liver-cells were prior in time to the changes in the connective tissues. They are certainly recognizable earlier than the other changes. For instance, if hours or days after the administration of these metallic poisons in not immediately fatal doses fatty deposits may be found in the hepatic cells, it is not presumable that the changes in the connective tissue takes place so rapidly. He had seen a number of cases of cirrhosis of the liver due to lead poisoning, some occurring in house painters who are careless in their habits, having unclean hands. Other cases of this occur in workers of lead fumes. It is not often that we see cases in the early stages of liver changes at autopsy. Therefore we must rely on animal experimentation in our endeavors to trace the relationship of these changes. In a number of the cases of metallic poisoning there occurs subsequently an overgrowth in the connective tissue in the liver. Another poison in which he was much interested was aluminum; the effects of this upon the human liver he did not know much about, but when the soluble salts of aluminum were administered to animals hypodermatically or intravenously, the changes can be speedily detected in the hepatic cells and subsequently in the connective tissue.

Treatment of Cirrhosis of the Liver: Dr. JOHN H. MUSSEN (Philadelphia), spoke on this topic. He divided the cases of cirrhosis of the liver into those in which no symptoms occurred during life, the cirrhosis having been found at autopsy, the patient dying from other causes, and into those cases that were not suspected until such an accident as hemorrhage made it apparent, *i. e.*, latent cirrhosis of the liver, and again into cases with the symptoms of portal obstruction and, on the other hand, biliary obstructions. The lines of treatment

were largely dietetic and hygienic, great care being taken to see that the functions of the gastrointestinal tract were kept in action all the time, and that the renal secretions were properly regulated as well as the action of the skin. He raised a word of caution in regard to the presence of hemorrhoids. Many patients are operated upon without careful investigations, and it was his misfortune to see 2 or 3 deaths occur following the operative treatment upon hemorrhoids; at autopsy cirrhosis of the liver was shown to be present. In all cases of hemorrhoidal disease, a thorough knowledge of the state of the liver should be known before any operative measures are advised. The management of ascites, occurring in cirrhosis, is interesting because of the late attempts at treatment through surgical intervention. In the treatment of ascites there were medicinal and surgical measures. He was accustomed to the use of mild purgation, and the use of calomel from time to time; he also used calomel in $\frac{1}{10}$ of a grain doses given every 3 hours as a diuretic. He also relied upon the old-fashioned pill of digitalis, squills, and calomel. He also had considerable confidence in the oil of copiba. In any case of ascites he did not wait long to determine whether these drugs would be of use, but he resorted to tapping early and frequently. One should not be appalled at the frequency of tapping required in some cases; 1 case was cited in which tapplings were done 190 times. He then considered the question of permanent drainage, and stated that Dr. Frazier had operated upon a case, opening the abdomen, scarifying the peritoneum, and attaching the omentum to the abdominal walls; this was done 12 months ago, and the patient is cured of his ascites, there being no recurrences. Among 20 cases that have been operated on in Philadelphia, a very large percentage were relieved or cured.

Cirrhosis with Pigmentation: Dr. THOMAS D. FUTCHER (Baltimore), read this paper. The association of pigmentation of the skin and tissues with a form of hypertrophic cirrhosis of the liver, rather than with the atrophic form was emphasized. He discussed at length the pigmentation associated with the hypertrophic cirrhosis of the liver, which occurs in the disease described by von Recklinghausen as "Hemochromatosis." He also dwelt with the source, chemical composition, and distribution of the pigment. He endeavored to show that diabetic cirrhosis with bronzing of the skin, *diabète-bronzé*, was probably identical with von Recklinghausen's hemochromatosis. So far as he knew, only 4 cases of cirrhosis of the liver with general pigmentation (hemochromatosis) have been reported from this country.

Rheumatic Stimulants: Dr. JAMES J. WALSH (New York) said that there were 3 terms in medicine that have indefinite signification—rheumatism, gout and catarrh, and curiously enough these terms are descriptive of the same idea. Acute rheumatic arthritis we have come to realize as being an acute infectious disease of microorganismal origin. Its very similarity to gonorrhoeal rheumatism points strongly to the microbial origin of the disease. He referred to a series of joint-symptoms that occurred in connection with certain toxemias. Observations were made, pointing to the fact that there might be serious involvement of joint structures without their necessarily being any microbial metastasis. Painful affections around a joint point to 2 facts, (1) the nervous mechanism supplying joints, owing to its greater use than most of the other groups of nerves, makes it extremely sensitive to disturbances of the circulation; (2) tissue in the neighborhood of joints being much used and subjected to injury are liable to take on chronic inflammatory conditions. Certain observations were made in a series of cases in the service of Professor Katzenbach at the New York Polyclinic. These cases presented painful symptoms which were usually referred to the neighborhood of joints and which had been diagnosed as rheumatism. When the patient was not able to give a straight history of acute rheumatism with red swollen joints, fever and sweating, the case was at once assumed not to be rheumatic in character and very seldom was it necessary to retract this assumption. Among 40 cases presenting, 15 had so-called rheumatic symptoms of the lower limbs, due to flatfoot. This proportion, a little more than $\frac{1}{3}$, represented, he thought, very nearly the ratio in which flatfoot symptoms are mistaken for rheumatism. Very often the symptoms are worse on rainy days or damp weather, probably from the fact that on damp, muggy days these patients are apt to wear old shoes which furnish a much less support to the foot than do the well-fitting new shoes. Again, nerves are much more sensitive when there is much dampness. In speaking of occupation neurosis, he said that there was no occupation that involved a frequent repetition of muscular movements but what might produce it. For instance, so simple an action as sweeping, if done as a regular occupation and constantly performed with a broom in the same hand, will, in individuals who are run down, give rise to painful feelings, either in the shoulder, if the broom is grasped too high up to enable the person to take advantage of the proper leverage in making the sweep, or in the leg if the body is constantly supported on one leg during the process of sweeping. The brachyalgia that occurs in connection with frequent and badly directed use of the small muscles on the forearm is well known, occurring in telegraphers, in writers, in penmen, in typewriters, in piano players, in violin players, etc. As a result of a sort of sympathy with the lower arm, the upper arm and shoulder, often suffer from a decided ache, and it is surprising how often this ache is treated as rheumatism. He referred to many other cases of

occupation neurosis in which antirheumatic treatment had been administered.

A Case of Akromegaly Presenting Features of Unusual Interest: Dr. CHARLES LYMAN GREENE, (St. Paul, Minn.,) presented a case of a young man, 25 years of age, who had had no fixed occupation, but for some years prior to the development of the disease had spent the winter months on the ice, a point of some importance, inasmuch as the history of many of these cases has strongly suggested the influence of long exposure to cold and dampness as a predisposing or exciting cause. The family history was negative. Syphilis was denied. Three years ago he suffered from a swelling of the kneejoint, from lassitude and general weakness. Two years previous to this (5 years ago) he noticed a rapid enlargement of the hands and feet and the members of his family noticed a change in his physiognomy. The enlargement of the hands and feet steadily continued and progressed quite rapidly up to the time that he presented himself 3 years ago. At this time the hands and feet were enormous, the wrist and ankles free from inflammation, but bulky, thick and in strong contrast with the forearms and legs. He complained of languor and weakness, but has had none of the severer vertical pains so common in akromegaly, nor did he complain of pain in the lumbar region or limbs. There were no signs of disturbance of the special senses nor of the nervous system. The skin is nearly normal and lacks the harshness of myxedema. The appearance of the face was especially interesting, the skin being thickened and hypertrophied though not rough. Both upper and lower eyelids are thickened and the ears appeared clumsy and tumid as also is the nose. The nasal arch is prominent, the malar bones project and the lower jaw is apparently enlarged both from the angle to the symphysis and vertically. The enlargement of the upper jaw had no doubt masked the changes in the lower jaw, depriving the case of one of the so-called typical signs of the disease. The tongue is large, the larynx is enlarged and its cartilages appear to be the seat of hypertrophy. The radiograph demonstrates the remarkable enlargement both in length and thickness of the bones. The feet presented the same typical characteristics as the hands. There were no marked enlargements of the great toes. The hands and feet were not the seat of pain nor are their movements much restricted. A feature of especial importance is the marked increase in the bulk of the overlying tissues which present the appearance and sensation of a hard edema exactly like that of myxedema. The treatment had been solely by thyroid extract, the result being an immediate and marked amelioration of the disease.

Election of Officers. For chairman, Dr. FRANK A. JONES, of Memphis, Tenn.; for secretary, Dr. ROBERT B. PREBLE, of Chicago.

THIRD DAY.

Modified Treatment of Typhoid Fever: Dr. T. B. GREENEY (Meadow Lawn, Tenn.) advocated the use of acetanilid with quinin, which, he claimed, had a soothing and quieting effect, and prevented the possible irritating effects of the latter. He had never observed any depressing effects of the drug upon the heart. The dose was increased or diminished according to the rise or fall of the temperature.

Mental Shock: Dr. O. T. OSBORNE (New Haven, Conn.) did not wish to advocate the use of the term medical shock for conditions of failing heart due to distinct pathologic conditions, or due to a gradual breakup in the system by very acute or prolonged intense processes; he thought the term was justifiable when a badly-acting and gradually weakening heart was the most urgent cause for anxiety and its weakness was out of proportion to the pathologic conditions or symptoms present. He believed that we were justified in using the term medical shock as we are in using the term surgical shock. The symptoms of this are a more or less rapid heart, irregular, perhaps dirotic, or intermittent pulse, incomplete inspirations without much actual dyspnea, interspersed with frequent sighs, and the subjective symptoms of precordial oppression. The temperature is generally low, the flesh cool and clammy, and if quick relief be not obtained death will soon take place by heart failure or medical shock. He believed that medical shock was just as certainly a vasomotor paralysis as in surgical shock and, as a consequence, the major part of the blood is to be found in the abdominal veins. The blood flows slowly into the dilated, and therefore nonelastic arterioles, hence slowly into the capillaries, and returning slowly in the veins and imperfectly fills the heart cavities. The heart contracts irregularly, incompletely, and arrhythmically. The aorta has not the pressure ahead or the forcible quota of blood from behind, and consequently does not give enough elastic rebound to force blood properly into the coronary arteries, and the heart muscle is improperly nourished. By the lowered blood pressure all the functions of the body begin to fall, all digestive processes are impaired, and molecular death begins to take place, at least almost unaccountably gradual failure of body and mind occurs until death closes the scene. Severe acute nerve pain will, if continued, give a lowered vasomotor tension, and if too long continued or too severe, vasomotor paralysis or shock perfectly similar to that due to profound injuries of these nerves, or surgical shock. In acute feverish processes our aim should be to make the elimination at least equal to the production of decomposing and fermenting products and to prevent the absorption of these products if possible. Keep the emunctories all in good order.

In all diseases or conditions where there is a piling up in the blood of absorbed poisons, be they from typhoid fever, or dysenteric ulcers, from pus collections, from malarial plasmodia, or hemoglobin debris, from cancerous disintegration, or from catarrhal unhealthy, edematous mucous membranes, etc., any treatment which hastens the evacuation of the excreted bile impregnated with toxins, will prevent systemic and nervous poisonings and ultimately vasomotor disturbances and mental shock.

Coughing a Means of Disseminating Tubercle Bacilli; a Study of 50 Cases: Dr. L. NAPOLEON BOSTON (Philadelphia) said the conditions which prompted him to investigate as to the degree with which tubercle bacilli were disseminated by coughing were, first, that from the mouth of an inmate of the Philadelphia Hospital he noticed that fine droplets of sputum were ejected with each act of coughing, and second, that coughing was often excited by eating. He thought that this was a potent factor in the dissemination of tuberculosis, and possibly explained why patients in the early stages of tuberculosis did badly in this institution where every possible attention was given to ventilation, light, and the disinfection of sputa. The spray was collected by a mask, the essential features of which were that it was made from German silver wire, one piece of which was moulded to fit the face, resting on the nose, cheeks and chin. To prevent irritation it was covered with rubber tubing. Suspended from this wire was a second oblong portion provided with 2 lateral grooves, which served to accommodate 2 microscope-slides. When the mask was in position the slides were held directly in front of the mouth and nose at a point 3 inches distant from the lips. The piece is held in position by an elastic band. The patients were allowed to wear the mask with clean slides from 1 to 1½ hours, and only during the day when he coughed less, and they were instructed to remove it during a paroxysm of coughing. Of the 50 specimens obtained from 50 patients, 38 were found to contain tubercle bacilli in variable numbers, 4 to 6 being the smallest found in any specimen. Of the 12 negative cases explanations were given. In 3 of these the patients were so very weak and did not talk while wearing the mask. It was shown that the secretions of the mouth and respiratory tract are atomized and given off in the form of spray, in both health and disease, and that this spray contains bacteria and other cellular elements known to be common to such secretions, and therefore it was reasonable to suppose that many other diseases were conveyed by this medium, and that the work accomplished through the study of consumptives is but a step in a direction which bids fair to modify the hygiene of infection. Conditions affecting these organs and consequently their secretions must of necessity be spread in this way; especially was this true of diphtheria, tonsillitis, and possibly smallpox, measles, scarlet fever, whooping cough, mumps, etc. Droplets alighting on clothing must serve as a favorable means to convey the disease from house to house; and that men may become infected by the spray projected by horses, cows, and other domestic animals suffering from glanders, tuberculosis, and similar affections, appears to be highly probable.

The Value of Throat Cultures in Diphtheria: Dr. M. H. FUSSELL (Philadelphia) said that the following statements could be proved: (1) True cases of diphtheria may have few or no clinical symptoms; (2) cases of tonsillitis or pharyngitis may have severe symptoms and be serious, but not true diphtheria being present, not due to the Klebs-Löffler bacilli and consequently not able to transmit diphtheria; (3) a diphtheric exudate may be easily detached and leave no bleeding surface; (4) an exudate due to some other organism may be a true membrane impossible to detach from the mucous membrane. He said that cultures can most surely and with less risk of mistake be made in the laboratories, but that they could be made at home and should be made there if we intend to keep pace with the rapid strides of recent medicine.

Genitourinary Examination by the General Practitioner, with Demonstration on Patient: Dr. FERD. C. VALENTINE (New York) made practical demonstrations upon patients before a large and interested audience. It was his desire to show (1) that all genitourinary examinations should be painless; (2) the operator should conduct no examinations unless his arms are bared to above the elbows and his clothing protected by a gown and apron; (3) during every genitourinary examination the physician should protect his eyes with spectacles (not eyeglasses), even if he has no visual defect; (4) ideal examinations are made in the morning, before the patient has passed his urine; (5) the amount and character of a urethral discharge can be estimated only by correct technic in expressing the urethral contents; (6) the color of the urethral discharge changes when it dries upon the patient's garments; (7) the meatus should be cleaned before passing urine for examination; (8) the manner of urinating is often pathognomonic; (9) the epithelium found in the urine is indicative of the locality of the lesion; (10) examination of the urethral adnexa is a necessary part of the steps for complete diagnosis; (11) no instrumental ingression of the urethra should be attempted without most thorough efforts at rendering it aseptic; (12) the technic of striving at urethral aseptics is neither complicated nor difficult; (13) the soft bougie-a-boule is the only instrument that can be used for tactile exploration of the urethra; it is a purely diagnostic instrument; the rigid sound is wholly a therapeutic instrument; (14) urethroscopy with a modern

instrument is not difficult; (15) the general practitioner is perfectly competent to examine the vast majority of genitourinary cases; (16) such examinations only exceptionally require extraordinary skill or a large armamentarium; (17) the pathology of genitourinary diseases in no wise differs from that of other affections.

Clinical Observations in Pericarditis: Dr. FRANK BILLINGS (Chicago) stated that pericarditis is essentially a secondary process, occurring in the course of some general infection. The local manifestations may be so slight as to escape observation, and the general symptoms to which the local disease may give rise may be obscured by the constitutional disturbance of the primary general infections. Therefore it often happens that the diagnosis of pericarditis is more often made at autopsy than clinically. The histories of several cases were given which illustrated pericarditis of several varieties, etiologically considered which presented clinically, as far as the heart and pericardium were concerned, practically the same signs and symptoms. The cases further illustrated the importance of the 3 cardinal signs of pericarditis, namely the pericardial friction rub, the form or outline of the precordial dulness, and the position of the apex beat especially in relation to the left border of precordial dulness. The pericardial friction rub is doubtless present in every case of pericarditis in some period of its course. It is practically the sole local sign in plastic pericarditis. It may not be recognized in pericarditis with effusion although it is present in every case at an early stage of the disease, and in cases of recovery after the disappearance of the effusion; it may be present too during the stage of effusion. The form of this outline of dulness in pericardial effusion is also characteristic. The pear-shaped outline with the base downward; the dulness, even in the early stage of effusion, in the fifth right interspace close to the sternum, obliterating the resonant angle formed by the lung, heart and liver; the dulness over the sternum extending to or above the second rib, together with the outline of the left border dulness, are easily recognized and are almost pathognomonic. It is also true that a greatly enlarged heart with all the chambers dilated from myocarditis and a weak diffusible apex-beat, may present an outline of dulness which so nearly resembles that of pericarditis with effusion that it may be impossible to differentiate between them without puncture. The location of the apex-beat in pericarditis with effusion is characteristic. When it is perceptible it will always be found that the left border of dulness is relatively far removed from it, as it is not in any other cardiac disease. In large effusions it may be obscured, and at other times the right ventricle may strike the chest wall in the region of the nipple, or undulatory waves may be seen as the only evidence of the heart beat against the chest wall. However, it matters not how the apex beat or the impulse of some other part of the heart against the chest wall be ascertained, it will be found that the point of contact of the heart against the chest wall is always relatively far removed from the left border of precordial dulness as compared with the relations of the apex beat to the left border dulness in all other conditions. The relatively rapid respiration and dyspnea, the signs of compression of the left lung evinced by the left subscapular dulness and bronchial breathing, the rapid heart action, the pulsus paradoxus and the asymmetry in size of the pulse of the radials, the irregular type of temperature, the paralysis of the left recurrent laryngeal nerve, the unequal pupils, the disturbed mental state of the patient, and still other phenomena, are signs and symptoms not so characteristic as the 3 cardinal signs first named, but are important and significant when present. Pericarditis is an easily recognized condition. Frequent, careful, systematic examination of the precordium should be made in all infectious diseases, and if this is done by the clinician, pericarditis will not escape him.

Pathology and Pathogenesis of Pericarditis: Dr. JOSEPH McFARLAND (Philadelphia) said that it is more frequent in men than in women, probably because they were more exposed to its causes. Concerning the relative frequency authors vary. It is customary to divide the cases into those which are primary or idiopathic and those which are secondary or metastatic. **Traumatism as a cause of pericarditis** is of importance only as it affords an avenue of entrance for microorganisms, or produces conditions favorable to their colonization in the tissues. Lymphogenous metastasis may occur in many of the local affections in which no actual traumatic lesions existed. In this manner disease of the mediastinum, plura, etc., may occasion pericarditis. Hematogenous metastasis is seen in nearly all of the infectious diseases, but especially in rheumatism, pyemia, septicaemia, pneumonia, chorea, scarlatina, etc. There is no specific microorganism of pericarditis. Breitung collected 324 cases of pericarditis among the autopsies of the Berlin Charité between the years 1866 and 1876 and found them distributed as follows: Pericarditis, serofibrinosa, 108; pericarditis hæmorrhagica, 30; pericarditis purulenta, 24; pericarditis tuberculosa deuteropathia, 24; pericarditis tuberculosa idiopathica, 2; pericarditis adhesiva partialis, 111; pericarditis adhesiva totalis, 23; pericarditis ossificans, 2. It is an error to think of these names as referring to distinct forms of the disease; they are for the most part stages of the same process. In 39 cases studied by Louis the exudates were, serous, 9; purulent, 7; seroanguinolent, 10; seropurulent, 13. The effect of pericarditis upon the heart is of great importance; no considerable disease of the epicardium is possible

without involvement of the heart. The superficial layers of muscular fibers usually show cloudy swelling, later hyaline or fatty degeneration. In cases with purulent exudate the pus may also gradually work its way between the muscular bundles. The changes that thus take place during the height of the disease predispose to acute dilation of the heart and a fatal termination of the disease may thus be brought about. If this does not occur and if the patient recovers from the pericarditis, the regenerative cicatricial processes that go on lead to fibroid interstitial changes in the wall of the heart.

The General Etiology of Pericarditis: ROBERT B. PREBLE (Chicago) made the following conclusions: (1) Cases of acute pericarditis, clinically primary occur, but are rare; (2) diseases to which pericarditis appears as a complication are in order of their frequency: pneumonia, 34%; rheumatism, 23.36%; chronic diffuse nephritis, 11.2%; tuberculosis, 10%; sepsis, 4.7%; aneurysm, 2.6%; typhoid, 1.7%; (3) the more extensive a pneumonia, the greater the danger of this complication; (4) the danger is somewhat greater with left than with right-side pneumonia; (5) When only 1 lobe is involved, the danger is least with a right upper lobed pneumonia, and greatest with a right middle or left upper lobed pneumonia; (6) with a unilobar pneumonia the chances of a pericarditis are 1 in 40; with a bilobar or trilobar, 1 in 10; with a quadrilobar, 1 in 5, and with a pneumonia of the entire left lung, 1 in 8; (7) the mortality of pneumonia with pericarditis is 92.4%; (8) rheumatic pericarditis is complicated by endocarditis in 60% of the cases, *i. e.*, 3 to 4 times the normal rate of cases of endocarditis; (9) the danger of pericarditis complicating rheumatism is the greater the younger the individual and is somewhat greater with males than with females; (10) so far as acute pericarditis is concerned, the site and extent of the endocarditis is apparently of no importance; (11) pericarditis appears as a complication of all forms of nephritis, but particularly the chronic diffuse nephritis with contraction; (12) it is an extremely ominous thing for 22, *i. e.*, 84.6% of the cases died; (13) it is still uncertain whether the pericarditis is toxic or infectious; (14) tuberculosis excites only $\frac{1}{5}$ of the cases, and when one considers the extreme frequency of tuberculosis, tuberculous pericarditis must be regarded as a rare complication; (15) pericarditis may be a part of a generalized acute tuberculosis, but is more often the result of a chronic tuberculosis of the lungs or mediastinal glands; (16) septicaemia and pyemia contribute a very considerable number of cases of pericarditis, and the primary focus may be remote or close to the pericardium; (17) aneurysm of the aorta causes 2.6% of all the cases, a very high figure when one recalls the comparative infrequency of aneurysm; (18) typhoid fever, which is rarely complicated by inflammation of the serous membranes, other than the peritoneum, contributed 4 cases, which is 1.7%; (19) the cases of obliteration of the pericardium are due to the following causes arranged in order of importance: endocarditis, tuberculosis, chronic nephritis, aneurysm; (20) more than $\frac{1}{2}$ of the cases, in which the cause was clear, were due to endocarditis, or rather to some cause common to both the endocarditis and the pericarditis, and more than $\frac{1}{2}$ of these cases showed a combined aortic and mitral endocarditis; (21) relatively, 6 times as many cases of obliteration of the pericardium occur with aortic and mitral endocarditis than with either lesion single; (22) tuberculous causes but few cases of obliterative pericarditis; (23) pericarditis accompanying nephritis is not always fatal, but may apparently end in the formation of adhesions.

Adherent Pericardium: ROBERT H. BABCOCK (Chicago) stated that adherent pericardium was encountered in 2 forms: first, in which adhesions between the 2 layers of the sac but not of the pericardium to the surrounding parts, pericarditis *interna*; and second, the pericardium adherent to the epicardium and also to the neighboring structures, pericarditis *interna et externa*. He then considered the effects on the heart and general circulation, with special consideration of its effect on the liver, leading to the so-called pseudotrophic cirrhosis of the liver. Diagnosis in the first form mentioned was usually very difficult and often impossible. He then made a cursory enumeration of signs. If the adhesions are limited to the 2 layers of the sac, and if they are unassociated with valvular disease, the result may be only hypertrophy of the heart and the circulation will be carried on adequately and no subjective symptoms are produced. If pericarditis leads to adhesions while the heart is in dilation from endocarditis, then the heart is prevented from ultimately returning to its previous size and the symptoms are likely to occur, *viz.*, those to stasis. In the second form mentioned the diagnosis was often easy in consequence of the signs resulting from the pulling of the adhesions upon the surrounding soft parts.

Tuberculous Pericarditis: C. F. MCGAHAN (Aiken, S. C.) stated that this disease was much more prevalent than had heretofore been generally accepted. He believed that a great many cases of obscure heart troubles occurring in the anemic when we could find no valvular disease, without marked symptoms of pericarditis, but where we have certain masked symptoms of the disease, is due to tuberculous pericarditis, particularly if later the patient begins to lose weight and assume a cachectic appearance. This condition usually progresses insidiously and he believed that it was communicated to the pericardium through the lymphatics, arterial and venous systems, and from all that tends to cause tuberculous troubles in the peritoneum. The symptoms of tuberculous pericarditis are

those that we would get from enlarged heart, and from an adherent heart together with the general symptoms of malaise and more disturbance of the general system than would be found in a simple pericarditis, or that secondary to rheumatism, or one of the exanthematous diseases.

Cardiac Lesions as Observed in the Negro; With Special Reference to Pericarditis: FRANK A. JONES, (Memphis, Tenn.) made the following recapitulation: (1) aortic regurgitation in the negro was the most frequent and most dangerous of all valvular lesions; (2) the next most frequent, aortic stenosis; (3) the next, mitral regurgitation; (4) mitral stenosis had not been diagnosed in the cases he reported from the physical signs and symptoms; (5) tuberculosis and syphilis acted both as exciting and predisposing causes in the production of muscular and valvular lesions; (6) syphilitic history in mitral regurgitation was more frequently found than that of rheumatic; (7) the murmur of aortic regurgitation was most frequently musical.

Some Points in the Treatment of Pericarditis: FRANK PARSONS NORBURY (Jacksonville, Ill.,) said that it behooved us in the treatment of rheumatism, acute infectious fevers and septic processes to keep ever in mind the possibility of pericarditis as an aftermath and govern ourselves accordingly by insisting upon absolute rest and quiet until this danger is past. Each case must be treated upon its individual merits. There must be enforced rest and quiet surroundings; this is important because it "curbs the symptoms and places the patient under the most favorable condition for speedy recovery." Milk is the most suitable diet. It should be given in small quantities every 2 or 3 hours. It is well to remember that most all cases of rheumatic pericarditis get well, if we will let them alone; keep them at rest and carefully meet indications as they arise. For the relief of pain a blister over the pericardium will be sufficient, or if it continues, cold applications, cold cloths or an ice bag used as needed. When other means fail morphin should be given, guarding it with proper cardiac support. For the restlessness he preferred bromid of soda given usually during the day, usually commencing about noon, again at 4 or 6 in the afternoon and at bedtime. For the sleep he used trional. If combined with sulfonal its effects are prolonged. For the cardiac distress strychnin may be given or, if necessary, digitalis with strophanthus. To properly care for the effusion is one of the prime essentials of treatment. If moderate, unless septic, it will be absorbed, and even if large, the chances are that with cautious use of diuretics and purgatives it will disappear. The indications for surgical interference are, according to Osler, "dyspnea, small, rapid pulse, dusky anxious countenance," and we will add the physical signs of extensive effusion.

[To be concluded.]

Section on Surgery and Anatomy.

FIRST DAY.

After expressing his appreciation of the honor done him in electing him Chairman of the Surgical Section, Dr. A. J. OCHSNER proceeded to give the usual address of the Surgical Section, on **The Cause of Diffuse Peritonitis Complicating Appendicitis, and Its Prevention.** Impressed with the fact that an unfavorable outcome in any given case of appendicitis means that the infection which was originally confined to the small space occupied by the appendix, has first invaded the tissues surrounding, and then been deposited over the entire peritoneal cavity, Ochsner has adopted a new form of treatment since 1892. At first, this treatment was employed only in selected cases; later, more and more generally, as its value was shown by clinical results. His idea is that the peristaltic motion of the small intestines is the chief means of carrying infection from the perforated or gangrenous appendix to other portions of the peritoneum, changing a circumscribed into a general peritonitis. This can be prevented by prohibiting the use of every kind of food and cathartics by the mouth and by employing gastric lavage in every case in which there are remnants of food in the stomach or in the intestines above the ileocecal valve, as indicated by nausea, vomiting or meteorism. The patient can be supported by the use of concentrated, pre-digested food, administered as enemas, not oftener than once in 4 hours, and not in larger quantities than 4 ounces at a time. This form of treatment, when instituted early, will change the most violent and dangerous form of acute perforated or gangrenous appendicitis into a comparatively mild and harmless form. Cases of perforated or gangrenous appendicitis in beginning general peritonitis, can usually be carried through the acute attack safely with this method. In all of this class, gastric lavage should be practised, in order to prevent the absorption of decomposing material from the alimentary canal. In cases of doubtful diagnosis, this form of treatment should always be employed. It will prevent a large proportion of troublesome complications and sequels, such as ventral hernia and extensive adhesions. The patient should be permitted to recover fully from his acute attack before an operation is performed, especially in cases not encountered within the first 36 hours after the beginning of an attack, or in cases with the formation of a superficial, circumscribed abscess. It often requires but a small amount of food to change a harmless, circumscribed peritonitis into a

dangerous, diffuse peritonitis. The treatment does not prevent a subsequent attack; it does not contraindicate the removal of the diseased appendix before the septic material has extended beyond this organ. It is indicated in all intraabdominal conditions in which it is desirable to prevent the absorption of septic material by means of peristaltic motion. The laity should be taught to stop feeding and giving cathartics to patients suffering from intraabdominal diseases. Ochsner states that his mortality in cases of perforated and gangrenous appendicitis, with diffuse peritonitis, is less than $\frac{1}{4}$ as high as it was in cases operated upon at once, upon making a diagnosis; and even in advanced cases of diffuse peritonitis, there has been a marked decrease in the mortality. From January 1, 1898, to May 1, 1901, he has operated in the Augustana Hospital in Chicago, on 565 cases, which he divides into 3 groups: Those suffering from diffuse peritonitis on entrance; those suffering from gangrenous, perforated appendicitis; those suffering from recurrent appendicitis, or at the beginning of a recurrent attack, when the infectious material was still confined to the appendix. Of the first class, 18 patients were treated, with 10 deaths, a mortality of 55.5%. Of the second class, 179 cases were treated, with 9 deaths, a 5% mortality. Of the third class, 368 cases were treated, with 1 death, or 33% mortality. In the total 565 cases there were 20 deaths, a mortality of 3.5%. These statistics include all patients who entered the hospital suffering from appendicitis, even those who died from general peritonitis a few hours after admission. Of classes 2 and 3, all were operated upon, so there can be no doubt concerning the diagnosis. Of class 1, all but 4 were operated upon and these were in an absolutely hopeless condition when they came to the hospital. Judging from the mortality rates quoted by other writers, Ochsner believes that these results are extremely encouraging. Krogins, who has compiled statistics for 58 authors, gives a combined mortality of over 70%. Ochsner believes that these results justify a further adoption and trial of this method of treatment.

Remarks on the Surgery of the Spinal Cord: ANDREW J. MCCOSH (New York). There are quite as urgent reasons for rapid relief in cases of pressure on the cord as there are in cases of depressed fractures of the skull, though perhaps it must be said the results of operation for the relief of fractured vertebra are less satisfactory than are those for fractured skull. Early operation is of the utmost importance. The patient may be in a condition of shock due to severe injuries of other organs. In such an event it is wiser to wait until it be determined that the case is not one which under any circumstances must end fatally. Again, it is sometimes difficult to determine that the symptoms are not due to mere contusion of the cord, or to more pronounced hemorrhage within the substance of the cord, or to hematomyelia. A certain time must often elapse before this point can be determined. In these cases the symptoms are apt to be of an irregular type. The muscular paralyses are not complete and often the muscles of the same group may not be equally affected; the anesthesia is only partial and paresthesia with patches of hyperesthesia is common. The symptoms of irritation are apt to be less pronounced though there may be mild twitching at first of certain muscles. The reflexes are not apt to be abolished though they may be altered. On the other hand, when there is definite pressure of bone on some portion of the cord the parts supplied from this center are apt to be more distinctly and more decidedly affected. The paralyses are generally complete and more regular as to grouping, the anesthesia also is apt to be complete with or without a band of hyperesthesia. The reflexes are apt to be abolished.

Generally within a few hours the differential diagnosis between these 2 conditions can be made. If in doubt a delay of 12, 24, or even 48 hours can do little harm. If then there still be question as to the cause of the paralysis, it seems to be wiser to do an exploratory operation. In the severer cases, where the symptoms indicate a fracture or dislocation, the question then will be: Is the injury to the cord one that can be relieved by operation. In order to answer this, we should first determine whether the damage has already been done by the springing apart of 2 dislocated vertebrae, with resulting pinching, bruising or complete disintegration of the cord, the vertebrae having immediately afterwards sprung back into their original position, or whether the symptoms produced are by the pressure of bony fragments or of an unreduced dislocation. In the former case, operation is not indicated. In the latter case it is urgently demanded. It is very difficult, often impossible, within the first few hours to determine which of these conditions exist. A short delay will probably settle this point, but it is exactly such delay which makes recovery hopeless.

As yet we have not sufficient experience or knowledge to make any definite statement concerning the early symptoms which indicate complete destruction of the cord. We do know, however, that if certain symptoms are allowed to persist for days or weeks that the case will be hopeless. It has been stated more than once that where there is complete loss of sensation, motion and patellar reflexes in both lower extremities that these symptoms indicate a complete crush of the cord, and that the case is absolutely hopeless. This view, however, is not correct, as has been shown by more than one case where all these symptoms have been present, and yet where, after removal of fragments of bone, recovery has resulted. The following case is to be added to this list:

The risk of an operation on the vertebra is very slight. The

shock should not be great. The operation should not consume more than half an hour. While it is true that the mortality has been great, it is not the operation but it is the conditions found which cause the large death rate. It would doubtless be larger were the operation not performed. In the 159 cases collected by Lloyd there were 59 deaths following immediately after operation and 32 at a later period. The so-called operative mortality was 49%. Of McCosh's own laminectomies for fractures of the spine, 6 in number, 2 have recovered and 4 have been fatal.

Operations for spinal tumors have generally been more satisfactory than those for cerebral tumors and offer better promise for future operative successes.

Spina Bifida or Hydrorrhachitis.—EVE says that Spina bifida, caused by an arrest of ossification of the vertebral arches, is situated in the lumbar region in about 50% of all cases.

At present there are recognized 3 distinct varieties: meningocele, meningomyelocele, syringomyelocele, the central canal of the spinal cord being dilated, thus forming the cavity of the sac.

This is a very fatal affection, few children surviving longer than 5 or 6 months after birth, many dying before that time. Death usually occurs from convulsions, or ulceration and rupture of the sac.

On account of the very fatal termination of the majority of these cases, the surgeon is warranted in pursuing any treatment which promises a prolongation of life or a radical cure. This treatment we can readily divide into palliative and radical.

Eve believes from the statistics gathered from the treatment by tapping followed by the injection plan, the results of which have been most unfortunate, we are warranted, in this aseptic age of surgery, to treat this affection by operation especially when the tumor is small and peduncular. He reported the case of a child operated on when less than three months old; the tumor was rapid in its development, and threatened rupture was imminent; the pedicle was small and consequently easily dealt with. The child made an uneventful recovery, and was dismissed entirely well.

The Methodical Exploration of the Brain for Fluid: CHRISTIAN FENGER (Chicago) reviewed the literature of traumatic brain abscesses, and spoke of the efficacy of the aspirating-needle. He described a case having a previous history of suppurating disease of the ear, and an attack of appendicitis subsequently, of short duration, and then swelling of the elbow-joint. He explored the brain methodically, going from one place to another. There was a cicatrix behind the ear which was the only guiding point. After exploring the brain on the affected side of the head with no results, he then tried the opposite side, where the pus was found, and the patient recovered. The methodical exploration of the brain was preferable to all others. Puncture is harmless, as Spitzka proved by the needle-tracings in the brain, which were aseptic.

The Immediate and Remote Effects of Brain Injury: D. S. FAIRCHILD (Clinton, Iowa). Fairchild discussed this subject at considerable length, reporting several interesting cases, and in closing offered the following conclusions: Violence of no great intensity may cause a fracture with only momentary displacement, or a rupture of the middle meningeal artery, with or without fracture, may occur. An injury which may lead to fracture without displacement, does not, as a rule, cause a serious termination if early and judicious surgical treatment is employed. A fracture may occur without brain displacement and yet it may cause irritative changes, which either may be immediate or there may be remote secondary changes resulting in epilepsy or mental impairment. A blow on the head may produce extensive laceration of the skull without any serious results, but a fall from a height or a rapid-moving train usually results in contusion or laceration of the brain tissue with serious immediate or remote results; or such serious injuries may also disturb the cerebrospinal fluid, causing more or less mental disturbance. A wound of the brain may heal with a scar tissue, which results in cystic or other degeneration with serious remote effects. In absence of definite symptoms to indicate the nature of the lesion, the extent of the force applied is of great value in reaching a conclusion as to the nature of the injury to the brain. Fairchild omitted for the most part ordinary, simple and compound fractures, and considered only such varieties of injuries as those which occur within the cranial cavity, and the immediate and remote results which may follow. In such doubtful cases, exploratory operation is usually advisable.

Discussion.—KEEN (Philadelphia). He believes that Eve has taken the proper stand with regard to the treatment of spina bifida; the old treatment by injection should be abandoned and operative measures adopted in these cases. He is disappointed that Fenger would limit aspiration to diagnosis of the cases with pus. Over 10 years ago Keen formulated methods and described various routes for tapping the ventricles of the brain for withdrawing collection of fluid. This paper which was read at the German Surgical Association was lost by the secretary, and has consequently never been published in full. Keen does not consider opening the ventricles a dangerous operation. In discussing Fairchild's paper on "Fractures of the Skull," a case of a man was reported who fractured the posterior part of his skull in 1892. Epileptic symptoms did not develop until 7 years later. On trephining, nothing was found to account for the symptoms. An incision was made into the brain substance, and to his surprise, Keen found, after a slight

incision, that the lateral ventricle was open. He drained this with a small drain for 24 hours, and twice on later occasions was obliged to evacuate fluid. The patient recovered from the operation, but sufficient time has not elapsed to determine what the permanent results will be. The case is interesting as showing not only the lack of danger in open ventricles, but from the fact that the symptoms developed very late, 7 years after the accident. Keen agrees with Fairchild that in many cases operation is imperative in the treatment of fractures. In certain cases of hemorrhage following injury there is no stage of unconsciousness, and the symptoms may be misleading. A case of a man is reported, who fell from a hayrack. No fracture was discovered, even upon exploratory incision. The man developed severe symptoms of pressure, however, with stertorous breathing, but no paralysis. There was no reaction of the right pupil to light, and but very slight reaction of the left pupil. A trephine was performed and both branches of the medical meningeal artery were found to be ruptured. In this case there was no loss of consciousness in spite of the severity of the injury. In certain other cases unconsciousness may develop from the injury, producing hemorrhage very long after the injury. A case was cited in which consciousness developed 6 weeks after the injury, and upon trephining, a very large clot was found. Keen believes with Fairchild, that it is necessary to operate in many of the doubtful cases.

FRAZIER (Philadelphia) advocated a new method of operation for trifacial neuralgia. His method is really a combination of the methods of Abbey and Cushing. He goes in by the temporal root as Cushing advanced and divides the central root, but does not remove the ganglion.

WEIR (New York) has recently become more radical in his views regarding the necessity of operating for fractures, and he thinks it a question if we should not operate in nearly all cases of fracture of the skull. In case of fracture discovered on exploratory incision after a severe injury, it is sometimes a question whether we should operate or not, but of late Weir has adopted a radical course and feels safe in doing so. On several occasions he has seen decided advantage result from this course. In cases in which we trephine and leave a gap in the skull, especially if this is below the hatband, or where the depression is unsightly from a cosmetic point of view, Weir uses a celluloid plate to fill the opening. In operating for the removal of the ganglion, Weir uses the Hartley and Krause method. He has performed 4 such operations during the past year with good success. He finds this method very satisfactory, and sees no reason to change. He can see no advantages in the method adopted by Cushing, but several disadvantages; the smaller incision makes the operation more difficult, and with the incision through the temporal root and consequent damage to the muscles, for this reason mastication will be decidedly interfered with. There is very little trouble in evading the medical meningeal artery with the Hartley-Krause method.

FRANK (Chicago) said he had good results in tapping the ventricles for severe headache following trauma in one case, as suggested by Fenger, but in most cases he does not think this operation is necessary, and sometimes the pressure may be removed by lumbar puncture and evacuation of the cerebrospinal fluid by this route.

EARLES (Milwaukee) agrees with Fairchild that very radical measures are necessary in the treatment of fractures of the skull. He now thinks that in nearly all cases we should trephine and examine the brain before closing the wound. In no other class of cases does the surgeon consider himself justified in closing the wound before it is determined definitely the condition of the viscera. In over 70 cases occurring in his own practice, Earles has found injury to the brain in about 87%.

MOORE (Minneapolis) believes that McCosh has given an entirely satisfactory statement of the best methods of the indications for the operation of langeneotomy. He believes with Eve that we should operate in cases of spina bifida and would even operate in the larger percent of the cases which were suggested by Eve. He mentioned several cases in which he had obtained satisfactory results from operation and gave several suggestions as to the technique of the operation.

DAWBARN (New York) mentioned a case which occurred in his practice 10 years ago. A man had been struck on the right side of the head and developed hemiplegia. Dawbarn trephines as was indicated by the local symptoms. The ventricle was tapped and a small amount of fluid withdrawn. The symptoms were not relieved, however, and the patient died about a week later. At the necropsy a blood-clot the size of a hand was found on the same side as the injury. In this case Dawbarn followed the suggestions of the neurologist in operating. Upon more thorough examination it was found that the motor fibers did not cross as is usually the case. He questions whether these cases are so rare and believes that in certain cases if we do not find a clot on trephining according to local symptoms, we should trephine on the side of the injury. Dawbarn has used the celluloid plate as suggested by Dr. Weir, for filling openings. The camphor in the celluloid is somewhat irritating and he has devised a new composition for a plate containing urea instead of common camphor, which he thinks is advantageous.

BERNAYS (St. Louis). Fenger's suggestion to trephine and examine both sides of the cerebrum and cerebellum with an aspirated needle is probably a new suggestion and one of great importance. With regard to technique, Bernays suggests that it is necessary to use a large trephine, and a good sized burr may

be used with good results without leaving so large a defect in the skull.

Discussion.—CRILE (Cleveland) did not think there was any difference of opinion as to what to do in any case of incomplete paralysis due to traumatism of the cord, but there is question as to the diagnostic feature as to complete cross-lesion of the cord.

BALDWIN (Salt Lake) in speaking of the celluloid plates, mentioned one that had absorbed and become flabby; that, instead of acting as a protection, it produced irritation.

McCOSH, in closing, emphasized the simplicity of laminectomy.

Dr. MEANS (Columbus) believes that McCosh's suggestions with regard to laminectomy are very valuable. Means operates only in case of injury to the spine with symptoms of pressure. He believes that there is a possibility of obtaining relief, even after the symptoms have existed for some time. He reported a case in which there was considerable following the operation 2 years after the injury.

SECOND DAY.

The Mortality of Appendicitis.—JOHN B. DEEVER (Philadelphia) stated that in 1900 he operated upon 268 cases of appendicitis in the German Hospital of Philadelphia. Of this number 144 were suffering from an acute attack and 124 cases were chronic. Of the patients operated upon during the acute attack of the disease, 26, or 17%, died, either from the disease or intercurrent trouble. One patient died from diabetes, 1, who was suffering from advanced tuberculosis, died from peritonitis; 1 died of postoperative pneumonia. Deducting these 3 cases of diabetes, of tuberculosis and pneumonia, the mortality of the series is 15.9% for appendicitis without intercurrent disease. In 7 cases there was purulent peritonitis. In 7 other cases, purulent peritonitis occurred subsequent to the operation. In 8 cases, septicemia was the cause of death. One patient died of shock, 1 of shock from a second operation for intestinal obstruction, due to adhesive bands. In the 7 cases of postoperative peritonitis, the appendix was removed in every instance. It was postcecal in 3 cases, and by its removal, unsuspected abscesses were discovered and opened. In another case, the appendix was behind and to the outer side of the cecum in a mass of infected exudate. In a sixth case, the abscess was found immediately on opening the abdomen, and the contents escaped into the general peritoneal cavity. In the seventh case, the appendix lay to the cecal side of the abscess wall and was not a portion of it. Of all these 7 cases with purulent peritonitis, in only 1 had the attack lasted but 12 hours before the operation; in the others the operation was from 1 to 21 days. In nearly all there was nephritis after operation. One death in chronic appendicitis occurred, in which there was an ovarian cyst adherent to the appendix and complicating appendiceal operation. Deever considers septic peritonitis the most important factor in the causation of mortality in appendicitis. This arises from the migration of organisms through an ulcerated appendix, or through the wall of the appendix without rupture, or through a gangrenous pouch. Another common cause of trouble is obstruction of the bowel from adhesions which form and which are apt to localize the infection. In certain cases, death results from the deposition of septic material in distant parts of the body, such as the liver, lungs, brain and heart. Very rarely, an abscess rupturing into the bladder, causes fatal cystitis, or pyelitis. In the fulminating variety of appendicitis, a fatal termination is unavoidable. Deever especially emphasized the importance of immediate operation as soon as the diagnosis of appendicitis is made. Delay in operation is responsible for more deaths than all the other factors which have to do with the disease. Barring some cases of the fulminating variety, there are no cases, which, if operated upon within the first few hours of the disease—at the latest, from 18 to 24 hours—that cannot be saved, and these patients are not only saved, but they are prevented from disagreeable complications such as fistula, fecal fistula, adhesions, the danger of intestinal obstruction and semiinvalidism from pain.

Some Unusual Features of Appendicitis and Their Treatment.—ERNEST LAPLACE (Philadelphia) reported 4 cases illustrating some conditions seldom met with in appendicitis. In the first case, there was pain of a reflex character, which the patient insisted was on the left side. The abdominal muscles were rigid on the right side, and, depending upon other symptoms, the operation was performed and a gangrenous appendix was found and removed. A good recovery followed. This case illustrates the deceptive nature of reflexes and reflex pain in these cases. In a second case, a man of 42 was supposed to have an abdominal tumor on the right side, but on operating, it was found that the appendix had sloughed off and formed a large, inflammatory, indurated mass. In cases of abdominal tumor of uncertain diagnosis, an exploratory operation should be undertaken, as in this case. In the third case, there was slight induration in the right iliac region, with considerable jaundice and pain. On operating, a gangrenous appendix with pus about it was found, also cholecystitis. The patient, in this case, had been suffering from typhoid fever. Both appendicitis and cholecystitis were relieved by this single operation. In the fourth case, a man suffering from gastrointestinal irritation and symptoms of dyspepsia suggesting the

possibility of floating kidney, but on opening the abdominal cavity, the true nature of the disease was discovered. In the treatment of cases complicated by general peritonitis, Laplace advocates continuous irrigation of the abdominal cavity with normal salt solution at a temperature of 100° F. A glass tube is introduced into the pelvis, and is connected by a rubber tube with a basin under the bed. A small tube is introduced at the superior extremity of the wound and placed in connection with the irrigating apparatus a few inches higher than the patient. The wound is tightly closed between the 2 tubes and continuous irrigation is kept up for a varying time, according to the necessities of the case.

The Knot within the Lumbar Region in Intestinal Surgery, with Report of Cases.—F. GREGORY CONNELL (Chicago). This form of suture Connell had previously described, so he limited himself to discussing the cases in which it had been used and in discussing its advantages.

The method was employed for the following conditions: Fecal fistula, 4; benign stricture of the pylorus, 3; malignant, 3; laceration of rectum, 1; gunshot wound, 2; carcinoma, large bowel, 1; strangulated hernia, 1; fistula bimuscosa, 1; invagination of ileum, 1; biliary fistula, 1.

The various operative procedures have been: circular enterohaphy, 8; longitudinal, 4; pylorotomy, 3; pyloroplasty, 3.

He gives the chief advantages of this suture:

1. Less danger of peritonitis through leakage at stitch hole.
2. No yielding of stitch.

And among other commendable points which may only be mentioned now are:

3. Adhesions diminished.
4. Small diaphragm.
5. Less danger of gangrene.
6. No foreign body. Suture material will all pass away.
7. Decrease in time.

In no case can death be attributed either to the method of suture employed or the manner of applying it.

In closing, he drew the following conclusions:

Yielding and leakage are the most frequent causes of failure in enterohaphy.

To include all coats of the bowel wall removes the danger of stitch-yielding.

To place the knot within the lumen diminishes the danger of capillary.

The square loop stitch is more reliable than is the circular loop stitch of Mamesele.

The relative thickness of the needle and the submucosa surrounds the procedure of "penetration without perforation" with great uncertainty.

To fail to include the submucosa leaves an insecure stitch.

To perforate the submucosa is practically to open into the lumen.

To penetrate into the submucosa of the duodenum is practically to perforate the submucosa.

It is not only possible but practical and advantageous to place all the knots of an enterohaphy in the lumen.

The ideal location for the knot is outside of the peritoneal cavity.

Discussion.—STEELE (Chicago) was glad that there is a hospital in the country where in every fatal case of appendicitis there was held an autopsy, as in the German Hospital, Philadelphia. Steele often was compelled to say, "I do not know why that man died," because of the fact that a necropsy was not accorded. He related the case of a little girl who had swallowed a shawl pin, which simulated appendicitis, but the pin was found and the case proved not to be appendicitis.

As to Laplace's irrigation in septic peritonitis, he did not see why normal salt solution, now applied to septic joints, could not be extended to the abdomen.

He had had an opportunity of observing the advantages of Connell's method described.

MURPHY (Chicago) commended Dr. Deever on his work, a debt of gratitude which the profession will never be able to pay. He considered that the question as to whether it is possible to make a diagnosis of the pathologic conditions within the peritoneal cavity from the symptoms presented was a very vital question. In the fulminating type he did not believe that one could tell from the outside whether it is progressing to that stage where it manifests its virulence.

KNIGHT (Connecticut) emphasized the importance of the estimation of the leukocytes in appendicitis and referred to a number of cases in which these furnished valuable diagnostic information. In case the peritoneum is infected he advises flushing freely.

MAXWELL (Keokuk, Iowa) emphasized the importance of irrigation in the treatment of these cases.

ANDREWS (Chicago). There are 3 zones in the region of the perforated appendix. One case in which the infection expanded to involve the entire peritoneal cavity, the zone contained clear pus; in the second case it contained cloudy serum, and in the third, clear serum alone. If the peritoneal cavity is flushed, there is danger of carrying the infection into areas not already contaminated. Recovery of the pelvis is possible only when part of the peritoneal cavity is affected but not if there is a true general peritonitis. He believes he can cite as many cases in which favorable results have followed simple drainage, as Knight can in favor of treatment of irrigation. Andrews advo-

eates the Trobis position and has seen astonishing results follow its use. He also commended Connell's method of suturing the intestine with the knot within the lumen.

HARRIS (Chicago) believes that in some cases leukocytes estimation is of absolutely no value, notwithstanding the use of the blood-count, as it is frequently impossible to tell from diagnosis what is within the abdominal cavity. Considering the dangers of early operation was advocated.

MOORE (Minneapolis) believes that it is dangerous to teach students and general practitioners that every case of appendicitis should be operated upon as soon as diagnosis is made. In the practice of Dr. Deaver and other experienced surgeons, with the advantages of large hospitals, this may be the wisest practice, but with inexperienced operators and less favorable facilities, it is not the wisest course. Moore believes that the appendix should be removed in most cases, and if it is not readily found in the pus cavity, extensive search should not be made for it. The estimation of leukocytes is of special diagnostic value in but comparatively few cases.

MORRIS (New York) compared an inflamed appendix in the peritoneal cavity to a match in a haystack. In many cases the fire might go out spontaneously, but it is always dangerous to trust to such a result, and clearly dangerous to trust appendiceal inflammation subsiding spontaneously. Morris advocates operation in every case as soon as diagnosis can be made by a competent man. Leukocytosis is of scientific interest in these cases, but it is not of determining importance when we are deciding the necessity for operation. In treating cases of general peritonitis, Morris believes that it is better to make a small incision, washing out the toxin particularly clean and leaving the patient alone instead of employing continuous irrigation as is suggested by Laplace. We are coming to appreciate more and more the importance of leukocytes as a protective agency, and washing the peritoneum disturbs this natural process. Both Clark's position, with the pelvis elevated, favoring absorption by the peritoneum, and Fowler's position favoring mechanical drainage, have been used with excellent results. Morris believes that it is still a question which position affords greatest advantages. He emphasized the value of intraphine transfusion of normal sterile saline solution in the treatment of cases suffering from considerable shock or aseptic pains from absorption of toxins.

SMYTH (Memphis) advocates early operation and removal of appendix.

DEAVER (Philadelphia) would not in routine make the blood count, and believes with Morris that it is better not to employ continuous irrigation of the peritoneal cavity.

A Method for the Study of Relational Anatomy: C. M. JACKSON (University of Missouri).—The relative inefficiency of the present courses of instruction in anatomy is largely due to the lack of a practical method of studying the topographic relations of the various organs. For this purpose, sections are necessary. The method of frozen sections is unsatisfactory. Jackson has obtained excellent results by sectioning bodies hardened by arterial injection of formalin. A detailed account of this method as applied in teaching relational anatomy in the University of Missouri was given, and a new apparatus for making rapid and accurate drawings of sections described. The possibilities of this method for teaching anatomy and surgery, and also for the study of relational anatomy by the practitioner are very great.

The Surgical Aspects of Carcinoma; the Nature of the Cancerous Process: ROSWELL PARK (Buffalo). The various theories as to the nature of carcinoma were reviewed, the dietetic, embryologic, irritation, and parasitic theories being especially considered. The dietetic theory is important only in case we succeed in maintaining the parasitic nature of the disease, when it may become a question as to whether raw, or uncooked food may furnish some of the parasites. The embryologic theory has explained many anomalous growths, but this hypothesis can never explain the peculiar behavior of cells which constitute the nature of malignant growths. The relation of irritation and trauma figures today as prominently as it ever did, but the relation is an indirect one, and, while accounting for certain predispositions, does not account for the active disease. The parasitic, or infectious theory of carcinoma, Park believes is the only one that satisfies the needs of both the pathologist and clinician. The disease must be studied by the pathologist, the chemist, the histologist and the clinician, all working in close association. The man who knows the disease solely from what he has learned from dead-house preparations, is in poor position to explain its course; whereas, the man who has simply watched the disease during life, may have strong views about its infectious nature, which, however, he can justify by nothing more than by analogy. The combination of clinical observation with experimental and laboratory work, is sure to solve this problem, if it is not already solved. Park believes that there are several arguments in favor of the parasitic hypothesis. The analogy in the lower vegetable forms in which the galls and zylomata are invariably caused by parasites. Comparative pathology furnished many other arguments. Again, in the matter of metastases, there is no known infectious disease characterized by metastases, and it is well known that cancerous disease often follows the track of such instruments as the trocar. Park believes that he may state that in the Buffalo Laboratory, Gaylord and others have absolutely produced adenoma carcinoma by inoculation in a

number of animals, and that this can now be produced in such a way as to afford unmistakable evidences of the infectivity of the disease. A minute description of the organisms cannot yet be given, but they belong to the protozoa, or some lower and less known form of animal life. They are seen to undergo ameoboid movement upon the warm stage, and they are seen to undergo anomalous changes somewhat slowly. This would appear to take them out of the realm of the vegetable kingdom. They can be cultivated and successfully inoculated, however. They grow best in weak solutions of ordinary media. The most successful way yet devised, is to deposit them in collodion sacs in living animals. They stand dessication as does vaccine lymph. There is absolute resemblance between the results obtained in the Buffalo Laboratory and those of Schüller, working independently. Nearly every statement is corroborated. Park believes that the statements of Schüller in connection with the work at Buffalo, take away the last element of doubt which can remain as to the parasitic nature of carcinoma. It is as yet too early to discuss treatment, but if it is found that we have to do with a parasitic disease, it is not too much to hope that some agent, vegetable or mineral, or animal antitoxin may be discovered, by which the ravages of the disease may be checked or prevented. Drugs destroy the protozoan that cause malaria, and let us hope that something may be found which will have the same destructive effect on the parasites producing carcinoma, without injuring the animal body. Until this can be done, carcinoma is a surgical disease, and Park believes that if recognized early, in accessible parts of the body, and if it can be removed thoroughly, it can be absolutely cured.

The Present Status of the Carcinoma Question.—SENN (Chicago) considered this the most important topic for research of today. Carcinoma results from a typical proliferation of epithelial cells. As carcinoma originates in epithelial cells its development is impossible in mesoblastic tissues. Histology does not support the parasite theory. The progressive extension of a tumor into the adjacent tissues is proof positive of malignancy. This is by the lymphatics only. The increase of carcinoma is more imaginary than real. There is more basis to heredity than is believed by the profession at large. The age is important, although usually over 40 it may be below 20, and in these cases it is almost always extremely malignant.

Carcinoma of the Cecum: W. J. MAYO (Rochester, Minn.). Carcinoma of the cecum occurs in 7% of all cancers of the intestines and is of the columnar cell variety. Colloidal changes are frequent. It is usually annular in form but may present a well marked tumor. Glandular infection occurs in less than 1/4 of the cases dying from this malady. Age is not so important a feature as in carcinoma of other organs, it is not infrequent in the comparatively young. This disease may be confused with chronic appendicitis, tuberculosis of the cecum, fecal impaction and so forth. Its course may be marked by symptoms of chronic obstruction of the bowels, with colics, alternating diarrhea and constipation, cachexia and wasting, or the first symptom may be an acute attack of obstruction. In the latter case an ileocolostomy should be performed. This procedure rapidly drains the small bowel giving the same relief as an artificial anus and can be left permanently, the malignant parts being excised at a secondary operation with closure of both ends of the intestine. If the symptoms are not acute the ileocecal coil should be resected. An incision through the right rectus muscle gives easy access to the operative field and as the blood-vessels are to a large extent terminal, ligation is not attended by great risk to the vascular supply of adjacent bowel. The peritoneum is divided along the outer side of the ascending colon and after the cecum is liberated posteriorly the colon is divided and the distal end sutured, the ileum being cut across when the parts are ready to unite. The end of the ileum should be anastomosed to the side of the ascending colon. The results of radical operations both immediate and remote, are good and compare favorably with cancer in other situations of the body.

A New Method of Treating High-seated Cancers of the Rectum: ROBERT E. WEIR (New York). Weir first opens the abdominal cavity and detaches the peritoneum around the rectum. With his fingers he freely liberates the entire contents of the sacral curve down nearly to the tip of the coccyx posteriorly, and in front to the edge of the prostate. This gives ample room to tie around the bowel, some 3 inches from the anus, a couple of iodoform tapes about an inch apart, these tapes being situated below the tumor. The intestine is then divided and raised out of the abdominal wound, and the tumor excised. The lower end of the rectum is seized by forceps, by an assistant, and drawn down and out of the anus in an everted condition. The tape that closed this everted bowel is then divided and a pair of long forceps is carried up into the pelvis and the lower end of the upper segment of the bowel is brought down by this forceps and out through the anus. The invaginated ends of the bowel are then sutured near their margins. This gives a union with all the knots inside the intestine. After suture, the bowel is replaced and the peritoneum is closed so that the abdominal and pelvic cavities are separated from each other by a peritoneal shelf. The drainage is then provided below through an opening just in front of the coccyx. Weir has performed this operation in 3 cases. One patient died, not from peritonitis, but from persistent diarrhea without elevation of temperature. The 2 other patients recovered and there are no evidences of

recurrence 18 months and 9 months respectively after the operation. Weir considers this a much more satisfactory operation than that devised by Kraske, for the removal of high-seated cancers of the rectum. In the Kraske operation, the disadvantages are the depth of the wound, difficulty in drawing the upper portion of the bowel satisfactorily, jagged invasion of the peritoneal cavity, and annoying hemorrhage. Weir states that the operation which he has described is very satisfactory.

The Treatment of Malignant Disease: FREDERIC S. DENNIS (New York) discussed the various unsurgical methods which have been proposed in the treatment of malignant disease, such as electricity, caustics, toxins, and drugs. He believes that experience has shown that surgical intervention is the only resource, since all these methods have proved of practically no value. Surgical operation is successful only when it is performed early, when it is radical in its character, and if there is recurrence, it should be repeated. Cases should not be considered cured unless at least 3 years has elapsed since operation, and by some this period is estimated as far too short. Dennis insisted upon the importance of educating physicians as to the necessity for early operation, as an essential feature of the cure. Microscopic examination of every growth is also very important as the only means to obtain accurate information for the future study of malignant disease. Every case should be carefully recorded and the subsequent history followed. Dennis gave the results of his own extensive experience: Eighty-seven patients are well from 3 to 22 years after operation for the extirpation or removal of malignant growth, without recurrence. These results reported to prove the value of surgical intervention over all other methods of treatment. In his cases there was no mortality in amputation of the breast for carcinoma or sarcoma, or from any other cause, with the exception of 2 cases of hemophilia. There was no mortality in the operation for removal of epithelioma or sarcomata of the skin; glandular sarcoma; sarcoma of the superior maxilla. There was 1 death from excision of malignant disease of the intestine, and 1 death following amputation of the hipjoint. Up to 1891, his percentage of cures for carcinoma of the breast was 45, and in his last series of 15 cases there has been 83% of cures of over 3 years' standing. He now has 20 cases in which the patients are living after a period of from 4 to 13 years after the operation, without recurrence or metastases. The patients have been carefully watched in all cases, and great pains have been taken to trace them for years. Dennis has had 5 cases of sarcoma of the superior maxilla, all of whom are living, with no mortality in from 8 to 18 years. In 7 cases of glandular sarcoma there was no mortality, and a permanent cure of from 8 to 21 years. In sarcoma of the skin, 22 cases; in 7 cases a permanent cure has resulted, existing from 8 to 16 years. In sarcoma of the breast, 6 cases were permanent cures of from 7 to 22 years. Dennis has had 8 cases of sarcoma of the leg, with permanent recoveries of from 6 to 13 years. He states that these statistics are not entirely up to date, but are being collected for future publication. The results in these cases are very encouraging, and show the value of surgical intervention, for the patients could not have been saved in any other way.

Discussion.—BERNAYS (St. Louis) believes that the prophylactic treatment of carcinoma is impossible until we learn the nature of the disease. He believes that in most cases, carcinoma is the degenerative process occurring in other tumors, while in other cases a new growth arises from some other cause.

RODMAN (Philadelphia) inclines to the belief that the parasitic theory offers the most satisfactory explanation of the etiology of this disease. Contrary to the experience of Dennis, his results in the treatment of sarcoma of the lower jaw have been very satisfactory.

FUTERER (Chicago) does not believe in the parasitic origin, but is inclined to favor Virchow's theory of mechanical origin. For years he has tried transplantation experiments without success, but he still believes that these attempts should be continued. Specimens of natural transplantation in the body, are by no means uncommon, and there is much evidence in favor of this theory.

MASSEY (Philadelphia) believes that carcinomatous tissue can be destroyed by the electric current without injury to the surrounding normal cells, and he advises this method of treatment.

DAWBARN (New York) agrees with Bloodgood in the opinion that all suspicious lumps should be removed. In operating for carcinoma of the mouth, he does not find it necessary to ligate the carotid in all cases, nor does he consider it best to pack the wound, for the gauze soon becomes saturated with saliva. Frequent irrigation keeps the wound in a more cleanly condition. He places the patient, not sitting up, but with the head lower than the feet, to avoid swallowing saliva and getting inspiration pneumonia.

POWERS (Denver) believes that the favorable results obtained at the Johns Hopkins Hospital have attracted more patients there than would ordinarily come to a general hospital, and hence, that the proportion of 3% of carcinoma in all cases, as stated by Bloodgood, is too high. He considers Weir's operation probably a better one than that of Kraske in the treatment of carcinoma, and believes that the mortality might be lessened by adopting it.

MAYO (Rochester, Minn.) mentioned a case in which on

operating for appendicitis he found a carcinoma in the region of the cecum.

The Nominating Committee suggested the names of Dr. DE FOREST WILLARD, of Philadelphia, for chairman, and Dr. JAMES B. BULLITT, of Louisville, Ky., for secretary, for the ensuing year. The secretary was instructed to cast a unanimous vote for these officers.

[To be concluded]

Section on Obstetrics and Diseases of Women.

FIRST DAY.

The chairman, Dr. H. P. NEWMAN, delivered his annual address, reviewing **The Progress of Gynecology** during the past year, and comparing the relative value of new methods and procedures, and forecasting the trend of the future progress of this specialty.

A paper by Dr. J. CLARENCE WEBSTER (Chicago) on **Methods of Incision for Vaginal Section**, and one by Dr. RUFUS B. HALL (Cincinnati) on **Indications for Vaginoabdominal Hysterectomy** were read by title.

Dr. A. H. CORDIER (Kansas City) read a paper on **Postoperative Intra-peritoneal Hemorrhage**. He described 1 case lost by the slipping of a catgut ligature. He believes that the use of unstable ligature material on large pedicles in localities where the same is absorbed quickly has regularly resulted in death. Postoperative hemorrhage demands early recognition and quick surgery. The use of drainage was advocated in all cases where hemorrhage is to be feared. He believes that the tube does no harm if left in for a few hours. Too much confidence is reposed in nature to control bleeding within the peritoneum. He considered the question in differentiating diagnosis between secondary shock and internal hemorrhage. If hemorrhage is suspected, a single parietal suture should be cut and sterilized forceps passed in to determine the true condition within the peritoneal cavity. He spoke of the value of saline solution employed intravenously in the treatment of hemorrhage, and considers that there is little danger of air in the vessels. The fluid should be employed hot and in large amounts. The value of complete examination in diagnosis was commented upon.

Discussion.—Dr. McMURTRY (Louisville) spoke of the prevention, diagnosis and treatment of postoperative hemorrhage. This, when due to the slipping of the ligature, the material used has little to do with the accident. The method rather than the material is important. He employs silk for ligature material. Intravenous injections of saline solution should not be employed as it will increase the blood.

Dr. GORDON (Maine) has used catgut sutures for 17 years, and has never had a case of intra-peritoneal hemorrhage. He does not consider that the use of the drainage-tube would be any protection against hemorrhage and would advise against its use.

Dr. H. A. KELLY (Baltimore) cited a case of hemorrhage from the uterine artery occurring 8 days after the operation from the too rapid absorption of the catgut ligature. He employs fine silk ligatures and objects to the use of the interlocking suture. He thinks it is important to leave a good pedicle above the tie and to apply 2 ligatures on the cardinal vessels after the operation is completed, and that the field should be thoroughly reviewed and all vessels examined to see that hemorrhage is completely controlled.

Dr. MARCY (Boston) spoke of the value of absorbable suture material. Drs. Wiggin, Frederick, Harris and Massey also participated in the discussion.

Dr. J. G. CLARK (Philadelphia) read a paper on the **Contributing Factors in the Production of Peritonitis**. He presented the following conclusions in regard to the Elimination of Peritoneal Infection and the Prevention of Surgical Peritonitis: (1) The peritoneum has an enormous absorbing function, being capable of taking up in an hour 3% to 8% of the entire body weight; (2) minute solid particles are carried in an incredibly short time from the peritoneal cavity through the diaphragm into the mediastinal lymph-vessels and glands, and thence into the blood-circulation, by which they are quickly distributed to the abdominal organs and to the bone-marrow; (3) the granular bodies are at first largely transported as free bodies, swept along by the lymph currents, but later the leukocytes act as the carriers; (4) there is, normally, a force in the peritoneal cavity which carries fluids and foreign particles toward the diaphragm, regardless of posture, although gravity may greatly favor or retard the current; (5) after the introduction of microorganisms into the peritoneal cavity there is a great decrease in their number within the first hour, both through their intra-peritoneal destruction and through their rapid absorption into the general system, where they are dealt with, and there is, therefore, no possibility of limiting free infectious matter to any part of the peritoneal cavity by mechanical means; (6) vigorous streptococci which remain behind develop within 6 hours a repellent or destructive quality for leukocytes, and the lethal combat is, therefore, inaugurated and well under way before drainage, as ordinarily employed, can possibly exercise any beneficial action, and hence in many cases in which surgical drainage is employed the patient recovers in spite of and not because of it; (7) a moderate amount of even virulent organisms carried by the blood to the lungs, liver, spleen, kidneys, gastrointestinal tract and bone-marrow may be destroyed or eliminated without the least harm to the patient,

whereas if the same amount of infectious matter is detained about a surgical field in the abdominal cavity, or stagnates in a dependent pocket, they may generate myriads of others, and thus overwhelm the patient; (8) in many cases, therefore, drainage as ordinarily employed, is superfluous or even dangerous, and the rational method is to remove all possible debris and infectious matter by thorough irrigation and then leave 1 liter of salt solution (0.6%) in the abdominal cavity, and in order to promote and hasten natural drainage, supplement this by an enema of a liter of salt solution given while the patient is well under anesthesia and in the Trendelenburg position; (9) under this plan the patient is generally stimulated, shock is minimized or averted, the urinary excretion is greatly increased and thus toxic matters are more easily eliminated without irritation to the kidneys or bladder, peritoneal infection is quickly eliminated while yet minimum in amount, thirst is alleviated or entirely prevented, intestinal peristalsis is promoted and consequently tympanitis is of less frequent occurrence, and the early action of the intestines evacuates infectious matter thrown out into the canal by the bloodvessels of the villi. All of these factors combine to reduce mortality after abdominal section, to decrease pain, discomforts and complications of the first 48 hours, and finally to hasten the recovery of the patient.

Discussion.—Dr. KELLY said that in nothing does the progress of gynecology show more than in the status of drainage from the past to the present time. He only drains in case of general peritonitis due to appendicitis, and says that it is rather for the sequestration of purulent foci rather than for the purpose of drainage. Baldy, of Philadelphia, opposes the use of large amounts of saline fluid in the peritoneal cavities, he considers it unnecessary and harmful.

Dr. CARSTENS alluded to the advantage of vaginal drainage. He believes that almost immediately after the operation is performed, adhesions are formed closing off the pelvis from the general peritoneal cavity, and that the only effective mode of drainage is through the incision in the posterior vaginal fornix.

Dr. DEEVER protests against the tendency to do away with drainage.

Dr. GORDON (Maine) indicated a marked difference between appendicial and pelvic pus.

Dr. DUDLEY (New York) employs transfusion before opening the abdomen to produce a current in the lymph channels through the abdominal cavity in septic cases.

A paper on the **Advantages and Disadvantages of Drainage after Abdominal Section**, Dr. HUNTER ROMM (Cleveland), was read by title.

Dr. MATTHEW D. MANN (Buffalo), by invitation, described a **New Operation for Removal of Cancer of the Rectum**. He pointed out that so far, 3 routes had been proposed for the removal of cancer of the rectum, the latest operation being the one perfected by Dr. J. B. Murphy, viz. removal through the vagina. Mann proposes to operate through the abdomen, the patient being in the Trendelenburg position. The technic as follows: The abdomen being opened, the rectum is cut off above the cancer and clamped. The sigmoid and rectum are then pulled out of the pelvis, the mesorectum being cut if necessary. The lower end of the rectum is cut below the growth and the latter removed. The lower cut end of the rectum is then pulled up and $\frac{1}{2}$ a Murphy button is put into it. The other half is put on the upper cut end, and the 2 ends are brought together. Union takes place even if the lower end is not covered with peritoneum, as was the case in 3 instances. Mann reports 5 cases operated on in this way with 1 death. In 2 of the cases the growth extended below the cervix uteri.

Dr. JOHN B. DEEVER (Philadelphia) read a paper on the **Accidents and Complications of Pelvic Surgery and their Treatment**. He treated of the difficulties which the gynecologist is compelled to face, and that the occasional operator under ordinary circumstances does not meet the cases which present anomalous complications, and as a rule is not prepared to deal with them or dispose of the accidents which may occur as a consequence of a complicated operation for disease of the pelvic organs. The variety of complications he groups as follows: (1) Those resulting from adhesions; (2) large growth involving other organs which may be damaged in the attempt at removal; (3) malignant growths involving other viscera by extension of the disease; (4) complications secondary to a ruptured extrauterine fetation; (5) pus in the pelvis; (6) hemorrhage. He called attention to the injuries produced by inefficient operators, and the harm resulting in the many so-called minor gynecologic operations of dilation, curetment, and trachelorrhaphy. He believes that many of these operations are performed unnecessarily when contraindicated and are positively harmful.

SECOND DAY.

The paper on **Uterine Fibroids**, by Dr. THOMAS S. CULLEN (Baltimore) was read by title; the second paper, also read by title, was on **The Complications and Degenerations of Fibroid Tumors as Bearing on the Treatment of these Growths**, by Dr. CHARLES P. NOBLE (Philadelphia).

Dr. EDWARD E. MONTGOMERY (Philadelphia) read a paper on **How Shall We Deal with Uterine Myomas?** He presented the following conclusions: (1) Small uterine myomas which do not cause symptoms are subperitoneal or interstitial and may be permitted to go untreated, but the patient should be kept under observation, and any increase in size should

indicate operation, as continuous growth may result in destruction of the uterus; (2) small growths which cause hemorrhage are submucous or interstitial, and should be removed through the vagina; they may be made accessible by tents or incision through either the posterior or anterior lip; (3) multiple growths or small growths inaccessible by the vagina causing symptoms, should be removed by abdominal incision; the uterus should be preserved wherever practicable; (4) when the growths are large, or render extirpation of the uterus necessary, the entire removal of the organ, as described in the text, is the simplest and most expeditious procedure.

Discussion.—Dr. EASTMAN (Indianapolis) compared the past and present methods of dealing with uterine fibroids. He considers that the evolution of the treatment is remarkable and gratifying. Degenerative changes are apt to occur at the menopause and he hesitates to leave a patient with a fibroid tumor at this time. He alluded to the danger of infection of myometomy, in which case the use of the serre-noud is necessary.

GORDON believes that when a woman has a fibroid tumor which is producing symptoms, whether it be large or small, whether she be near the menopause or not, it should be extirpated by hysterectomy. WATTEN (Louisville) believes that it is best to do full hysterectomy in these cases as it is possible for a cancer to develop in the neck of uterus after supravaginal hysterectomy. Dr. DUDLEY (New York) thinks there is room for conservative work in this field; that it is a duty of the gynecologist to perform myometomy if there is a possibility of preserving function and leaving the woman with healthy appendages. Dr. MASSEY (Philadelphia) argued in favor of electricity in treatment of these cases.

Dr. J. M. BALDY (Philadelphia) read a paper on **Cancer of the Uterine Neck**, which will be published in **AMERICAN MEDICINE**.

Dr. J. WESLEY BOVÉE (Washington) read a paper on **The Relative Merits of the Different Methods of Uretero-ureteral Anastomosis**. He referred to the frequency of injuries to the ureter in abdominal surgery. He considers that nephrectomy is often necessarily performed. He reviewed the different methods of performing ureteral anastomosis and described a case of anastomosis in which the upper end of ureter was invaginated into the lower by the method of Pozzi. In comparing the relative value of the different methods that have been suggested, he considers that the transverse end-to-end is preferable so far as the length of the ureter is concerned, except when the ends are already cut obliquely, in which case the oblique method would be most economic; next would come the end-to-end method of Pozzi with oblique end-to-end; next, the Robson modification of Pozzi, which is the least valuable; and the Van Hook is practically inapplicable when more than $\frac{1}{2}$ inches of the duct has been cut away. When the upper end of the ureter alone is dilated, the oblique end-to-end and side-to-side are clearly the best plans to adopt. He considers that the end-to-end or the end-in-end are applicable in every case in which the end-in-side or side-to-side plans can be used with one single exception and can be accomplished as safely and in even less time. It may therefore seem that the ingenious plan of Van Hook would scarcely ever be needed. With the end-to-end plan as most practicable and the end-to-end of Pozzi, it would seem that a surgeon should be able to repair any injury to the ureter.

Dr. A. PALMER DUDLEY (New York City) read a paper on **Some Results of Ovarian Surgery**, with a report upon intraimplantation of ovarian tissue. He reviewed the work done along this line since 1887, and considers that this is no longer experimental. During the past 14 years he has operated upon 190 cases requiring operations upon the uterine appendages. In selecting the method of operation he considers the age of the patient, her social position, previous family history, and the patient's preference in the matter. His records show that plastic work was done upon both ovaries in 128 cases; 1 ovary and tube removed in 60 cases; gonorrhoeal tubes examined and $\frac{1}{2}$ removed in 5 cases; vaginal sections for drainage in 14 cases; hysteroraphy, 73 cases of pregnancy at full term, and 5 cases of miscarriage which have occurred subsequently to this operation. He described the method of ovarian implantation of large cysts, implanting the ovarian tissue in the center of the fundus uteri without severing it completely from its ligamentous attachment. By this method the ovarian tissue is nourished by its own circulation until such time as collateral circulation can supply it. The proper nervous supply of the ovarian tissue is not cut, and should the ovarian tissue subsequently give trouble, it is in the cavity of the uterus where it can be quickly reached with a sharp curet, and removed without danger to the patient.

Dr. HOWARD KELLY (Baltimore) gave a lantern demonstration, illustrating **The Various Incisions Appropriate to Different Renal Operations**. Three incisions were indicated. First, best incision for suspension of the kidney; second, the incision to be employed when the kidney is enlarged and the operation is liable to be attended with difficulty; third, incision for the removal of the kidney with the ureter. His plan for the nephroureterectomy avoids an extensive wound which would weaken the support of the abdominal walls made by the long incision from the back down to the symphysis pubis. He discussed thoroughly the anatomy of the renal region and the best method of operating upon renal lesions with the least injury to nerves and muscles.

Dr. THIENHAUS (Milwaukee) reported a case of **Atresia Hymenalis, Hematokolpos, Hematometra, and Duplex Hematosalpinx**, each of the size of a man's fist, in a girl of 14, and presented specimens. At the close of his paper he emphasized the following conclusions: (1) the origin of gynatresias in a simple genital tract may be twofold; (a) caused by an inflammatory process (the majority of cases); (b) caused by congenital malformation; (2) the practitioner must pay attention to every case of birth in which he suspects a gonorrhetic infection of the maternal genital tract, not only to the eyes of the newborn, but in the same manner to the vulva and vagina, and, if he finds an infection of these parts he should treat them carefully with a 5% protargol solution 3 times daily, as advised and recommended by Siebert, or by other methods; (3) in all infectious diseases during childhood possible inflammation of the genital apparatus must be taken into consideration; (4) the physician must enforce a thorough examination in all cases of polymenia menstrualia with absence of menstrual flow; (5) if he finds an atresia somewhere in the genital tract as the underlying cause, that he must not cut blindly into the hematokolpos or hematometra, but must direct his method of treatment after the question: is there hematosalpinx present or not? (6) if the latter is diagnosed, laparotomy must be performed first and then the hematometra or hematosalpinx opened by the vaginal route.

Dr. A. GOLDSPOIN (Chicago) presented a paper on **Results Immediate and Remote of Conservative Surgery**, with these conclusions: 1. The patients who are not near the menopause, and who are not tainted by tuberculous or malignant disease, 1 or a part of 1 or both ovaries should be preserved, with or without the retention of the corresponding tube, in the following conditions: (a) In follicular cystic degeneration or cirrhotic induration due to inflammatory processes or other circulatory disorders; (b) in extirpating dermoid tumors and in removing fibroid tumors with or without the uterus; (c) with great caution in the extirpation of nonpapillary glandular cystomas that are devoid of surface papillomas and other evidences of malignancy. 2. Necessary for success in the resection of the uterine adnexa is the exercise of asepsis of the highest degree, and the use of a minimum amount of a fine and readily absorbable suture material exclusively and judiciously as to tension. 3. A generous median ventral incision provides the best access for the conservative treatment of the adnexae, in cases where septic accumulations in the parts are not certainly absent, and when extreme fixations of the parts abound. When these more extreme complications are not present, and a retroversion of the uterus exists, the resection of the adnexae is most auspiciously and easily effected via the dilated internal inguinal rings in conjunction with a thorough Alexander operation. 4. Vaginal celiotomy does not provide a favorable access for conservative surgical treatment of ovaries and tubes. It does frequently admit of ignipuncture, but is not auspicious for resection of ovaries. 5. Resection, with the care and technic above mentioned, is the more ideal and most conservative measure, and should be preferred when the parts are sufficiently accessible without undue traction upon the lateral supports, and when asepsis in the surrounding wound and in the general execution is reasonably assured, otherwise thermo-cauterization is probably better.

Dr. A. J. DOWNES (Philadelphia) read a paper on **Electrothermic Hemostasis in Abdominal and Pelvic Surgery**. He defined the ideal method of hemostasis as one which not only occluded the bloodvessels, but did so without adding a complication to the case either immediately or remotely. He says that none of the usual methods fulfills the definition. He referred to the use of ligatures and the angiatribe. He referred to Keith's method of hemostasis by pressure and heat with crude appliances and gave Skene credit for originating the electrothermic hemostasis and indicated the imperfections in his instruments and method. He believes that the essential requirements in this method are: first, pressure, and then the proper amount of heat in the compressing blade. He pointed out the dangers and insisted on the necessity of mathematic exactness in the use of the current, and exhibited an electrothermic angiatribe, electrothermic forceps, and electrothermic artery-forceps. He reported 20 cases and some multiple operations, including 11 appendicectomies, hysterotomies, 1 ovarian cyst, and 5 salpingo-oophorectomies. He claimed for the method, general hemostasis without ligatures; its ideal use in appendicectomy. He believes in the use of a nonadhering and sterile clamp, and claimed for the method a shortening of time for hemostasis and great practicability.

A paper by Dr. L. H. DEMMING (Indianapolis) on **The Uses and Abuses of Morphine in Abdominal Surgery** was read by title.

[To be concluded.]

Section on Diseases of Children.

FIRST DAY.

The Chairman's Address. SAMUEL W. KELLY recommended that either the office of Secretary be made more continuous than at present, or that the secretary be provided with an assistant; also the custom which, it appears, expects the chairman of the section to act as toastmaster at the section din-

ner undergo a revolution. The advancement of the surgical side of pediatrics is very important, and has been slower in its developments than was medical pediatrics. Its advance may be measured in many different ways, by the recognition of the necessity and importance of it; by the increase of actual knowledge concerning it; by the spirit of knowledge through textbooks and teaching; by the extent and the manner in which this knowledge is applied in practice; it becomes evident that many of the most prominent writers on surgery have given inadequate attention to the surgical side of children's diseases. At the present time the knowledge of anatomy, physiology, pathology, and the history of diseases has reached such a point in the observations of practical physicians and surgeons that the diseases of children, their peculiarities and their importance, can no longer be quite ignored by the surgical side of the profession. There is now needed no elaborate argument to prove that there is a department of surgery as distinct from that adult life, as the medical diseases of children differ from those of their elders. In the cases of children abnormalities are found, and the same diseases that occur in adults are marked by different phenomena when occurring in children. We are aware what peculiarities surround operative work upon children,—how ill they bear hemorrhage, cold, or prolonged shock, and how wonderfully they recuperate once the stress of the storm is past. In medical journals, medical societies, and medical teaching, too little attention is paid to the surgical subjects. There should, if necessary, be children's surgeons as well as children's physicians; or at least the surgeon should be required to extend his knowledge to diseases of children.

Measles.—J. B. GARBER said that the prime cause of measles is, no doubt, a specific poison, the nature of which has not been fully determined. The poison spreads by contagion from one person to another and is given off by the breath and secretions. No age is exempt from an attack of measles. Recurrence of the disease is not uncommon, especially among children. The pathology of the disease is not marked. The period of incubation is now well established, and is found to be about 14 days from the time of exposure. The prodromal symptoms last about 3 days, and are associated later with catarrhal symptoms. Fever is always present, coming on as early as the second day; often remitting and rising again just preceding the eruption; laryngeal cough, drowsiness, loss of appetite and vomiting usually occur; sometimes convulsions. On the third or fourth day, eruptions appear, usually preceded by the Koplik spots which disappear as the eruption progresses. When the rash begins to disappear, if the fever continues, look for complications; for in complications lie the danger of measles. Bronchopneumonia, intestinal catarrh, hemorrhages from the mucous surfaces, and otitis media may occur as complications. The diagnosis is not usually difficult but occasionally puzzling in isolated cases. Cases without eruption have been reported; malignant forms sometimes occur; marked typhoid symptoms accompany some of the fatal cases; it may awaken a dormant tubercular condition; the mortality is low, except in complicated cases; the treatment should be rest, hygienic and symptomatic.

Discussion.—Dr. SLAGLE stated that he rarely found the Koplik spots. Second attacks of measles have not been common in his experience, usually when a second attack is diagnosed as measles, it has been found that it was German measles.

Dr. SCOTT thinks rubella a distinct disease; very much more prevalent than measles, but very easy to confound with the second attack.

Dr. J. M. POSTLE was sure that he had seen true measles undoubtedly recur, in several cases, and had found benefit in the treatment of measles from the internal administration of suprarenal capsule.

Dr. BARBER called attention to the danger of endocarditis following measles. Dr. TOWNSEND pointed out that the enlargement of the postauricular glands was pathognomonic of German measles.

Pathology and Treatment of Pertussis: J. M. POSTLE. Pertussis is a toxic neurosis produced by a bacterium, probably by that of Czuplewski, Hensel, and Koplik. Working in the tissues beneath the mucous membrane of the respiratory tract, these bacteria produce a toxin which has as the point of special selection for attack those nerve-cells governing expiration. These nerve cells are depressed, with resulting clonic spasm of the expiratory muscles. Excess of carbon dioxide in the blood produces powerful stimulation of the nerve-cells governing inspiration, at the same time, partially or completely destroying the toxin. Children, therefore, when playing around gas-works have whoopingcough lightly. Dr. Rose, of New York, has treated pertussis by rectal injection of carbon dioxide, and this experiment has seemed to ameliorate the symptoms. The whooping sound is produced by inspiration before the laryngeal muscles are fully relaxed. There is a prompt return of the expiratory cells to normal when the toxin has been destroyed by rational therapeutic immunization, and recovery is complete in from 1 to 3 weeks, depending on how near to the full physiologic effect the patient is kept while under the influence of the remedies used. The treatment consists of the administration of suprarenal glands, strychnin or any preparation of nuxvomica which may be given hypodermically or by the stomach, and should be pushed almost to the full limit or slightly toxic effect.

The Antenatal Treatment of Hemophilia was the title of a paper by J. W. BALLANTYNE (Edinburgh, Scotland) read by Dr. DARNALL. Cases in which the effect of antenatal treatment can be tested are rare. It is clearly and persistently hereditary, and shows a family prevalence. The probability is that male offspring will be hemophilic, though the female offspring usually escapes. There is a presumptive diagnosis then of antenatal hemophilia when a hemophilic woman is pregnant with a male infant. The following case is reported: Mrs. C., 34 years of age, third pregnancy, tall, well built, rather spare, with black hair, sallow complexion, has always lost much blood at her menstrual periods, and had postpartum hemorrhage after both confinements. She had a distinct family history of hemophilia; the first child at birth was anemic, is still alive, but is a marked "bleeder," having nearly succumbed several times during the cutting of teeth; the second pregnancy ended in the birth of a male child, and was also associated with a postpartum hemorrhage. The infant showed hemorrhage from the umbilical cord at birth, and died at the age of 12 months, during dentition, the cause of death being returned as cerebral hemorrhage. The mother was now pregnant for the third time. Calcium chlorid might safely be given to the mother; the drug would pass through the placenta and reach the fetal tissues, although theoretically the hopes of success were small; also iron, arsenic and strychnia might be administered in order to improve the general health, increase the tone of the uterine muscle, and lessen the risk of postpartum hemorrhage. This treatment was carried out for 3 months; on October 3, 1900, a male child was born, red and mottled and healthy in appearance, indeed, in all respects normal; there was no hemorrhage from the cord, no postpartum hemorrhage for the first time in the mother's obstetric history, and she was able to nurse her infant. The labor was easy, and the whole process normal. Since that time the infant has never had any bleeding, and did not bruise like his brothers. He has also cut a tooth without a hemorrhage, while it may be noted that his eldest brother still suffers with a bleeding tendency very markedly. This may be a coincidence, but if so a very remarkable one, and we cannot accept the conclusion that it is merely a coincidence. There are circumstances which encourage the opinion that after all the treatment in this case may have something more than a coincidental relation to the healthy state of the third infant.

SECOND DAY.

A symposium on typhoid fever in children signaled the morning session, the following being abstracts of the important papers read:

Symptoms of Typhoid Fever in Infancy and Childhood.—J. P. CROZER GRIFFITH reviewed a number of articles that have appeared on typhoid fever in the last few years. The symptoms of typhoid fever in children differ in many respects materially from those in adults. To insist that the cardinal symptoms must always be present would lead us into frequent errors in diagnosis. The affection is far from rare in infancy and the failure to recognize it is rapidly disappearing because we are more on the alert for it, and have the serum reaction test to aid in the diagnosis. The peculiarity of the onset of typhoid in children is its indefiniteness. The great degree of malaise and fatigue is absent. There is loss of appetite, slight indisposition, and some headache. The temperature does not abate, and, although the child scarcely feels ill, the diagnosis of typhoid fever may be made by exclusion. The child is sent to bed on general principles, and not because it wants to go. In the second class of cases the onset is sudden, with vomiting and with fever from the start, and the rash is discovered. In infants the symptoms are vague because elevation of temperature is common from slight or undiscovered causes. Perhaps only the Widal reaction will differentiate the disease from indigestion, enteritis or influenza. Another peculiarity is that the course of the disease is shortened, from 14 to 20 days being, perhaps, an average length. Abortive cases are common, and it is milder than in adult life, and the mortality lower. Children under 5 are less liable to die from it. The roseola is quite as common as in adults. In a few cases he had seen herpes labialis. Desquamation is described by the French writers as occurring frequently. Enlargement of the spleen is usually present, but not usually discovered. There is perhaps nothing peculiar in the respiration. The pulse is often unusually slow as compared with the rate which one would expect for the same elevation of temperature in other diseases. The temperature-curve is similar to that in adults. Not infrequently it rises rapidly without the step-like ascent. Often it remains high without the tendency to morning fall. Towards the end of the attack it falls, often with much greater rapidity than in adults. Indeed the fall may be almost critical at times. The tongue is not as liable to become dry and parched. Vomiting is a very common initial symptom. It is sometimes troublesome even later in the disease, sometimes directly producing death. Diarrhea is more liable to be absent than present. Abdominal distension is not often a troublesome symptom, though often present. Hemorrhage is of rare occurrence. When it does occur it is usually in later childhood. Perforation is also of uncommon occurrence, the infrequency of these 2 symptoms probably being due to the less pronounced development of intestinal lesions. One of the characteristics is the tendency of nervous symptoms to predominate over intestinal symptoms.

Extreme torpor, coma, vigil and carphologia occur much less often than they do in adults. Slight delirium is common, especially at night. A certain degree of apathy is very common, especially in very young children. A condition sometimes seen is that of pseudomeningitis. This sometimes causes confusion in diagnosis. Meningitis symptoms, it is true, do occur in adult typhoid also, but certainly less characteristically. As a rule the diagnosis can be easily made, but sometimes typhoid fever begins in children with all the appearances of acute leptomeningitis and lead for a time to an entirely erroneous diagnosis. Aphasia is a nervous symptom rather to be considered as a complication and occurs probably more frequently in childhood.

The Diagnosis of Typhoid Fever in the Laboratory: JOHN LOVETT MORSE protests against the separation of laboratory and clinical methods in the diagnosis of typhoid fever. Both are to be used, both are fallible, and both have their limitations. The value of the various laboratory tests are unequal. Some are easy to carry out, some are more difficult. The Widal reaction is present in 95% of all cases of typhoid fever. It seldom appears before the second week of the disease. In a small number of cases it may not be present, and in some it may be intermittent. Repeated negative tests are a strong evidence against the presence of typhoid fever. The reaction may persist in the blood for a period of at least 20 years after the patient has had typhoid, hence a positive reaction in the absence of other symptoms is not diagnostic of typhoid, unless one can be sure that the patient never had typhoid. A negative reaction followed by a positive reaction in a dilution of 1 in 50 is absolute proof of typhoid. In children, the reaction appears under the same conditions as in adults, but appears earlier, is feebler, and persists for a shorter time. It is of less value in infants than in older children, because it may be transmitted to the blood through the mother. Examination of the feces is of nearly equal value as the Widal reaction, but requires much expert knowledge and a complete laboratory, and is therefore not practicable. Typhoid bacilli are found in the urine in from 20% to 30% of the cases, but as a rule they do not appear until late in the disease. Recent observers have shown that in about 80% of the cases the blood shows the presence of typhoid bacilli. On account of the complicated processes necessary, this test is hardly practicable to the general practitioner. The rose spots in a series of comparative tests invariably showed the presence of the bacilli. The spots must be carefully incised under antiseptic precautions, however, and requires much technical knowledge. The diazo reaction is simple and can be made by anyone. It is obtained in most of the cases and usually appears early. Its value is vitiated by its being also present in tuberculosis, septicemia, and other febrile diseases, the very conditions with which typhoid fever is oftentimes confounded. The leukocyte count is important. It is subnormal throughout the entire course of the disease. The average is 5,000 per cm. or less. An increase above normal means the onset of some complication, such as hemorrhage, inflammation or some outside influence, such as cold bathing. The value of the leukocyte count is only seen when the diagnosis lies between 2 diseases, one of which has leukocytosis, and the other does not, as in typhoid and septicemia, the latter having leukocytosis and the former not having it. In the cases of malaria and meningitis, where the diagnosis is uncertain, the examination of the blood for the plasmodium of malaria, or lumbar puncture in meningitis, will clear up the doubt. The author concludes that the Widal reaction and the leukocyte count are the most important tests because easiest carried out, and therefore more practicable.

Report of a Case of Typhoid Fever in an Infant: FRANCES E. BARRETT first discussed the slowness of the profession to recognize the existence of typhoid fever in young children. The report of this case is of interest on account of the age, which was 2 years and 4 months, and the physical condition of the child. Also, the absence of many of the common symptoms, such as enlarged spleen, rose spots, coated tongue and prodromal symptoms, and the continued high temperature without morning remissions. The recovery was uneventful.

A paper on **The Treatment of Typhoid Fever in Children**, by HENRY E. TULEY, was read by title, as also was one on **The Dietetic Treatment of Typhoid Fever**, by LOUIS FISCHER.

Case of Multiple Gangrene Associated with Cholangitis Complicating Typhoid Fever.—I. A. ABB related the case of a female child aged 21 months which came under observation on the fourth day of its illness. The father is at present ill in a hospital with typhoid fever. Examination on admission shows the tongue coated, the abdomen tympanic, the spleen palpable and enlarged. The Widal reaction was positive, temperature 103 F., and a slight edema of the extremities. About 10 days after admission furuncles appeared on the scalp and over the shoulder blade of the left side. After the child had been ill about 2 weeks an eruption appeared on the back of the neck and extremities. At first papules appeared, these became pustules, and in a very short time became areas of gangrene. Summing up the features of the skin the following are interesting points in the order of occurrence; red macules, papules, flaccid vesicles and blebs. There were also postulated or crusted papules, umbilicated vesicles, and ulcers with a dirty, grayish, moist slough. The ulcers have steep margins, are mostly oval in shape, and vary from the size of a split pea to a penny. The whole eruption impresses one as a multiple

embolic process in the vascular system of the upper corium leading to gangrene of the type called infectious multiple gangrene. The autopsy showed the gangrenous areas in the skin which have already been described. The pericardial sac contained fluid. The myocardium was pale and flabby. The lungs were edematous. The spleen was enlarged and showed the presence of infarcts. The kidneys were negative. The liver was large, light-brownish in color, and distinctly soft. Over the entire surface there were a large number of whitish areas about the size of a pin. These were surrounded with a red border, and were scattered irregularly throughout the organ. Microscopically these areas are seen to be due to a necrosis of the parenchyma adjacent to the interlobular vessels. A study of these sections from the liver shows an inflammation of the bile passages, and angiocholitis. The liver also shows the presence of an adenoma.

Treatment of Typhoid Fever, with Special Reference to the Intrarectal Injections of Normal Salt Solution. E. STUVER holds that it is the toxins generated by typhoid bacilli which are responsible for the pathologic lesion and the characteristic symptoms of the disease. These toxins seem to be very penetrating and reach every organ, tissue, and cell of the human body. The treatment must, therefore, aim at first inhibiting the activity of the bacilli, so that the manufacture of toxins will cease, then in eliminating these toxins from the organ's tissues and cells of the body, as well as clearing out the bacilli. At the same time attention must be directed also to the conserving of the bodily forces. This is accomplished by the administration of calomel and other laxatives to keep the bowels open. Calomel is also a well known antiseptic, and this and other intestinal antiseptics serve to inhibit the activity of the bacillus of Eberth. Intrarectal injections of normal salt solution serve admirably as an antipyretic if given cold. At the same time the action of the skin and the kidneys is so stimulated by its use that these eliminative organs much more rapidly rid the system of the bacterial toxins, thereby preventing some of the serious degenerations and complications of the disease. Cold baths and cold sponging should be employed, and the very best possible sanitary conditions and hygienic surroundings should be secured. On arranging the diet liquid and nourishing food should be selected, but at the same time food that is easily digestible. The patient should not be stinted with water. It should be drunk freely and often throughout the whole course of the disease.

The Treatment of Temperature by Drugs: EDWIN ROSENTHAL. Collective statistics of typhoid fever in children have placed the mortality rate at or near 5%. The thermometer retains the first place as a diagnostic implement. In young children, the febrile progress is often only from 8 to 14 days; the average course under 10 years is 19.3 days. After the age of 10, this course is much like that of adults. Typhoid fever is, perhaps, the only disease in which the temperature runs higher in older than in younger children. If the fever be high and long continued, it will do much harm by its influence on the nervous system. If the temperature suddenly drops, it is of the same significance as in the adult—a case of hemorrhage. If the fever continues longer than the average time, it is significant of a complication. A thorough knowledge of the febrile movement, its cause and its dangers, is as necessary as the drugs to be used. In the choice of remedies, one must use a surprising amount of common sense. The bad influence of too much drug treatment cannot be questioned. It is a misleading delusion to say that we can avoid it. Careful investigation proves that no special specific virtues can be designated; for this reason I cannot find one drug which has stood the test of time in an impartial judgment. While all the ordinary coal tar derivatives have been thoroughly tried, none of them are allowable; and while they may influence the fever, that is, reduce its height, no particular virtue can be claimed for them. The same conclusion may be reached with regard to the Woodbridge treatment, which has proved to be a failure as far as limiting the disease is concerned. These so-called specific remedies perhaps have little or no influence. Quinin also proves perfectly inert; it does not influence the fever, and sometimes does more harm than good; in children it should never be used, though it has never shown that influence which the coal tar products always exhibit. One must have a distinct understanding of the meaning of the fever in typhoid. The chief question is, not what drugs to use, but when is it necessary to interfere. It is conceded that the fever is but a protective reaction of nature. A long continued hyperpyrexia will produce tissue degeneration; that it will do it sooner in adults than in children is a well known fact. Lacking the ideal way of interference—an antitoxic serum—Brandt's hydrotherapy is the next best thing. Other antipyretics included in the line of drugs, and which have been mentioned above, have only been mentioned to be condemned, since they possess no specific virtue.

Discussion.—Dr. VICTOR C. VAUGHAN drew attention to the fact that typhoid fever occurred less frequently in children than in adults, and explained this fact by the child's not getting around and drinking water from so many sources as an adult; the same reason why typhoid infection occurs less frequently in women than in men. It has also been said that typhoid fever occurs less frequently in cases of pregnant women; cases of typhoid fever seem to be less severe when the infection is a mixed infection; for when there is a mixed infection with the colon bacillus an irritative diarrhoea is set up which causes the

intestinal canal to be regularly drained of its poisonous contents. Mixed infections are more likely to occur in the case of children; just why typhoid fever is milder in children, is a question for which there is no positive explanation. The death rates seem very hard to get at. In hospital practice it has been found to be 8 or 9%; but in a series of 20,000 cases, which were selected, the deathrate was between 16% and 17%. In children, perhaps, the reason for a lower deathrate may possibly be found in their better elimination through the skin, kidneys and other organs of toxic products. It is high time to stop experimenting with drug antipyretics. If these dangerous drugs are to be used, let us make our experiment on animals and not on human beings. The only way to reduce temperature is by the cold bath. The occurrence of multiple gangrene is an exceedingly interesting matter, and has been found in malaria, small-pox, etc., as well as in typhoid. The fact of being able to diagnose these things by a positive discovery of the bacillus given us now a clearer insight into the diseases. Dr. CLIFTON SCOTT referred to the view held by some that cold baths caused internal congestion, but had not found it so in his experience.

Dr. CHAS. DOUGLASS found the medicinal treatment of typhoid fever very unsatisfactory; temperature may be controlled entirely by the baths and proper regard to the diet. The diet should always be kept down to the point where there is perfect digestion, then both less baths are necessary, and less medicine; he does not agree with the popular idea with regard to the use of calomel in small doses; his experience is, that cases which are allowed to preserve quiet bowels, continue to a steady recovery; the temperature goes steadily down without purgation if proper care is used in the diet. Feeding should be such as to make the stools normal in character and free from any bad odor. Odor, color and consistency of the stools are the things to guide in the feeding. Anything may be given the patient that he can properly digest; milk, broths, the white of eggs and starch water may all be given if the quantity is regulated in accordance with the conditions present. Abdominal complications and tympanites give no trouble when this is looked after; and patients may frequently go from 1 to 7 days without a movement from the bowels, and no bad effects follow. Calomel or other forms of purgation are not necessary if the diet is steadily cut down, when the bowels usually take care of themselves.

Dr. F. WOOD thought we frequently feed our typhoid patients too much; less food, less medicine and more water give better results than over feeding; it is very important to provide perfect quiet for these cases; don't allow them to become restless, talk too much, or be bothered; don't urge them to eat at all unless they want to eat. Oftentimes injudicious use of milk will cause tympanites. If hemorrhage occurs, perfect quiet should be maintained by the use of morphin. Quiet is more important in this complication than any medicine.

Dr. HEAD pointed out the great value of the leukocyte count as an aid to the differential diagnosis between meningitis and some of those forms that come on like appendicitis.

Dr. ROSENTHAL'S paper on **Prolonged Intubation** has been published in AMERICAN MEDICINE, Vol. I, No. 5.

Discussion.—Dr. SHURLY referred to 240 cases of diphtheria with a mortality of 60. Of this number 8 were intubated. Prolonged intubation may be classified as those cases in which the tube remains in position more than 6 days; ordinarily it should be removed on the fourth day. In these cases 3,000 units of antitoxin are always given immediately. Of the 8 cases intubated, all recovered except 1. The causes of bad results are usually traumatism or cicatricial bands. Plated tubes should be dispensed with.

Dr. GOLDAN uses the suprarenal glands whenever there is edema. A small piece of silk thread is always attached to the tube so as to easily withdraw it. It is often not necessary to withdraw the tube because the child will cough it up or pull it out.

Dr. I. A. ABT thinks the sooner the tube can be taken out the better it is for the child. It should be removed every morning; to allow it to remain in continuously causes edema, trauma, etc. His custom is to remove it in 24 hours if possible. There are cases in which a tube cannot be introduced into the larynx. This may sometimes be due to the fact that all of the tubes sold at the shop are not properly made.

The Prevention of Pulmonary Tuberculosis in Pre-disposed Children: JOHN A. ROBISON said before the discovery of the bacillus hereditary tuberculosis was supposed to be of great importance, but in the light of modern scientific inquiry infection has supplanted heredity. Direct transmission is extremely rare. Cases of tuberculosis occurring during childhood are in nearly all cases due to direct infection, so many statisticians claim, though an equal consideration of the two factors, heredity and the bacillus, I think must be maintained. Healthy individuals possess certain degrees of immunity to tuberculosis as well as other infectious diseases and this immunity is transmitted to the offspring. If one parent is tuberculous the immunity is weakened. If both parents are tuberculous, the immunity is lessened to a greater degree and there is engrafted on the progeny a cellular nutritional weakness. Children of tuberculous parents are easily affected both directly and indirectly. Preventive treatment should commence with the ancestors. The education of the people would mean the improvement of the coming generations. A child should never

be suckled by a tuberculous mother. As the babe grows the diet should contain more fat. Early a taste for hydrocarbons should be cultivated. Pure candy in moderation is beneficial to growing children if given after, not between meals. Children do not drink water enough which is a great aid to nutrition and acts as a solvent for the effete material in the body. The diet should contain plenty of nitrogenous food. The period of puberty is a critical one. Enforced ignorance of the sexual laws oftentimes allows youth to fall into vices which weaken the cellular and organic structure of their bodies. The youth should be educated in such necessary physiologic laws as tend to preserve the integrity of all the tissues and maintain nutrition at its highest point. Better hygiene should be secured in our schools. Those with a tendency towards tuberculosis should choose vocations which necessitate them to be out of doors a large part of the time. The question of clothing is a most important one, especially if the patient be a girl. The patient should be warmly and loosely clad. A child with predisposition towards tuberculosis should not wear a corset, since this cannot help interfering with the processes of nutrition and a development of the respiratory functions of the lungs. Thin shoes, insufficient head covering or deficient underclothing are the stepping stones to tuberculosis. Cleanliness is a great preventer of germ infection. Hydrotherapy is of great value. Perfect hygienic surroundings with a maximum of fresh air and sunshine are prerequisite. Parents should be warned as to the danger of neglecting such diseases as the measles, whooping cough, influenza, tonsillitis, adenoids, etc. The feeble-minded are especially liable to tuberculous disease.

Discussion.—Dr. WOOD thought that there was a great necessity for the stricter enforcement of laws regarding the marriage of tuberculous people. Dr. WORK referred to the supreme importance of proper clothing. People should change their clothing as the weather changes. The two great objects of clothing are equal warmth and equal pressure. Dr. SLAGLE pointed out that tuberculosis begins in the stomach through the influence of impaired nutrition, with the consequent weakening of the power of resistance.

Protracted Influenzal Pneumonia in Infancy: FRANK X. WALDS says that it has been observed that infants are in a high degree immune from influenza. Influenza, however, in infants, frequently runs into protracted pneumonia. Nursing children are almost absolutely immuned, even though their mothers be seriously stricken with the grip. This immunity is explained by assuming that a potent antitoxin is eliminated in the maternal milk. Infants artificially fed are more susceptible to this disease than others. COMBY reports a case of grip in an infant only 17 days old. Relapses among children are not rare. The symptoms often come on very much like severe gastrointestinal infections. Later involvement of the respiratory track occurs. Cough is at first short, but later increases in intensity until it is paroxysmal and continuous, similar to that of pertussis. Breathing is rapid and hurried, and jerky. More or less coryza is present in most of the cases. Oftentimes inflammation of the middle ear, rupture of the drum, and discharge of mucus complicates matters. The sputum was examined in all cases, and the influenza bacilli were demonstrated. The pneumonia was clinically lobar. The consolidation was slow in development, with diffuse bronchitis over the remainder of the lung. The nervous system was signally exempt in the cases coming under the author's notice. The occurrence of an exanthem closely simulating the scarletina rash, which has been pointed out by many authors, was wanting in the cases under consideration. A diagnosis is sometimes difficult, and may easily be confounded with gastrointestinal infections, ordinary bronchopneumonia, malaria, sepsis, or miliary tuberculosis. There is no specific treatment for influenza, but the little patient should be kept quiet and be fed on a nutritious diet suitable to the digestive capabilities of the infant. Nauseating cough mixtures should be avoided. In the event of cardiac or respiratory failure, stimulation should be given as indicated. Cold applications to the skin frequently act in a happy manner in cases of threatened suffocation.

Congenital Malformations: CARL BECK presented a very interesting paper, and showed numerous x-ray photographs to demonstrate the cases reported. The most frequent abnormality of the upper extremity is polydactylism. Congenital deficiencies are naturally hard of correction, but even in such cases surgery is not without resources. Eiselsberg has successfully transplanted, for instance, a toe to the hand. The x-rays are manifestly of great value in determining just what are the conditions present.

Membranous Colitis: CHARLES DOUGLAS says that membranous colitis occurs most frequently in infants over 6 months old and less than 2 years. The stools resemble those of catarrhal enteritis, except in the amount of blood. The only feature which establishes a diagnosis is the occurrence of the pseudo-membrane. The severity of the attack and the gravity of the prognosis are in proportion to the amount of mucus passed daily and the length of time it continues. If longer than 10 days, the prospect of recovery is not good. It is rarely seen in nursing infants. A microscopic examination of the membrane shows that it is structureless and like a mass of fibrin, with no mucous or epithelial cells. The cases presented showed that different bacilli have the power by their irritative qualities and the result of their toxins to form this false membrane on the mucous membrane of the bowels. It is important to recog-

nize that the character of the food is the principal etiologic factor in the beginning of this trouble.

A Case of Ureteral Calculus.—In the case reported by W. W. KEEN the calculus was accurately located by the x-rays before the operation was performed. The patient gave the usual history of stone in the ureter and since a recent attack of scarlet fever the paroxysms of pain on the left side have been more frequent and severe. The patient was 10 years old. On admission the left side of the abdomen was so painful that a diagnosis was impossible as to location of the stone, though the diagnosis of calculus which had already been made by his physician was perfectly clear. The photograph shows a calculus about $\frac{1}{2}$ the size of the last joint of the little finger. In the left ureter, a little below the level of the pelvic brim near the bladder, there was considerable difficulty in finding the ureter at the operation as it was imbedded in a hard mass in which the ureter was apparently lost. On an examination the stone was found to be dark in color with a reaction for mucin, the shell is of calcium phosphate with a trace of organic matter. On the opening of the ureter about $\frac{1}{4}$ of an ounce of urine escaped from the somewhat hydronephrotic kidney. The ureter was packed with iodoform gauze which was removed on the second day and recovery was uneventful.

Discussion.—Dr. C. L. LEONARD stated that he had skia-graphed 47 cases of stone in the ureter. In most of these cases the stone had been subsequently passed so that it is advisable to wait in most cases, unless the stone be large, rather than resort to surgery, since the surgical operation is difficult and nearly always if the calculus is small it passes of itself.

Dr. CLIFTON SCOTT agreed to the extraordinary value of the x-ray in these cases, but thought its value was negative as well as positive. He had operated on a case diagnosed as calculus from the clinical symptoms. The diagnosis seemed perfectly clear, but at the operation it was found to be an endothelial growth and no calculus at all. Dr. KEEN also referred to 4 cases on which he had operated for stone and the stone had not been found.

[To be concluded.]

Section on Materia Medica, Pharmacy and Therapeutics.

FIRST DAY.

Experimental Work in Intraorganic and Venous Injections and Blood Extracts in the Cure of Acute Organic Diseases, the subject of a paper by Dr. W. BYRON COAKLEY (Chicago) whose aim was to show that while exaggerated statements were often made as to the possibilities—in the way of prolonging life and otherwise—that could be accomplished by means of saline solutions, they had a very definite and useful place in practical therapeutics. Studying the history of the subject, he had found that the remedial effects of salt were referred to in a work of great antiquity. In the fifteenth century efforts were made to place its use on a scientific basis, and similar efforts had been made at various times since, but without any satisfactory results until experiments on animals were recently instituted. Meanwhile, the profession had taken up other liquids for the purpose of making injections. Distilled water, milk and blood were all tried, but the last had been abandoned, partly because of the difficulty of obtaining human blood in sufficient quantity, and partly because the benefits were counterbalanced by the dangers. None of the other things that had been used had produced the same good effects as a solution of sodium chlorid. The author reported a number of experiments he had made on dogs, their effect being to show that when the animals had been reduced to the point of showing only a slight flutter of the heart, the injection of the saline solution restored them to vitality in a remarkably brief space of time. Instruments for blood-letting and transfusion were shown, together with needles for making injections into the lungs and other organs. The author added that he had only 1 clinical case to report. It was a case of lobar pneumonia, and the patient recovered.

Dr. GEORGE F. BUTLER (Chicago) followed with a paper which appeared on the program as **Modern Therapeutics**, but which he said should have been entitled **The Neglect of Valuable Therapeutic Measures**. Having described how new medicines were introduced and boomed, enjoyed great popularity for a time, and then as often as not disappeared from sight, he said that some preparations of decided merit were thrown into the background because of prejudice and the influence of commercial interests. The fact was that therapeutics, like most other things, was markedly under the influence of fashion. Blood-letting, which was based on the old idea of removing toxic products and supplying blood serum with water, had fallen into disuse largely as a concession to prejudice. Now, however, it was commencing to assume its old place again. Practically the same theory prevailed in regard to the use of normal salt solutions. Again counterirritation had ceased to be generally used because of popular prejudice against pain, and yet alienists had observed that traumatism sometimes exercised a marked, though for the most part but too short, benefit in insanity, and cases had been reported in which fractures of the skull had been the means of curing idiocy, giving rise in one or two notable instances to the disclosure of remarkable genius. The great effects of counterirritation were shown in the results

obtained from the constitutional effects of operations *per se* irrespective of the location or indication of the operation. The author proceeded to show that, in spite of the prejudice against them, complex prescriptions founded on the control of objectionable features of a drug, still gave good results, and after speaking of the use of emetics as eliminants and of the use of the vegetable uterine tonics, he expressed his strong belief in the efficacy of hydrotherapy, massage, mechanotherapy, dietetics, suggestive therapeutics, and physical culture, when properly used. His experience led him to say that if he had to choose between the two therapeutic measures, exercise and baths, he would prefer exercise in the majority of cases, and especially exercise in the open air. Exercise, baths and suggestive therapeutics were all matters that should receive more attention, as should also the equally important matter of diet. If proper consideration were given to these neglected therapeutic agencies, and care taken to utilize them scientifically, there would be less room for Faith Curists and Christian Scientists.

A third paper bearing more or less on the same subject was read by Dr. O. T. OSBORNE, the particular phase of it which he discussed being **Therapeutic Indications Presented by the Conditions of the Blood in Disease.** His object, he said, was to stimulate the more careful study of the blood in the treatment of all diseases. He thought they had become too pessimistic of late in regard to therapeutics. Still, it was a mistake, on the other hand, to place a blind faith in particular remedies. Every case must be treated individually, and they must treat the disease plus the individual who had it. His reason for pleading for greater attention to the blood was founded on his belief that in it there might often be found to linger the doubts as to whether a patient would or would not get well.

Chronic Myocarditis. A paper on this subject was read by Dr. J. H. MUSSER (Philadelphia). A large proportion of patients who suffered from this disease were men who had great responsibilities, and nothing was more difficult than to decide what line of life should be recommended for them to pursue. They required to be guided by the circumstances of each case, and by the individual's capacity for exertion, his ability to digest food of a kind likely to assimilate, his recuperative power, and so on. They must also pay attention to the matter of bathing, and consider carefully the kind of baths suited to each case, though as a rule the warm bath at night and a cool bath in the morning were sufficient to indicate. In regard to drugs, if the affection of the heart could be traced to some other disease, such as syphilis, specific treatment must be resorted to. Apart from this he found good results from the use of purgatives, which he thought were too much neglected. There was, too, a certain class of cases in which he got good results from potassium iodid. He had tried to find the special indications for the use of this drug, but he regretted to say that he had not succeeded, and so must admit that he gave it empirically, though he could tell generally the kind of cases in which it was likely to do well. When a case had advanced so far as to have paroxysms of angina pectoris, the treatment in the intervals between the paroxysms was very important. A patient who had reached this stage must give up business cares, follow the most hygienic life possible, and take nitroglycerin or nitroglycerin and potassium iodid, or something else that would keep down the arterial pressure. He was opposed to the use in such circumstances of digitalis, which would increase the blood-pressure. The nitroglycerin ought to be taken in large doses, and the doses increased from time to time to the point of obtaining the physiologic action of the drug. These patients had to be put on a lower plane of existence than that on which they had been living. They could not live up to the normal blood-pressure without suffering injury and running danger. In many cases of dyspnea, on the other hand, cardiac stimulants were indicated. There was, however, no general rule to be laid down in regard to chronic myocarditis. Every case had to be dealt with individually, and that not only with reference to local conditions, but to all the functions and structures of the body.

Discussion. Dr. HENRY BEATES (Philadelphia) agreed with the author of the paper as to the treatment he recommended along the line of prophylaxis, but he joined issue with him as to the medical treatment. He was opposed to the use of arterial depressants and contended that stimulants were indicated in the class of cases described. Some remarks in regard to the paper were also made by Dr. S. E. SOLLY (Colorado Springs) and others.

The Treatment of Obesity.—The author of this paper was Dr. HENRICH STERN (New York). He defined obesity, classifying its different kinds and pointing out the complications that frequently accompanied it. As a rule it was to be regarded as symptomatic, hence the necessity of ascertaining its character and cause in each case. After discussing the Banting, Ebstein, and Oertel-Schweninger symptoms of treatment, the author describes his own methods, which consists of dietetic, physical and medical treatment.

The Treatment of Neurasthenia.—Dr. HAROLD N. MOYER (Chicago) contributed a paper on this subject. There was, he admitted, nothing new that he could advance in regard to the treatment of this disease, but its widespread prevalence made it of the greatest consequence that the subject should receive more attention than it did. The importance of correct diagnosis could not be too strongly insisted on. There was a general misapprehension in the profession as to what constituted

neurasthenia. From his association with his colleagues at the bedside and elsewhere he found that there was a disposition to confound hysteria, neurasthenia, and hypochondria. There would be no objection to this confusion of these complaints if the treatment of the conditions were the same, but he believed that the failure to make a proper differentiation between these diseases accounted for the large number of failures that took place in the treatment of neurasthenia. He was sure that none of those who heard him would say that the general treatment of neurasthenia was satisfactory. In his opinion, the central symptom of neurasthenia was fatigue. He believed that where there was no fatigue symptom there was no neurasthenia. He meant by fatigue the exhaustion state that followed motory activity or sensory stimuli. If this fatigue symptom were kept definitely in mind it would enable physicians to differentiate neurasthenia from hysteria and hypochondria. Hysteria never presented the fatigue symptom, and in the case of the hypochondriac there was never any basis for his belief that he had a definite ailment—it was a pure delusion. Hence the importance at the very outset of making a correct diagnosis, which must always be arrived at by process of exclusion. Every convalescent from acute disease was for the time being more or less of a neurasthenic. Many internal disorders and constitutional diseases were accompanied or followed by neurasthenic conditions. Therefore, he would distinguish between primary and secondary neurasthenia, and he would never make a diagnosis of primary neurasthenia until all possibility of secondary affection had been eliminated. The number of primary cases was comparatively small. When he had a case of the kind to deal with the foundation-stone of his treatment was rest. He followed this up by other measures. The rest might be partial or complete. The rest cure had become very fashionable of late, and it was being exploited largely by persons who did not belong to the profession. Much that was splendid that had come from Weir Mitchell in the way of therapeutic teaching was thus being misdirected, the consequence being that a great deal of harm was done. It was only in cases of primary neurasthenia that he would prescribe the rest cure. In other cases a large proportion of cases were made worse by the rest treatment. Women might sometimes do well under it, but it was generally quite otherwise with men. Modified rest was a very different thing, and as a rule did well with one sex as with the other. It was important also to regulate the habits of neurasthenics, and hydrotherapy ought never to be neglected. In respect to drugs, he differed very much from some of his colleagues, inasmuch as he made strychnia his sheet anchor. He gave it in very large doses—from a sixteenth to a twelfth of a grain 3 times a day. It often did well, as did likewise cannabis indica, which was another drug he used. His object in giving these drugs was to produce a psychical state in the patient; he did not believe they served any other use than that. They were not specifics in any sense. Still they frequently gave the patient a start to recovery. It was a species of suggestion, and it was only in that way that he used the drugs. In this connection he expressed the opinion that in the case of neurasthenics the larger the dose of the doctor and the smaller the doses of medicine they got the better it would be for them. He no longer used hypnosis, and he regretted some of the instances in which he had used it. But the extraction of a promise from a neurasthenic that he would pay implicit regard to the instructions of the doctor, coupled with the suggestion that thereby he was sure to get better, generally did much good. At the same time the patient should be told not to discuss his symptoms with anyone but his physician, and if he was asked how he was getting on, always to reply that he felt better—irrespective altogether of whether he did so or not—also had a beneficial effect. The keeping by the patient of a record of his daily life, with details of his treatment and symptoms, was likewise of much value. By simple means of this kind the author had many successes that were very gratifying.

Discussion.—Replying to questions, Dr. MOYER said that hysteria might lead to neurasthenia, and cases thus developed were peculiarly difficult to deal with. In regard to diet he would not attempt to lay out a table for any group of cases. It was necessary to individualize and experiment. However, he used none of the patented or prepared foods. He depended largely on milk, using modified milk, the same as they did with children, when milk in its natural condition could not be assimilated. He had had experience of 2 cases in which temporary exposure to cold had had good results.

SECOND DAY.

Standardization and the Pharmacopeia formed the subject of debate at the morning session. It was introduced by Dr. C. F. WAHRER (Fort Madison, Iowa) who read a paper entitled **A Plea for More Uniformity and Strength in Our Armamentarium.** The subject, he remarked, was far from being new, and the objects aimed at might seem utopian, but it was only by keeping eternally at it that any good could be accomplished. His main desire was to impress on general practitioners the importance of certain facts. In regard to some phases of their work, they were better equipped and could do things better than in previous days. They were better able to make a correct diagnosis. They knew more of etiology. And not only were they reasonably proud of these facts, but they

were apt to think themselves peculiarly blessed in being permitted to live in such an advanced age. But, on the other hand, had therapeutics kept pace with the advances in other branches of medical science? He believed he must answer negatively, and this not because the pharmacist had been idle, for many new remedies of much value had been introduced, but because sufficient attention was not given to the quality of the drugs they used in fighting disease. Even the pharmacopœia failed in this respect that it did not make adequate provision for the uniformity and strength of remedies that were officially recognized. If combined with this circumstance they took into account the cupidity and dishonesty of many manufacturers of medicines, and the ignorant and careless making up of prescriptions, they would admit that the outlook for the sick man was anything but cheerful. What was the use of making a careful diagnosis, and knowing the proper remedy to prescribe, if they were ignorant of the quality of drugs that were to be used in making up their prescriptions? It was necessary to have drugs made according to a uniform standard by a pharmacist who should not only be an honest man, but should feel that his calling was a high one. At present not a few manufacturers had only commercial interests in view, and therefore physicians had to limit themselves to the prescription of drugs which could be easily tested, or which came to them with the guarantee of a house of high standing. Why should physicians allow manufacturers to prescribe what remedies they should use in the treatment of their patients? Yet this was what was being done every day. Thousands of mixtures were continually being forced on their attention as specifics, and what was worse, the profession bought these mixtures, and even wrote testimonials in their favor. Among the members of the profession who were found endorsing nostrums were professors in medical institutions with pretensions to high standing. No matter who they were, he thought they should be dismissed from their positions, and allowed to devote all their time to the exploitation of the so-called remedies with which they had permitted their names to become associated. Of course, there were a few firms of repute that were doing all in their power to supply drugs of the requisite quality and strength. They aimed at what was called standardization, and their work in this respect was deserving of all encouragement. A body like the American Medical Association, however, could also do something to assist in bringing about a better condition of things. It seemed to him that a committee should be appointed to impress on the body having charge of the revision of the pharmacopœia the necessity of making more satisfactory provisions for standardization, and to memorialize Congress with the view of getting legislation passed that would at least ensure to the public the possibility of getting their drugs as free from adulteration as they could now rely on getting their butter and other commodities of daily use. All the skill and knowledge of physicians would continue to be thrown away so long as they had to depend on inert drugs and manufacturers of doubtful honesty.

Dr. A. B. LYONS (Detroit, Mich.,) who had the next place on the program with a paper entitled **Standardization of Crude Drugs and Galenical Preparations**, said the excellent paper they had just heard made superfluous a good deal that he had prepared to say. He then proceeded to speak of the natural division of drugs into 2 classes—those that could be tested by chemical process and those in regard to which they had to depend on physiologic experiment. He proceeded to give illustrations of the extent to which vegetable drugs varied in medicinal activity, and said that scientific medication required that preparations made from them be brought to some uniform standard of strength. Individual manufacturers supplied standard preparations, but many of their assay methods were confessedly imperfect. An imperfect method, he admitted, was often better than none. The *Pharmacopœia* of 1890 furnished standards and assay processes for opium, cinchona bark and nuxvomica. In the revision of 1900 this list would be greatly extended and the assay processes rendered more precise. Unfortunately standardization by physiologic experiment had been ruled out. The question vitally interesting to the physician was what standard shall be established? He should insist that the standards give him preparations identical therapeutically with those he had been accustomed to, when these were prepared from an average sample of good drug. In passing the author commented on the fact that the pharmacopœia was far behind the processes adopted by the leading pharmacists of the country for obtaining uniformity of quality and strength. In so far as standards were established, it was the duty of physicians to see that drugs conforming to them were used in making up of prescriptions; the enterprise of competing manufacturing houses of ethical character might be depended on to do the rest.

The chairman, in inviting *discussion* on the papers, said the subject was one of the greatest importance, and one in regard to which those aiming at uniformity in the strength of drugs should have the moral support of the profession.

Dr. HALLBERG (Chicago) said that the question, if not the burning one of the day in so far as therapeutics were concerned, was one of the most important that could be brought before them. Until the revision of the pharmacopœia, in 1880, there was no alkaloidal standard for any drugs. In the decade preceding that revision a great deal of work in the line of alkaloidal assay had been done by Dr. Lyons and others, and

it was thought that the principle of fixing the alkaloidal strength would be quite largely adopted, but by the time the Revision Committee got to work in Washington, it was found that the progress made was not sufficient to warrant the application of the principle to more than 3 drugs, opium, nuxvomica and cinchona, with preparations of the first 2. Since then this work had been going on apace. A number of the medical schools of the country—notably the University of Pennsylvania and the University of Michigan—had been devoting attention to the subject with the view of ascertaining the best processes that could be adopted for assaying drugs that could not be tested chemically. But whether the principle could be extended to every drug of alkaloidal or glucosidal character was still an open question. He was inclined to believe that it could not until the active principle of certain drugs, such as aconite and digitalis, were more clearly defined. Until this was done it would be a pretty difficult problem to know how to formulate a process and fix a definite standard of value for the drugs mentioned, as well as many others. No doubt the principle could be extended beyond the 3 drugs to which it at present applied, but he did not think it could be extended to a great many, except in a limited way. The physician ought certainly to have a criterion to go by whenever it was possible, and considering the number of competent men on the Revision Committee, he had no doubt that everything possible would be done towards supplying this.

Dr. F. J. WULLING (Minneapolis), speaking as a practical pharmacist, admitted that they were not yet in a position to adopt many of the assay processes that had been recommended. At the same time there was much that might and ought to be done in the direction of standardization. If they could not attain the ideal, they might at least take a step towards it. Much had been said about the lax methods of pharmacists in making up prescriptions, but it should not be overlooked that many physicians were equally lax in preparing them. The physicians referred to would do well to make themselves more familiar with the contents of the pharmacopœia. Of late many preparations had taken the place of drugs recommended in the pharmacopœia, and he knew of no good reason for this save the matter of convenience, and the fact that so many doctors did not know enough about the constituents of the medicines they prescribed. A physician who had included potassium iodid in many prescriptions had confessed to him that he had never seen the drug, and the same was true in regard to many members of the profession with respect to drugs in general. He thought that more attention should be given in the medical schools to the teaching of *materia medica and pharmacy*, and that the pharmacopœia should be made one of their textbooks. A recommendation to this effect from a body like the American Medical Association would carry much weight.

Dr. A. M. WILSON (Kansas City) said he had recently been invited to examine some students who had passed their prescribed time in the study of medicine, and he found that there was not a man of them who could tell the difference between a tincture and a fluid extract. The subject under discussion was one in which he had been interested for many years, and he was fully acquainted with the existent necessity for more uniformity. Some drugs varied so much in strength that one dose of what was bought in one store was sufficient to kill a dog, while that obtained in another store was almost if not quite inert. At the same time, looking at the matter from the standpoint of a teacher, he was sure that they would never bring about harmony between the druggists and the prescriber until doctors got to the position of knowing when they first came out of college what drugs were. It was too common a mistake in the profession in these days to think that if they could make a correct diagnosis, everything else was plain sailing. There was too little in the way of rational practical therapeutics in the textbooks used in most of the medical colleges. They could never hope to get any settlement of this question until the doctor knew as much as the druggist along the lines of these essential facts. It was their ignorance of drugs that allowed so many of them to fall victims to the polite and suave representatives of houses which called themselves pharmaceutical, but which it was an insult to reputable firms to speak of under that designation.

Dr. W. L. DICKERSON (St. Louis) said students of medicine should spend a much longer time in *studying therapeutics and materia medica*, but at the same time the pharmacopœia should be arranged so as to prevent such variations as were now possible in the strength of drugs.

The chairman said they had wandered somewhat from the subject of the papers, but perhaps not without benefit, the matters that had been touched on being also of importance. As to standardization, to which he had given a good deal of attention for some time past, he agreed that it should be brought about as fast as possible. As a member of the Revision Committee he might be permitted to discuss the pharmacopœia a little more freely than others had done. He had always wished that it could be made of such a character that medical men could be interested in it, and come to make use of it as much as druggists did, his belief being that it should be the common standing ground of the two professions. The difficulty, however, was this, that it was made for the druggist, and was not particularly useful to the medical man. It con-

tained a great deal that every medical man was expected to know in his student days but for which he had no particular use afterwards. There were many in his own position. He never handled drugs at all. For years he had nothing to do with handling them. He only knew the effects he wanted to produce by their agency, and when these results followed he knew that he had got drugs of the proper strength. To do this, however, it was necessary for him to specify. If instead of doing so he left it to the druggist to decide which make he should put in prescriptions, the variations were liable to be so great that they could not be depended on. Other physicians had the same experience, and consequently they made a point of specifying the make of drug they wished. The pharmacopeia could be made more useful to medical men if its character could be modified somewhat. What they wanted to know about chiefly was new remedies, and these should be included in the work somehow, whether tested or not. They might be put in an appendix for that matter, but they should be included in the book somewhere, so as to make it an encyclopedia of medical information, of course with as many details as possible about tests and other essential facts. On the other hand the volume might be relieved of a great deal that it now contained in regard to old remedies which were still used in some parts of the country, but which the majority of physicians had ceased to employ. In regard to the subject of teaching, he was glad to observe that some of the leading schools were commencing to give courses of lectures in pharmacology, while in a few there were also courses on the physiological action of drugs. The result would be that the profession generally would be much better informed than it was now in regards to drugs.

The Treatment of Pulmonary Tuberculosis: This subject was discussed in a symposium of papers at the afternoon session. The first speaker was Dr. S. E. SOLLY (Colorado Springs), who dealt with **The Indications for and Utility of Altitude Treatment.** While acknowledging the good effects that were now produced by sanatorium treatment, he said the advantages to be derived from climate should not be forgotten. In speaking of altitude as a factor in the treatment of tuberculous patients they must first consider the physical conditions and then the physiologic effects. The first thing that distinguished high elevations from other places was the diminished barometric pressure, and the effect was that a patient was soon elevated from his anemic condition into one of general health. The effect of altitude was similar to that of iron, arsenic, and other therapeutic agents which were employed for the purpose of improving the blood. The effects on the circulation and respiration were both temporary and permanent. The immediate effect was to increase the rapidity of the action of the heart, and another effect was to cause the lungs to become more active. Chest measurements had been found to be increased by residence at high levels to a greater extent than by that at sea level. The change from day to night—cold or cool nights following warm days—was also found beneficial, acting like a cold douche after a warm bath. The aseptic conditions of the air at high altitudes has likewise to be taken into account. Altitudes might be divided climatically into 3 classes—those that were cold, those that were warm, and those that were hot relatively. This matter of temperature was almost entirely a matter of altitude modified by the distance from the equator. To find cold places equal to those in the Alps it was necessary on the American Continent to go to Canada, that was if they wanted them at the same altitude. Hot temperatures they got in Arizona and New Mexico. Colorado occupied a position between the 2 extremes. In considering the cases they should send to high altitudes, it was essential to consider how the persons became tuberculous. Although the bacillus was the central factor in the process of tuberculous degeneration, it acted differently in different people, and arose from different causes. The condition of the patient's general health, in other words, was important. Tubercular patients might be divided into 3 classes—the purely tuberculous, the catarrhal and the pneumonic. These terms were subject to misunderstanding and abuse, but they served to mark a convenient division, though of course they were all tuberculous and there was more or less catarrh in every case. The important point was to distinguish those cases that arose like lightning from a clear sky, without any apparent cause. These might be called cases of primary tuberculosis. Such cases did well, as a rule, at altitudes and in such a climate as Colorado. Catarrhal cases were peculiarly susceptible to weather, and this fact had to be borne in mind in selecting a climate. Pneumonic cases were not so well suited to the higher elevations; they frequently did better on lower ground and in a less dry atmosphere. Individual habits and predilections, financial circumstances and a variety of other considerations had all to be taken into account in deciding whether it was desirable or not to send a patient to a particular locality. He hoped that the new sanatorium might be the means of bringing about a better selection of the patients whom there was a possibility of doing the maximum of good for in different regions.

Dr. NORMAN BRIDGE (Los Angeles) read the next paper, which was on the **Adaptability of Southern California and Similar Climates to the Needs of Consumptives.** Among the advantages he claimed for Southern California were its relative dryness, the small rainfall, the large amount of sunshine, the fact that it had both high and low altitudes, and the mildness of the climate all the year round, which permitted

patients to spend as much of their time as they pleased, or their physician thought desirable, in the open air.

Dr. A. BURROUGHS (Asheville, N. C.) reported the conclusions he had drawn from 19 years' experience with **Creatosol in Tuberculosis.** He dwelt on the importance of using a pure creatosol made by a method which he described, and said it should be used in large doses and continued for 2 years after all symptoms had disappeared. He thought it had been proved to give better clinical results than any other medicine.

A paper on **Specific Therapeutics in Pulmonary Tuberculosis** was contributed by Dr. ARNOLD C. KLEBS (Chicago). He reviewed the culture products and serums used in the treatment of tuberculosis, their method of application and their results; criticised pharmaceutical preparations of alleged specific value, food preparations, etc., and concluded by describing sanatorium regime as practised in and outside of institutions. The conclusion he came to was that there were no drugs possessing specific virtues for the cure of the disease, and that the best treatment to be followed by the general practitioner was the closest possible imitation of the methods pursued in the sanatoria, always keeping in mind the advantages of climate when they could be secured without too great a sacrifice.

Dr. NORMAN BRIDGE, by request of the chairman, then read another paper he had prepared with the intention of reading it in the section devoted to **Hygiene and Sanitary Science.** It dealt with the **Proper Management of the Tuberculous Lung.** The profession he thought had been too ready to follow the theories of the lay public, and the consequence was that they had many rules of action that ought to be relegated to the rubbish heap. What was most essential, in his opinion, was to give rest to a sick lung, and this he thought could best be done by external fixation. Bandages of plaster-of-paris he found particularly useful.

The papers were discussed by Dr. DELANCY ROCHESTER (Buffalo), Dr. S. G. BONNEY (Denver), Dr. C. L. MINOR (Asheville, N. C.), Dr. R. C. MOORE (Omaha), and others, most of the speakers expressing dissent from the opinions advanced by Dr. BURROUGHS as to the great value of creatosol.

Treatment of Pneumonia.—Papers on this subject were read by Dr. DELANCY ROCHESTER and Dr. W. L. DICKERSON, the former contending that the most serious element in the disease was toxemia, and that in the absence of an effective antitoxin it should be eliminated by means of the skin and the bowels, while the latter entered a plea for the use of cardiac depressants, by means of which he said he was able to abort attacks when he was consulted early enough. In the course of the discussion which followed, Dr. Rochester said that as pneumonia was an infectious disease, and not an inflammation, he could not approve of the methods followed by the reader of the other paper. Dr. J. F. SPELLMAN (Anaconda, Mont.) Dr. MOORE (Omaha) Dr. HOFFMAN (St. Paul) and Dr. MARY MCCOY (Duluth) also spoke.

[To be concluded.]

Section on Cutaneous Medicine and Surgery.

FIRST DAY.

Address of Chairman:—Ancient and Modern Conception of Syphilis: W. L. BAUM traced the development of the conception of syphilis from fifteenth century to present time. In 1492 syphilis was called a new disease, due to such causes as influence of planets, unseasonableness of the air, and bites of venomous insects. No great epidemic of syphilis has occurred since the fifteenth and sixteenth centuries. The animalcule theory of the causation of syphilis gained credence in the seventeenth century and developed into the germ theory of today. The following century saw the clinical demarkation of diseases due to venery, and in 1852 the distinction was made between hard and soft chanere. Lues is now regarded as a specific disease whose toxin arrests development, and whose course is modified by constitution attacked. There remain as problems for the twentieth century, the early securing of a diagnosis where primary sore cannot be depended upon, the determination of the process which produces the serious symptoms of syphilis, and a satisfactory working out of the bacteriology of the disease. Treatment should not only include the constitutional effects, but also be directed to the overcoming of the marked mental depression.

Pathology and Treatment of Cutaneous Cancer, with Special Reference to its Nonparasitic Nature, was the next paper. M. L. HEIDINGSFELD: Only the portion of the paper dealing with treatment was read. Zinc chloride, white arsenic and caustics have been the old established remedies. Surgeon's knife has been used since introduction of anesthesia, but has not realized our fondest hopes, as 75% of cases are or become beyond the reach of the surgeon's knife. Statistics show that only 30% of cases are cured. This fact, coupled with nonchalance of the surgeon and skepticism of laity, accounts for success of cancer quacks. In a series of cases has had great success with a mixture of equal parts of arsenious acid and gum arabic, enough water to make mixture, consistency of butter, cocaine crystals to relieve pain, and 10% of glycerin to prevent drying. One application for 12 hours is usually sufficient. Follow by antiphlogistin or soothing preparations. This combination is prompt in action, is easily limited, spurs the healthy tissue and has a specific action against cancer. It is an

ideal remedy in mild cases, and has been successful in a series of 9 cases.

A paper on the Increasing Prevalence of Contagious Skin Diseases, by H. W. STELWAGON, was read by title.

Syphilis and its Relations to Blastomycetic Dermatitis.—H. G. ANTIPOY said that evidence up to the present time is not sufficient to warrant us to regard blastomycosis as a separate disease due to the yeast fungi. Lesions which others would classify under this head are probably forms of verrucous tuberculosis, or as suggested by the study of the case in literature, are one of the vegetating forms of syphilis. Carefully analyzing this case, one concludes that the character of the infiltration border, the size and rapidity of the development of the plaques, the histopathology of the lesion, the results of treatment, and the varied forms of yeast fungi found, do not permit us to regard blastomycosis as a disease *sui generis*. As now recognized it has no distinct entity but is a disease which only the minority can diagnose and cannot be picked out by the majority. A spirited discussion followed and the general trend of opinion was opposed to above.

A paper by W. S. GOTTHEL on Adenoma Sebaceum of the Nonsymmetrical Type of Darier was read by title.

Notes on a Case of Keratosis Follicularis (Parospermosis).—J. ZEISLER reported a case of this rare disease in a boy 21 years old. The eruption commenced when the patient was 8 years of age, and has gradually increased in severity until it now covers almost entire surface of body. Has been treating patient for 6 weeks and stimulates glands to throw off crusts by use of pilocarpin, carefully watching effect of drug on heart.

The motion carried that chair appoint a committee of 3 to draft a constitution and bylaws to govern this section, and to report at the next annual meeting.

SECOND DAY.

The Nominating Committee reported for president, H. W. Stelwagon; for secretary, R. R. Campbell. The secretary was instructed to cast a unanimous ballot for these candidates.

Demonstration of Cases—BURNSIDE FOSTER: CASE I.—Lupus vulgaris on the left arm of a man 27 years of age. Has been treated with hot air. Lupus erythematosus somewhat suggested by cicatrix, but following discussion did not support this view. CASE II.—A large congenital nevus pigmentosus on the back of a young man. Microscopic section resembles structure of melanotic sarcoma. CASE III.—Notes on a case of leprosy. This leper was born in Minnesota and has not been out of the State.

Lantern Slide Demonstration on Skin Cancer: M. L. HEIDINGSFELD. The present tendency is to ascribe causation of epithelioma to parasites. Clinical evidence does not warrant this. Incongruity between parasites in tissues and in cultures is a weak point. Successful treatment of blastomycetic dermatitis with potassium iodid strongly suggests syphilitic origin. Has not been successful in finding blastomyces in these cases. At present too many links are poorly forged or are entirely wanting in the chain of evidence which would establish the parasitic origin of cancer. A disturbance of the normal relation between epithelial cells and the restraining to connective tissue affords a better hypothesis. A stimulus epithelial cells, a weakening of the restraining power of the connective tissue, or both of these factors combined are the main factors in the etiology of cancer.

Lantern Slide Exhibition Showing the Clinical, Pathologic and Bacteriologic Features of 11 Cases of Blastomycosis of the Skin, by J. N. HYDE and F. W. MONTGOMERY. The slides shown were prepared from cases in all of which, with one exception, blastomyces have been demonstrated, both in tissues and in culture. In that one case the fungus was not found in the tissues but was subsequently demonstrated in culture. Blastomycosis is a chronic disease, attacking the more exposed regions of the body, and now has a recognized organism. A clinical picture of the disease was established by a series of slides, showing character, location and extent of lesion. Blastomyces were shown in tissues and in culture and compared. There is a bare possibility that these organisms are saprophytic, but an overwhelming mass of evidence leaves no reasonable doubt but that they are the cause of blastomycosis.

Lantern Slide Demonstration of the Exanthems, from Original Photographs, by W. T. CORLETT. **Variola.** Slides showed seat of eruption and various stages of disease. Present epidemic characterized by mildness of attack. Eruption appears first on forehead, nose, on the backs and palms of hand. Induration on second day is very characteristic. Characteristic features of lesions are induration, umbilication in some place and at some time, and frequent involvement of nape of neck. **Varicella.** Diagnostic points are multiform appearance of lesion, noninduration, wide area of erythema, transparent vesicle, and the appearance of the eruption at first on the back and trunk.

Lantern Slide Demonstration of Variola: POLITZE (New York).—Period of umbilication is short and often is not recognized. The eruption in adults appears on palms of hands and soles of feet. The eruption of varicella never appears in adults in these localities, but may in children. Lesions are more marked where there is pressure or irritation. Soles of feet show characteristic eruption after it has disappeared from remainder of body.

Lichen Hypertrophicus: D. LIERTHAL.—Slides show pathologic changes in layers of skin.

Epidermolysis Bullosa Hereditaria: L. E. SCHMIDT.—The case has been under observation for 2 years. Microscopic findings are practically the same as in recorded cases, but findings in blood examination differ.

Report of a Case of Epithelioma of Long Duration and Beginning in Early Manhood: W. FRICK.—This carcinomatous lesion on back, between shoulders, has endured for 35 years. Patient is now 54 years old and has been under observation for 5 years. The lesion is not a typical carcinoma either clinically or microscopically.

[To be concluded.]

Section on Nervous and Mental Diseases.

FIRST DAY.

The Relation of Nervous and Mental Diseases to General Medicine.—In speaking of the tendencies of modern methods of investigation, Dr. H. A. TOMLINSON calls this the age of mechanics. Mechanical methods are more alluring to the average investigator, because they require less mental effort. Renal disease is most important in all forms of mental and nervous disease. In nearly all cases admitted to the hospital for the insane he found evidence of renal inadequacy. His observation as a consultant also confirms the belief that this condition prevails in private practice as well.

Dr. FRANK P. NORBURY (Jacksonville, Ill.), read a paper entitled **Etiology of Paretic Dementia.** The lesion of this disease is a meningoencephalitis; parenchymatous atrophy. The essential changes involved the cortex, the basal ganglia, and the chord. It has been claimed that there should be no doubts of the etiology in these days of the prevalence of syphilis, in fact, "where there is no syphilis there can be no paretic dementia." It is not primarily a syphilitic lesion. In a study of 200 cases under his observation a history of syphilis was present in 60%. Alcohol and overwork with other excesses should be considered as etiologic factors only. He cited 3 cases, in 1 of which paretic dementia followed malarial fever, in another typhoid fever, and in a third rheumatism. He believes that the acute infectious fevers are a common etiologic factor. These cases may have been purely coincident, but he believed them to be causative as above. He also believes that a vulnerable condition of the cell is necessary to its occurrence, and, therefore, that heredity occupies an important place as an etiologic factor. In summing up he stated that he believed syphilis to be present in all cases of paretic dementia, but that the infectious fevers and heredity are important secondary causes.

Discussion.—Dr. D. R. BROWER (Chicago) took issue with the essayist on the occurrence of syphilis in all cases of paretic dementia. He believes that heredity is very limited in its influence, if it acts at all as a cause. He cited a case in which paranoia and paretic dementia occurred simultaneously in the same individual as a complicating psychosis. In his experience, syphilis does occur in these cases in from 60% to 80%, but in many instances he believes that mere overwork, stress of life, or excessive indulgence in alcoholics, etc., are alone responsible for its occurrence.

Dr. CARPENTER believed with the last speaker that there are cases of paretic dementia in which it is impossible to obtain a history of syphilis, and that it is possible to find it as the result of other factors alone. He mentioned the fact that the negroes of the South did not have this disease until after the close of the Civil War. He believed that sexual excess, business stress and alcoholism are sufficient in one having a neuropathic constitution to produce this disease of themselves. He cited cases where great harm might be done the individual, as in life insurance examination, or army examination, where a diagnosis of preexisting syphilis were made because of the development of the dementia.

Dr. DEVEXY said that he had seen 6 or 8 cases in which it seemed possible to exclude syphilis altogether, unless the hereditary type were assumed, and this he thinks would not be fair.

Dr. SYDNEY KUH (Chicago) said there is a very large amount of evidence that syphilis is present in all cases of paretic dementia and also tabes, but as a matter of fact it is impossible to say that it is always present. The character of syphilis has changed very materially in the last 3 or 4 generations; it was formerly more in the nature of an acute infection and often caused death early. History seems to show that certain cases of syphilis have a tendency to attack the central nervous system; in other words, 2 or 3 men have been known to become infected from the same individual, and in each this disease of the central nervous system may develop.

Dr. MAYER (Pittsburg) was totally ignorant of cause of paretic dementia but believed that it must be based on more scientific grounds. When we study other diseases we take a different course as to their pathology, and do not state arbitrarily that they are due to this or that infection. It may be due to other causes; to toxemia, and even that traumatism may act as a factor in its causation.

Dr. TOMLINSON believes that because syphilis is present in these cases it is not necessarily the only cause; certainly, the syphilitic lesion cannot be demonstrated and is not present in many of the cases.

Dr. NORBURY, in closing, said that business stress and other excesses as a factor in the etiology do not hold good, for many cases come from the rural districts where such conditions are certainly not present. Caution in diagnosis should be exercised; the general practitioner is particularly liable to withhold his diagnosis too long, and the period at which treatment might be beneficial is passed ere the diagnosis is made. There is undoubtedly early in the history of these cases a circulatory disorder, as pointed out by Dr. Folsom, of Boston, some years ago, and at this stage we may reasonably hope for benefit from treatment.

Dr. F. SAVARY PEARCE (Philadelphia) then read a paper entitled *Symptomatology of Cerebral Hemorrhage*, going to considerable length into the considerations of symptomatology; he spoke of some unusual symptoms and stated that in 50% of all cases the hemorrhage occurred during the night, and that on awakening the patient found a varying degree of hemiparesis. All cases of suspected hemorrhage, however slight, should be kept absolutely quiet for a period of several days. He stated that spasticity in the part affected is greater in cases of ingravescent hemorrhage than in hemorrhage into the internal capsule.

Discussion: HUGH T. PATRICK said the question as to the mystery of the occurrence of cerebral hemorrhage being more frequent at night is like the problem of the jar of water containing the fish weighing exactly the same as when the fish is removed; the answer to the argument is that it is not so. This statement regarding cerebral hemorrhage came to light prematurely and was never visible anyway. The theory of neuron retraction has no basis upon which to rest, and is not an established fact, and Dr. Pearce has wasted a good deal of cerebral energy in dwelling upon these points.

Dr. PUNTON noted that the writer had failed to bring out the importance of coma as a symptom of cerebral hemorrhage. It is an important symptom, and the deeper the coma and the longer it lasts the more unfavorable the outlook; he agrees with the writer that the diagnosis of cerebrohemorrhage is at times very difficult indeed. Cerebral hemorrhage is occurring earlier than formerly; it is not at all uncommon nowadays to find it in individuals 30 to 35 years of age, whereas we were formerly taught that it was essentially a disease of middle life.

Dr. JONES (Minneapolis) states that to him the most puzzling cases are those with the symptoms of hemorrhage, but in which no hemorrhage is found at postmortem.

Dr. CARPENTER said that he had seen a number of cases of ingravescent hemorrhage within the past year, and he had noticed an early tendency to sleepiness and drowsiness, gradually passing into coma, and he believed this to be a characteristic of large surface hemorrhages.

Dr. PEARCE, in closing, said the inclusion of thrombosis and embolism make it still possible that it occurs in the majority of cases at night, while it is true that the neuron retraction theory is not established, yet it is satisfactory to cling to a theory so fascinating until something more definite shall take its place. A definite diagnosis in cerebral hemorrhage is one of the most difficult things in neurology.

Dr. PORTER (Chicago) read a paper entitled *What Can Be Done for the Epileptic in a Medical Way*. He dwelt at length upon the usually unsatisfactory results of treatment, and took the ground that by a careful and painstaking attention much better results may be obtained. The primary cause of epilepsy, he believes to be due to malnutrition of the brain-cell, brought on by constant congestion of the cerebral blood vessels; he claims that sensitive areas on the scalp which may be definitely outlined in nearly all cases are due directly to this congestion, and that remedies applied or administered to relieve such congestion are the rational treatment for epilepsy.

This paper was discussed by Drs. PUNTON, KUH, PATRICK, RIGGS, PEARCE, MOYER, WARNER and DEWEY, all of whom took issue with Dr. PORTER as to the etiology and pathology of epilepsy, and all agree that the treatment is usually unsatisfactory, and that there is but one remedy, viz., the bromids, which has any appreciable effect upon the course of the disease.

SECOND DAY.

Dr. C. E. RIGGS (St. Paul) read a paper on *The Treatment of the Acute Psychoses in Private Practice*. The various forms of mental perversion usually come first under the observation of the general practitioner. As for the acute insanities their prognosis varies in proportion to their early recognition and treatment. He believes that the causes of insanity are not confined to the central nervous system, but that they are primarily due to a general physical condition. It is only a short time since it was thought that the State Hospital or the private institution were the only places where the insane persons could properly be cared for. He is convinced from large experience that home care in properly-selected cases will shorten the attack by a period varying from a few weeks to several months. No person should be sent to a State hospital who can properly be cared for at home. He does not mean to antagonize the State hospitals; they are excellent institutions and are doing splendid work in their particular field, but there is a considerable class that can with great advantage be cared for at home. Early recognition and prompt treatment is very important in all cases of acute insanity. Properly adjusted rest and exercise, the administration of large quantities of milk (140 ounces per day)

together with eggs, beef juice, malt extract, etc., supplemented by whisky and strychnia to overcome excitement, is in brief outline the treatment recommended. The nurse is another factor of utmost importance in the care of these cases; she should possess special knowledge, as well as proper personality in order to be successful. The recommendation is often not only a mistake but a crime; cases of paranoia are always harmed by it, as are also many cases of melancholia.

Discussion.—Dr. DEWEY (Wisconsin) said it was his experience that the general practitioner seldom tries to care for cases of insanity at home; more often the opposite mistake is made of sending away cases which could more properly be cared for at home. Patients with melancholia are not benefited by travel, because they are incapable of being interested in their environment.

Dr. PUNTON (Missouri) emphasized the isolation of the patient as of great importance in the treatment of these cases. This point should be impressed upon the general practitioner and an early diagnosis always sought. Harm is often done by sending such patients to the ordinary city hospital where the surroundings are such that they cannot be properly cared for.

Dr. NORBURY (Illinois) emphasized the idea that insanity is a problem of internal medicine.

Dr. DREW (Massachusetts) took exception to Dr. Riggs' free use of whisky in the treatment of the acutely insane.

Dr. EVERTS (Ohio) concurred in the main in the views of the writer.

Dr. TILLER (Iowa) is opposed to the home treatment of the insane, since under his observation it has proven a failure, because of the lack of intelligence and the means of the relatives to carry it out properly.

Dr. LANGDON (Ohio) who has had neither hospital nor sanitarium experience, is inclined to favor the home treatment, although in the great majority of cases poverty will prevent this being carried out.

Dr. PEARCE (Philadelphia) endorsed the method of forced feeding by means of the stomach tube when food is refused.

Dr. TOMLINSON (Minnesota) believes that the idea that it is harmful to insane persons to keep them together is not true; on the other hand, it even results in benefit to them; the chronic cases having a quieting influence over the acute. It may be true that acute cases can be cared for successfully at home, but the majority of cases do far better in the institution. The thing that prompts people to send the patient to the hospital is not the welfare of the patient, but the convenience of the family.

Dr. KIERNAN (Chicago), from an experience in both hospital and private practice, favors the institution; the only feature of home care which he would commend being the avoidance of commitment.

Dr. RIGGS, in closing, said the distinction between the neurologist and the alienist is a thing of the past. He further emphasized the importance of forced feeding, and defended the free use of whiskey to quiet excitement for a limited time in selected cases.

A symposium on *Syphilis of the Brain* was presented by Dr. HUGH T. PATRICK (Chicago), RICHARD DEWEY (Wisconsin), and F. W. LANGDON (Ohio). Dr. J. T. ESKRIDGE (Colorado), being detained at home by illness, his paper was read by title only.

Dr. PATRICK began by presenting 7 general postulates regarding popular fallacies relative to syphilis of the brain: (1) Brain syphilis occurs most frequently in the first year after infection, next in frequency in the second year, next the third, next the fourth, next the fifth year and so on; (2) in diagnosis the absence of the history of infection should be accorded little, if any importance; (3) the term syphilis of the brain is not synonymous with gumma, indeed, the condition is not gummatous at all; (4) the lesion is most frequent in arteritis, next in meningitis, and least frequently gummatous; (5) paralysis caused by brain syphilis outside of the cranial nerve is very irregular in its distribution; that is, it may be hemiplegic, monoplegic, or any irregular type; (6) a very high proportion of cases are not at all amenable to treatment; (7) it is never a system-disease. Headache occurs in 75%, and is usually severe. Transient attacks, dizziness, etc., are frequent; these occurring between the ages of 20 and 40 should always awaken suspicion. A somnolent, semistuporous condition occurs more frequently in lues than in any other brain disease.

Dr. DEWEY presented the *Psychoses in Cerebral Syphilis*. He raised the question whether any psychographic changes characteristic of this disease may exist; going carefully over the subject by other writers he draws the conclusion that we have not yet sufficient evidence to assume that they do. Too much has often been taken for granted in claiming syphilis and then connecting mental symptoms with it. It is necessary to exclude also other complications before this conclusion may be reached, the disease being proven and other things excluded it is still necessary to connect psychopathic history with findings at the postmortem. Our knowledge is, as yet, too insufficient to admit of deductions of value on this point.

Dr. LANGDON (Ohio) presented *Syphilis of the Nervous System, its General Pathology, with Remarks on Treatment*. In describing the initial lesion he describes it as a primary, localized parenchymatous and interstitial neuritis. A wound plus an infection. A secondary or tertiary lesion, he describes as an exudative root neuritis. The early or febrile period is a generalized toxemia. Locomotor-ataxia and paresis

are usually associated with syphilitic disease, but may occur without this infection. He referred to the method recently suggested of treating this disease in the acute stage by means of serum taken from the individual in the tertiary stage. The production of an artificial antitoxin was also mentioned. These papers were discussed by Drs. Norbury, Carpenter, Punton, Moyer, Kuh and the essayist in closing.

Dr. A. J. PRESSEY (Cleveland, O.) presented a paper entitled **Suggestions for Lessening the Frequency of Relapse After-treatment of Morphinism.** Authorities have variously stated that from 50% to 95% of all cases relapse after so-called cure, but the writer believes that the former figure is more nearly the truth, and that if the cases of degeneracy be eliminated the percentage would be reduced to even 25% or less. Some of the commoner causes of relapse are the inability of the physician to retain his patient sufficiently long under treatment; the frequent use of alcoholics, of tobacco, and of other narcotics. Do not despair of cure in any case in which the patient shows a desire to recover; on the other hand, some of the apparently most hopeful cases do relapse. The drug should be very gradually withdrawn, and that not steadily and continuously, but increasing and diminishing according to the patient's comfort, until it is reduced to the minutest fraction of the grain before being discontinued altogether. Static electricity is mentioned favorably as a factor in treatment. Careful and minute personal attention to details of control are absolutely necessary. Institution life has good effect upon these cases.

Dr. CROTHERS (Connecticut) in discussion took issue with the writer upon the gradual withdrawal of the drug. He believes that in most instances it may, with benefit, be abruptly or rapidly withdrawn. The system does not absorb more than 4 grains at a time, even though the dose be 20 grains. The needle fascination is the hardest feature to overcome. By means of hydrotherapy, suggestion, and substitute drugs the patient may be sustained and kept comfortable while a cure is being effected.

Dr. LAMBERT OTT (Philadelphia) presented a paper entitled **Injuries, Feigned and Real, with their Differentiation and Medical Legal Aspect.** Injuries are of 2 classes, visible and invisible; the effects of invisible injuries are usually sensory, while those of the visible are motor and trophic. Subjective pain is not easily discovered, but the results of pain are many times easy to discover. The pulse-rate while pressure is being made over the painful area is a valuable means of diagnosis. The frequency with which modern attorneys and physicians bring cases of this type into the courts constitute a species of modern robbery; $\frac{1}{4}$ of the cases of personal injury are of this type. Corporations should employ a physician to guard their interests, watching all cases of personal injury throughout their course. A jury of medical men to determine the exact physical condition, and also to determine the amount of damages is recommended.

Dr. MOYER, in discussion, thought that these measures would require the elimination of a good portion of the Magna-Charta and also the revision of the State Constitution, if not that of the United States as well.

Dr. CRAFTS (Minnesota) took issue with the writer as to the frequency with which personal injury cases are fraught with rascality. He believes from the tone of the writer's paper that he must be a corporation surgeon, and called attention to the fact that as there is more money on the side of the corporation the influence upon the expert is likely to be greater upon this side than the other.

Dr. DEWEY emphasized the importance of suggestion in these cases, even when there is no intention of deception on the part of the patient; the examination of the physician in itself is liable to produce such suggestions.

Dr. GASSES (Wisconsin) said that so long as we have our present system of subjective and objective pain there will be this confusion; there is but 1 pain, and that is pain; the pulse is the best index of any condition arising from pain.

Dr. KIERNAN (Chicago) agreed with the premises of the essayist.

Dr. OTT, in closing, invited those who disbelieved the rascality exhibited in the average case for personal injury to come to Philadelphia for a short visit, where he feels they will be converted.

[To be concluded.]

Section on Ophthalmology.

FIRST DAY.

The chairman, Dr. J. A. LIPPINCOTT, delivered a short address of welcome. The report of the committee was heard after which the reading of the papers was taken up.

Treatment of Strabismus; Measures other than Operative.—Dr. EDWARD JACKSON (Denver, Col.). In order to secure the desired results, treatment is required whether the case comes to operation or not. When the strabismus is detected treatment should begin immediately. There are many grades of binocular vision and may exist with amblyopia or squint. When development is interfered with by the strabismus, means must be taken to overcome the defect. We must first make it possible for the eyes to act in unison,

second, establish normal enervation, third, remove all obstacles to binocular vision, and fourth, to assist and train binocular vision. The correction of the ametropia was dwelt upon at length and impressed as the most important measures at our command. A full correction is necessary, preferably made by retinoscopy. Other important measures urged are: (1) Bandage excluding fixing eye; (2) use of cycloplegics for long periods of time in fixing eye; (3) stereoscope; and (4) reading bar.

Treatment of Strabismus; Operative Measures.—Dr. C. F. CLARK (Columbus, Ohio) said that the first effect of tenotomy is over-correction, which rapidly diminishes and in 3 or 4 days is overcome. The operation for advancement is much more tedious than tenotomy, but with a careful procedure an over-correction is seldom met with and the ultimate result is satisfactory, while relapse is a frequent occurrence after tenotomy. Even though falsely directed the deviating eye moves in harmony with the other, and to tenonize one of this group of muscles would be an absolute loss of power, while an advancement or resection would be really adding strength to the muscle involved. The writer's method of resection was described in detail.

Strabismus; its Treatment.—Dr. A. E. DAVIS (New York, N. Y.) This paper was read by invitation and took up most of the modern approved methods of treatment of strabismus, both operative and nonoperative. Panas' method of tenotomy was described and when surgical interference was necessary this method was used to the exclusion of all others, even in low degree of squint. In nonoperative methods the careful correction of any refractive error was paramount.

The Cosmetic and Visual Results in Squint: Dr. J. M. RAY (Louisville, Ky.): In 100 cases of convergent strabismus, observed in private practice during the last 4 years, 76 were monocular squint and 24 alternating squint. The early age at which many of these cases are seen prevents a study of the visual acuteness. In all cases where the objective test could be made, a cycloplegic was used and the refractive error corrected with almost immediate improvement. In some cases after correction the amblyopic eye improved, while the fixing eye became worse. Rarely was it possible to produce binocular vision. Glasses were invariably prescribed before any operative interference was attempted. Cosmetic result may be good and still one eye be amblyopic.

Discussion: Dr. SAVAGE (Nashville, Tenn.) said that if either advancement or tenotomy alone was done, then do an advancement. He believed, however, that a complete tenotomy of a rectus muscle should never be done. He advocated advancing one muscle and cutting the other.

Dr. BAKER (Cleveland) was in favor of the exclusion bandage and the midriatic, surgical procedure always being the last resort.

Dr. HORTZ (Chicago) believes in dividing the effect of operative treatment on both eyes to preserve the harmonious action of the eyes. In alternating strabismus he does a single tenotomy with cure.

Dr. BLACK (Denver) has done Panas' operation, except that he did not cut the muscle, simply stretched it, with good results.

SECOND DAY.

The Origin and Development of the Instrument, Together with a Description of the Historic Exhibit of the Ophthalmoscopes and the Publications on Ophthalmoscopy, prepared for this meeting by H. Friedenwald, of Baltimore, Md. This interesting paper was written to commemorate the fiftieth anniversary of the invention of the ophthalmoscope. The experiments which led to its invention, a description of the original instrument, and the many improvements which have led up to the modern instrument was treated in a most pleasing manner. In the exhibit hall was a valuable collection of very old and rare historic instruments, charts, papers, and manuscripts, which have been loaned to the writer. In closing the paper the writer desired to thank particularly Dr. C. A. Wood for his assistance in gathering the collection, also to many other doctors and instrument houses. It was his earnest wish that the Surgeon-General be urged to establish a permanent museum of ophthalmologic apparatus at Washington.

The Life of Helmholtz: Dr. CASEY A. WOOD (Chicago, Ill.). The sketch on the life of Helmholtz seemed a most fitting close to the previous historical paper in which he played so prominent a part.

Tarsadenitis Meibomica: Dr. M. F. WEVMAN (St. Joseph, Mo.,) defined this condition as a subacute or chronic inflammation of the meibomian glands and tarsal cartilage. In enumerating the subjective symptoms he laid stress upon the smarting and itching of the lids and a tendency to lachrymation, and the objective symptoms of tumor, drooping of the lid, nipple-shaped gland-mouths and the alligator-skin appearance of the conjunctiva. Many chalazios that undergo suppurative extend between the layers, one to the other producing a fistula containing much granulation tissue which he thought was a cause of many relapses. Treatment was thorough curetment and 5% protargol injections.

Report of a Case of Retroflexion of Iris: Dr. A. A. HUBBELL (Buffalo, N. Y.) described the case of a man who fell from a wagon striking on the side of the head. The patient never had previous disease or injury to the eye and vision was

acute. When first examined, the cornea was hazy, tension diminished and anterior chamber filled with blood. No rupture of any tissues of the eye. Later the blood absorbed leaving a few shreds which in time also completely absorbed. Ophthalmoscopic examination failed to reveal either the iris or lens. In a few weeks' time tension was normal and aside from aphakia and loss of iris, the eye looked normal. The theory is that the lens was dislocated and absorbed, while the iris was forced back and turned in against the ciliary body where it was retained by the hemorrhage until it was permanently anchored. With a spherical lens vision was $\frac{1}{12}$. The writer could find but 7 more cases recorded.

The Nominating Committee presented the names of Dr. Frank Allport, of Chicago, for chairman, and Dr. C. A. Veasey, of Philadelphia, for secretary. The report was accepted unanimously.

Nonoperative Treatment of Heterophoria: Dr. G. M. GOULD (Philadelphia) believes, properly speaking, there is no operative treatment for heterophoria. In his private practice, heterophoria was, in a large majority of cases essentially innervational in character, and hence required no surgical treatment. The nonsurgical treatment consists of accurately correcting the ametropia, combining a prism with spherical lens, if necessary, and gymnastic exercise. He declares he has not a dozen patients wearing prisms, the correcting lenses being sufficient to relieve all symptoms.

Surgical Treatment of Heterophoria: Dr. G. C. SAVAGE, Nashville, said that no case of innervational heterophoria should be operated upon, neither should a case which can be cured by gymnastics, or which is produced by a small error of refraction, receive surgical treatment. Many cases do not receive benefit from lenses or gymnastic exercise and must be operated upon. To obtain a cure from surgical methods there must be an alteration of the tension of the muscle and a change of plane of action. The operation consists of dividing the central fibers of the muscle so as to allow the peripheral fibers to be of equal strength. Never cut the tendon completely in heterophoria. If too much is cut, modify by taking up Tenon's capsule.

Discussion: Dr. RISLEY commended both papers, but thought the truth lay in a median line. No mathematic rules can be put down for treatment of these cases. There are many modifying factors, probably the most important being the shape of the skull in different individuals and the cheek ligaments.

There was a great deal of discussion on these papers, the general consensus of opinion being that nonsurgical treatment was in the ascendency. Without exception conservatism was emphasized.

Table of Paralysis of Ocular Muscles: Dr. H. M. STARKEY (Chicago, Ill.) demonstrated a very complete and elaborate table to the members, using it to elucidate the points of the paper. Having detailed the anatomy of the ocular muscles, their primary and secondary action, the paralysis of individual muscles was taken up for consideration.

The Extraction of Hard Cataract without Iridectomy: Dr. S. D. RISLEY (Philadelphia) said that "ripe" or mature cataracts are selected for this method of operation. The patient to be operated upon should be in bed, so there is a little moving about as possible. With a carefully selected knife the puncture and counter puncture is made at the corneoscleral margin above the pupillary margin, but before completing section the knife is dipped slightly and a conjunctival flap made. The speculum is then removed, the upper lid retracted by the assistant, pressure is made above the wound with an instrument, and on the lower lid by the operator, as the lens tips and comes into the wound, it is followed by the lower lid so as to remove any lens matter that may remain. The eye is then closed by adhesive strips, pads and a bandage. In later years he had not washed out anterior chamber. He used a solution of eserine in eye just before operation, and later continues in use of atropin. When there is a tendency to prolapse of the iris it is usually detected at time of operation. The acuteness of vision was given in a large number of cases, the majority attaining a high standard.

[To be concluded.]

Section on Laryngology and Otology.

FIRST DAY.

JOHN N. MACKENZIE (Baltimore), chairman of the section, spoke of the lack of instruction in all the medical schools on the special subjects, particularly that of air passages in the head. He believes the use of special instruments should be insisted upon and that they should be demonstrated in connection with the diseased conditions. He cited the Johns Hopkins University as being the first to make such procedure obligatory on the students; it is there a part of the curriculum of the college course.

Dr. O. T. FREER (Chicago) gave a very interesting paper on the treatment of laryngitis. He believes local treatment is absolutely necessary in all cases. Many of the less advanced cases can be improved by the use of internal remedies, such as salicylates and iodids, and when these are used in conjunction

with astringent sprays, recovery will be speedy. He believes sprays of far greater value than powders or the applicator, the latter often causing damage to the diseased membrane. The local treatment demonstrates the infected mucous membrane and not a congested condition due to cold. The surface being covered with leukocytes, the most reliable astringent is the nitrate of silver 10% or 20% solution. In more severe cases when the submucous tissue becomes involved and an edematous condition arises, there is danger of strangulation, it then is necessary to use the knife. The chronic laryngitis will assume the epithelial character of the skin, often small nodules or long folds of the membrane will form, later atrophy, absorption of fat, erosions, fissures and small amount of secretions, forming crusts, then we have the condition of ozena. Here more radical and severe treatment is necessary, a solution of hydrogen dioxide followed by astringents in solution. He spoke of the latter use of ichthyol being very useful to contract the tissues, but he has not had much experience in its use.

Discussion.—Dr. INGALS believed the use of the spray to be most beneficial, and advises a deep inhalation after use so as to draw the fluid down below the vocal cords. Dr. FREER said the inhalation method was extremely irritating, and unless cocaine had been previously used it would be likely to cause spasm.

Edematous Laryngitis: JOSEPH S. GIBB (Philadelphia) describes this condition as inflammation of a mucous surface with serous transudation into the submucous tissues. Much confusion has arisen from the various names given, many attempts have been made to simplify by classification under certain types. All this confusion can be abolished by drawing a sharp line in the symptom edema without inflammation. Active, in which inflammation occurs; passive, in which no inflammatory action is present. To clearly demonstrate this feature the doctor cited 4 cases. Of these 4 cases 3 were due to some form of septic infection. A large number of cases taken from other men show about the same proportion. This leads to the belief that a classification based upon first, those in which there is no true inflammatory condition of the laryngeal mucous membrane; second, acute catarrhal accompanied by more or less thickening of the mucosa; third, secondary septic processes complicating zymotic diseases; and, fourth, the infectious cases. In all appears the one symptom, edema and accompanying aphonia.

Dr. G. F. COTT (Buffalo) reported a case of total extirpation of the thyroid gland. The patient, a man, had for 16 years difficulty in breathing, rapid heart and swollen thyroid. The immediate cause for treatment was a great exacerbation of symptoms. A 2% solution of eucain was used and tracheotomy performed. It was impossible to pass a canula. A small soft rubber catheter was introduced into the larynx, and 30 hours later operation was attempted under the use of eucain; the pain became intense, and chloroform was used. After a half hour it became necessary to stimulate and use intravenous injection of salt solution. After 3 hours the glands, weighing $5\frac{1}{2}$ ounces, were removed. He related the history of a girl of 5 years having a papilloma in the larynx. She would not submit to the use of instruments. The trachea was opened and tube inserted which she wore for 2 years. One week ago the larynx was split between the vocal cords and the papilloma removed. Larynx sewed together. Perfect recovery.

SECOND DAY.

The Relation of the Middle Turbinate Body to Chronic Nasal Disease: C. S. BAKER (Bay City, Mich.) said that the nasal chambers must be accepted as mere ducts to drain the upper air passages, any obstruction in the turbinate bodies acting as a dam, thereby causing infection of the ethmoid cells. In nasal operations we drain out the upper cavities by opening up the obstruction. In many cases the chronic condition was due to the pressure of the ethmoidal cells against the septum; the opening of the ethmoidal cells saved a secondary operation on the septum. In this operation it is possible to remove the whole of the turbinated bones.

Discussion.—Dr. CASSELBERRY believes we should not interfere with the middle turbinated unless some pathogenic condition exists and there is a decided interference with drainage. In most cases of empyema, drainage by operation cannot be entirely relied on alone. It is not devoid of danger, there being the greatest danger from infection and also from hemorrhage. It is frequently a bloodless operation, yet sometimes it is not and there is a great amount of blood lost. He has used adrenalin and cocaine, with which the tissues become shrunken, parchment-like tissue which can be cut off with scissors; this is frequently followed by persistent hemorrhage. Adrenalin is of great assistance, but is followed frequently by persistent hemorrhage. Packing by iodoform gauze after removal of middle turbinate will stop the hemorrhage and can be removed following day. It is unsafe to send patient home without this provision.

Discussion.—Dr. WARREN. Middle turbinate is the chief trouble in the nose. There are 14 cavities in the nose. You can drain the antrum through the removal of the middle turbinate. A deviation of the septum is not so important. The initial lesion of catarrhal disease is in the middle turbinate.

Dr. CARR: So far as I can discover there is no difference in chronic discharge in the nose and that of other parts of the body. The whole point is drainage by removal of middle turbinate.

Dr. COTT: There is a point not particularly mentioned and that is the disturbance of cerebration: the constant pressure interferes with breathing, causing morbidity and later mind affection. This operation relieves. I object to the use of gauze, it insinuates itself on the small spiculas of bone remaining and cannot be easily removed. I find cotton more readily removed.

Dr. PAYNE believes use of cotton to be best. By repeating the use of adrenalin do we get the secondary hemorrhage. It can be used every 2 or 3 hours for several days. There is an operation of removal of middle turbinate beneath the mucous membrane which is devoid of danger. The bleeding is less, and less apt to cause infection.

Dr. MAYER: After the use of adrenalin, the patient should not be allowed to go away without packing. Have in many cases used no packing, but have resorted to adrenalin every 2 or 3 hours, the effect has been satisfactory. But before the day of hemostatics, a patient after operation was put to bed and kept there for 2 or 3 days. No packing was used and no hemorrhage resulted.

Dr. BAKER said there was no marked difference in the kind of material used for packing. He did not find gauze to insinuate itself more than cotton. It is not always possible to put a patient to bed. Have been obliged to pack in some cases, but recognized another danger. After removal of polyps when pus was discharged, the packing was the cause of infection and loss of the patient.

[To be concluded.]

Section on Hygiene and Sanitary Science.

FIRST DAY.

Only 7 members were present at the opening of the session. The secretary, Dr. J. N. HURTZ, was unavoidably absent and the chairman appointed Dr. J. R. NEELY (Chicago) acting secretary for the meeting.

The chairman thanked the members for placing him in the responsible position as chairman. The first paper was read by Dr. W. H. HEATH (Buffalo, N. Y.), by invitation, on **State Supervision of Marriage, its Feasibility, Scope, Justification and Possibilities**. As the standard of everything is made higher, so too this problem should be elevated, while it is a difficult one to deal with; the steps toward reform were that official license should be obtained, and 3 certificates should be issued. (1) Regarding health and heredity; this certificate should be issued by the family physician, and should include a medical examination; (2) a certificate to be issued by the municipal Board of Health as to their freedom from any and all hereditary or constitutional disease as well as educational in many respects; (3) a certificate as to the evidence of capability or ability of support, both on the part of the male and female, and this should include their passing a civil service examination in case the former was rendered permanently disabled.

Discussion.—Dr. EGNERT (Philadelphia) thought we were not ready for this innovation. In large cities many of the people are ignorant of a preliminary education on this point, hence opposition would be great on the part of the people, and they are not yet ready for such legislation. A course of lectures might be expedient in large municipalities, and one course alone would not be sufficient. This might be done during the winter months, and the poor would grow tired of attending these lectures.

Dr. L. H. MONTGOMERY (Chicago) said most of the salient points embodied in the paper have from time to time appeared in the literature, particularly that which has emanated from the State boards of health of Illinois and New York. He doubted if the people would regard this interference otherwise than that of being unconstitutional, but as sanitarians, as he regarded it, each of us, individually, favored practically all which was outlined by the author of the paper. In localities where there were no municipal health boards or other health authorities, the rule could not be made effective.

Dr. L. B. TUCKERMAN (Cleveland) said the great trouble with these educational schemes is that they render cautious those who do not need to be made cautious and have no effect on those who need to be made cautious. The more intelligent among the working classes do not marry at all. An inquiry by Hon. Carroll D. Wright as to the status of over 17,000 influential wage workers in 22 cities, showed over 15,000 unmarried. They do not marry because their tenure of employment is uncertain—they do not know when they will lose their jobs. The marrying is done by the thoughtless, happy-go-lucky class, with whom such cautioning instruction has but little weight.

Dr. FERD. C. VALENTINE (New York) said to carry public good to a logical conclusion, we should prevent people from marrying who have had gonorrhoea and syphilis. Fewer blind and other helpless charges would then be placed upon us. The question is one under State control, but that it would be impossible to carry out the provisions at the present time.

Dr. WILLIAM T. ENGLISH (Pittsburg) read the next paper, entitled **Pulmonary Fearlessness**. This paper elicited no discussion, except that Dr. EGNERT rose to say that he was glad to see one professional advocate of the college yell.

The following Nominating Committee was appointed: J. R. Neely, A. W. Suiter, William T. English.

SECOND DAY.

The Limitation of the Venereal Diseases: DENSLAW LEWIS (Chicago) referred to the universal prevalence of the venereal diseases and their disastrous and far-reaching effects. He asserted that a maudlin sentimentality and a false modesty prevented their consideration and he maintained that their importance justified a straightforward study as is done when other infectious diseases are investigated. There is no higher duty nor a more sacred privilege than the opportunity to do something toward the prevention of these loathsome diseases. At puberty the child's attention is directed to the external genitals. Masturbation is likely to result. The removal of all sources of irritation is a prophylactic factor of importance. Circumcision in the male and liberation of the preputial hood in the female may be necessary. When older, the dominating influence of the awakened sexual instinct asserts itself. Howard Kelly says the child follows the immediate impulse and nothing should be told him. It is asserted that a father is false to his trust if he does not warn his children against the dangers that beset them. If the father is a medical man neglect here becomes criminal. Illustrations relative to botany and zoology are instanced to show method of teaching the child. The boy should know the dignity of virility. He should keep himself pure so that in adult life no premature or indiscreet act may interfere with his assumption of the parental function. Certain conditions of our society should be told him. He should know about the venereal diseases and prostitution. He should learn the control of the sexual appetite. He should appreciate his duty to woman-kind. He should understand that if all men knew, as he now knows, regarding his duty in honor toward the young girl, prostitution could not be. The young girl should study physiology. There is no immodesty in her knowing that the bowels should move daily. There is no impropriety in understanding that menstruation indicates the possibility of maternity. The State also has a duty. In Illinois it is now a crime for a man to seduce an unmarried female of previous chaste character, under 18 years of age. The truth should be told the young girl. She should also know about the venereal diseases and it is a lesson in humanity for her to know regarding the prostitute—her unfortunate sister. There is danger in married life unless the sexual relations are satisfactory. There is danger in case of the absence or pregnancy of the wife, for at such times the polygamous nature of the man may assert itself. The prostitute should be considered as a focus of infection, and venereal diseases in her should be restricted by instruction in prophylaxis and by knowledge of the antiseptic douche and how to use it. Means for the treatment of venereal diseases should be increased. A hospital should exist in every city. The funds of every community cannot be more advantageously expended than in an effort to restrict venereal diseases. Class legislation is unconstitutional in America. Our idea of justice prevents the incarceration of a prostitute, even if diseased. Educational methods and adequate provisions for consistent treatment are the only feasible and practical means for limiting venereal diseases.

Discussion.—Dr. FRED C. VALENTINE (New York) said, in extending the views of the author to a practical end, advocated (1) that the State should include in reportable disease all contagious genitourinary and venereal ailments; (2) that sufficient hospital and dispensary services be established to separately treat genitourinary and venereal diseases; (3) that following the indications of the prostitutes themselves, who congregate in certain districts, to segregate them in definite regions; (4) that those who can be reached by law be regularly examined; (5) that circulars of instruction in the dangers of venereal diseases and in the methods of their avoidance be distributed to the prostitutes themselves, and to every male who enters the prostitute's districts. If these mere outlines of ideas on the subject be carried out, the work of public-spirited men, as Dr. Lewis, will bear the fruits for which they labor, and if but a small proportion of the youth of our generation be saved from venereal disease, in consequence of this advocacy, the efforts will not have been in vain. Dr. HOWARD A. KELLY (Baltimore) discussed the paper at considerable length in a dignified and ethical manner and recited instances where women had been saved. Dr. KOBER (Washington, D. C.) advocated athletic training of the youth. Dr. R. HARVEY REED (Rock Springs, Wyo.) said: We are at a loss how to get at a practical way to suppress prostitution, or social evil. This problem to be handled successfully, and to regulate vice, and the limitation of the disease will follow if such course is pursued, is to educate the boys and girls on these matters in the congregations of our churches. To attack the disease, or those contaminated with the disease, we must make them antiseptic. The legal phases are better discussed in cities than in the country. It is our duty to do the whole moral thing—moral persuasion and the theologian should be called in—psychology from the stand of the theologian we should join hands with. Dr. S. EGNERT (Philadelphia) said public lectures may be advantageous to instruct the ignorant in this class of disease. Venereal clinics for a young man to visit are very well and good if the young man does not visit these

clinics too frequently, for then he becomes flippant about it. We must educate the women also in this direction and in similar manner, even at the risk that the poor people grow tired of attending clinics and lectures.

Dr. FULLER (Iowa) said legislation will not control this, but it will restrain it somewhat. Of this there is no doubt. Teaching the young will assist them to be moral and thus the disease will be lessened. Dr. J. C. SHRADER (Iowa City, Ia.), said we are making progress no doubt in this matter, and we can readily suppress this, first, by helping to restrain our boys from wrong-doing, school teachers must teach morality among children. A great deal of good can be done by them by teaching morality in a discreet and proper manner. Dr. L. H. MONTGOMERY referred to the International Medical Conference for the prevention of Syphilis and Venereal Diseases, which was held at Brussels in September, 1899, where this topic, which had special reference also to the social evil problem, was discussed for 5 days by leading men of our profession throughout Europe and other foreign countries, from the standpoints not only of legalizing the disease, but of segregation of the courtesan, municipal control of same, etc., and yet the problem was unsolved. He did not agree with the author of the paper regarding the ravages or virulence of syphilis as he outlined it, that nowadays the disease is not so prevalent nor its virulence so great. Perhaps because people are educated and also that a physician is early consulted. Neither did he think that the disease was as prevalent where ignorance and poverty prevailed as the author had described it, or that these were the chief causes of producing the courtesan. It is not alone in the factory girl, nor any class in particular, that the disease exists. In his experience he sees more of gonorrhoeal infection among the clandestine class of women than in a public woman. Seduction of a young woman in other classes, under the promise of marriage, whether it be among the educated as well as among the illiterate, does occur under the promise of marriage, and then when disappointment overcomes them, through shame, or otherwise, step by step the young woman descends lower in the social sphere, and while she may ultimately become a semi-public character, not infrequently exposes others to unclean contact, or is herself thus exposed.

[To be concluded.]

THE AMERICAN ACADEMY OF MEDICINE.

ANNUAL MEETING HELD AT ST. PAUL, MINN., JUNE 1 AND 2, 1901.

FIRST DAY.

The First Year Medical Curriculum: THOMAS D. DAVIS referred to the changes in the past few years in all medical courses. The change from a 3 years' to a 4 years' course is not necessarily an advance in medical education, and there is absolute necessity for higher admission requirements. The graduate in art and science should have some advantage over those whose preliminary education stops with the high school. The first year in the course in medicine should approach the last year in college. There are many of the college studies that are a great advantage to the medical man, especially logic, psychology, botany and rhetoric.

Symposium on Reciprocity in Medical Licensure.—

Is the Demand for Reciprocity Based Upon Fact or Fancy? CHARLES MCINTIRE read this paper, mainly an examination of the reports of various State boards of medical examiners to determine what percentage of physicians desire to remove from one State to another.

The Desirability of Reciprocity in Medical Licensure:

—J. N. HALL referred to the fact that many physicians of excellent reputation wish to locate in Colorado on account of their health or for personal reasons. These men are often men of experience and well fitted to practise medicine, but are rusty on the foundation studies, such as anatomy and physiology. Reciprocity would be of benefit to these men, but reciprocity should not be established except among States where requirements are essentially equivalent.

Reciprocity in Medical Licensure from the Standpoint of a Physician who Changes His Residence: EDWARD JACKSON said that about 1 in every 4 or 5 physicians changes his residence from one State to another sometime in his career. Some give up the practice of their profession on account of the difficulties involved in such a change. The difficulty is not with the practical branches, which they are constantly in the habit of using, but rather with the preliminary studies, such as chemistry, anatomy, etc., whose technicalities they do not feel able to pass a stringent examination upon. The physician who wishes to remove cannot be expected to keep better posted upon those branches than he who does not wish to remove. The acceptance of the certificate of another State board as evidence of a proper acquaintance with such studies, would remove the chief hardship. The fear of lowering the standard seems to be the greatest obstacle in the way. The standard in many States

is placed "so high" that evasion in the form of special legislation lets in all sorts of irregular practitioners and threatens the permanence of medical practice laws.

Away with Reciprocity. CHARLES MCINTIRE thinks reciprocity will perhaps lead the profession far astray. Physicians already possessing the legal qualifications to practise medicine in one State should have certain privileges granted them in removing to another State. These privileges should be both fair to the people of the State as well as the physician, and the physicians already practising in that State.

Symposium on Institutionalism.—

Institutionalism: What Is It? Dr. ELMER LEE said the church was the first to start refuges for the sick and the afflicted. It was followed by corporate system, State charities and private enterprises. The individual fits himself for dependence by vicious habits, and ignorance of knowing how to care for himself; also by misdirected energies and misfortunes. The author describes the classes that apply for institutional charities, and mentions some of the abuses connected therewith.

The Soul of Institutional Oversight. JOHN CURWEN thinks that under the present organization of society there is a necessity for institutions for the care of certain of the defectives. In order to protect society and to care for these defectives, it is necessary that the State give its aid to properly accomplish it.

SECOND DAY.

Abuses of Institutionalism. EUGENE C. CARPENTER claims that institutionalism is an outgrowth of organization. The result is routinism. Routinism begets perfunctorism, which leads to automatism. Automatism is not different from that which is mechanical. Mechanical action is in fixed lines and does not depend upon experience and reflection. Opposition to innovations follows such action, and is therefore opposed to progress. The result is that the institutionalist is dominated by the institution instead of dominating it, and so becomes its victim. The true institutionalist must always remain master of the institution and strive to keep out of too strict routinism. If he is narrow all the participants in the institution will follow his narrowness. His policy, therefore, should be one of broadness and liberality, so that the institution may be known for its progress and breadth of purpose.

Tendencies in Hospitals for the Insane, with Some Suggestions. J. E. ROBBINS points out that too much isolation and lack of competition tends to make an institution inefficient. The medical staff is liable to become ultraconservative and the employes of all grades degenerate. It is necessary to keep in touch with the outside world and prevent the caste spirit of estimating men and women by themselves, and not by their positions.

The Advantage of Civil Service Principles in the Conduct of the Insane Hospitals.—GERSON H. HILL read a paper with this title in which he describes the plan of the organization of the State institutions in Iowa, and treating of the benefits resulting from the system and the principles underlying it.

Evils in Some Hospitals and Nurses' Training Schools that Might be Avoided by Proper Requirements, Regulations and Inspections by the Board of Health of each State.—ALBERT GOLDSPOHN said that it is important that the administrative body of hospitals, asylums, etc., should be composed of both laymen and medical men. Competition is one of the greatest evils of the hospital system. The author also enters into the question of how can the abuse of medical charitable service in hospitals be reduced and regulated.

The Need of National Cooperation in the Establishment of Sanatoriums for Tuberculosis.—A. MANSFIELD HOLMES pointed out that sanatoriums increase the chances for recovery, and afford an opportunity for the carrying out of rigid sanitary regulations which they do not have at home. They also educate the friends of those infected against the source of the infection, and thus prevent the spread of the disease. Sanatoriums should be graded so as to suit those for whom they are instituted. They may be conducted entirely for profit, or on the cooperative plan, or purely for charity alone. They may be located in climates known to possess beneficial influences, or near large centers of population. The State could not direct its energies in a more useful channel than in the establishment and maintenance of sanatoriums for tuberculosis.

Hospitals and Sanatoriums Founded, Owned, and Controlled by the Medical Profession: A Case in Hand.—H. BERT ELLIS divides hospitals into 3 classes, charitable, private, and mixed, and describes these classes, and another owned and controlled by physicians alone. For the latter plan he claims many advantages, and commends its adoption to physicians.

Institutional Life for Epileptics and for Feeble Minded: A. C. ROGERS.—The family is unable to cope with certain abnormal conditions found in the life of epileptics. These can only be properly managed in institutions. The organization, equipment and management of these institutions should have in view the necessities and requirements of the particular class of people for whom it is intended. All institutions are remedial, custodial, or a combination of the two. The community life is necessary for the feeble-minded and the epileptics, in order to supply the variety of physical, mental, moral, and religious opportunities suited to their needs.

The Care of Epileptics in Massachusetts: EVERETT FLOOD read this paper, which is a history of institutional care of epileptics in Massachusetts, dealing more especially with statistics and the administration of the institutions.

A Suppressed Educational Problem: JAMES A. TAYLOR urges an "enlightened" natural selection in lieu of the ignorant haphazard methods of selection practised by the majority of people, which result so generally in physical as well as intellectual deterioration.

Necessity for Revising Medical Fees: P. MAXWELL FOSHAY said that medical services are not adequately remunerated, and a plea is made for changing the method of computing the value of professional services. The custom of charging a fixed sum is a relic of antiquity and is illogical. Charges should be made according to the importance of the services rendered, as is done in other callings. The greatest advantage would be the removal of all conditions that at present serve as an excuse to justify the offering of commissions by the surgeon and the specialist.

The Relation of the Clinical Laboratory to its Hospital: HENRY W. CATTELL discusses this paper from a personal experience of 12 years, and an intimate connection with hospitals during that time, in various capacities.

DR. S. D. RISLEY (Philadelphia) gave the **President's Annual Address** to the Academy to a large audience composed of the Fellows of the Academy, and invited guests of the Aberdeen Hotel, Saturday evening. His topic was **Some of the Ethical and Sociologic Relations of the Physician to the Community**. In closing the address he emphasized it in the following language: "I have striven to show that a most striking characteristic of the medical man is a sense of obligation to the community; that this ethical attitude finds expression not only in the laborious routine of his daily professional service, but in a pronounced educational influence on all those lines which pertain to the healthfulness of the people and their medicsociologic welfare, this attitude being maintained notwithstanding frequent lapses from reciprocity upon the part of the laity; that this educational influence is originally exerted in the investigation and control of the relations which our defective classes of the population sustain to the social body. The student of social evolution realizes that through altruistic civilization, a rapidly increasing percentage of degenerates has grown up, presenting a serious and complex problem for solution by the twentieth century. Two suggestions are made for its arrest. First, the legalization of means to prevent the propagation of defectives; and second, by a wider education of the community regarding the importance of selection for the marriage contract, and its possible control by the State.

AMERICAN CLIMATOLOGIC ASSOCIATION.

EIGHTEENTH ANNUAL MEETING, HELD AT NIAGARA FALLS, N. Y., JUNE 1, 2 AND 3.

[Specially reported for AMERICAN MEDICINE.]

When the Climatologists were assembling the falls were enveloped in a dense fog, and the weather conditions for some time previous had been such that the natives were not so much disposed as they might otherwise have been to put forward the claims of the place to be regarded as an ideal holiday or health resort, at all events in the spring or early summer. On the other hand, it was noticeable that though the members of the association had come from all parts of the country they were singularly reticent about the kinds of weather they had been having recently in their respective homes, the inference being that on no quarter of the continent has there lately been much to boast about in this respect. A tacit understanding seemed in short to have been arrived at to ignore the concrete actualities and to deal only in generalities with regard to the elements.

Of course, the battle royal of the congress was waged, as it has been on many previous occasions, over the vexed question or questions as to what and where is the **best climate for the treatment of tuberculous patients**; but before it was entered on there were a number of affairs of outpost, which had the double effect of putting the combatants in good training and of warming them to their work. The president, Dr. ROBERT H. BARCOCK (Chicago) directed the exercises with decided skill and with an evident appreciation, not to say relish, of the different phases of the conflict. At the outset he cleared the way by delivering a **presidential address** which defined clearly and accurately the ground on which they were met, at the same time that he hinted at some of the points on which there was a difference of opinion. Taking as his particular theme the **limitations of medicinal therapeutics**, he showed that, while all good drugs were useful in their particular spheres, and some like quinin and mercury had claims to be regarded as specifics and at all events could not be done without, he pointed out that there was more and more tendency on the part of the most enlightened members of the medical profession to pay attention to the general health of their patients and, with a view to this, to call in the aid of natural agencies as far as possible. The influence of climate, life in the open air, the use of water in various ways, exercise, diet, and other things now receive more attention than they had done, and it was well that they should do so, if

only, but not principally, for the reason that the general public had revolted against the excessive use of drugs and called for a greater reliance on the resources of nature's laboratory—exaggerated manifestations of which were found in the growth of bodies like the Christian Scientists, Faith Curists, Kneippists, etc. Simultaneously with this outbreak of therapeutic nihilism, it was true that a new era was being opened up by the discoveries of what could be done by means of antitoxins, and serotherapy, and organotherapy generally, but this was no reason why skilled physicians should neglect natural agencies and leave the rich field to ignorant empiricists. Proceeding to speak in more detail of hydrotherapy, he reminded his hearers of the belief that the Romans had in baths, and after remarking that though their utility had been lost sight of with many other good things in the Dark Ages, the therapeutic value of water again commenced to be recognized in the seventeenth and eighteenth centuries, and now they could say in regard to it that it not only was the only remedial agency that had stood the test of time but that it stood higher now than it did 2,000 years ago. The activity of the last 30 years in the study of bacteriology had given rise to the belief that every disease was due to some sort of microbe, but they now knew that there must be some additional factor besides bacteria. In other words, there must be a condition of the body that afforded a good culture medium, otherwise the bacteria would not thrive. They might speak of it as susceptibility to particular diseases, or say that the power of resistance was slight, or that a person's vitality had become low, but it all meant the same thing, and showed the importance of observing the general laws of health. The physician was behind the times who depended entirely on medicines; they must make intelligent dual use of medicinal and natural agencies.

The reading of papers was then proceeded with, the first being one on the **Climate and Diseases of Puerto Rico**, by Dr. CHARLES H. ALDEN, formerly Assistant Surgeon-General, U. S. A. Having showed that the diseases most prevalent in the island were largely due to bad sanitary arrangements, he recounted the good that had been accomplished since it came under the jurisdiction of the United States, particularly in respect to smallpox, which previously had been very much neglected and was consequently very common, but which through the agency of vaccination had rapidly diminished and almost entirely disappeared.

The Fevers of Florida were then reported on by Dr. FRANK FREMONT-SMITH, Palm Beach, who, admitting that his experience had been confined to 1 or 2 of the larger cities on the coast, adduced figures to show that there was nothing to be particularly alarmed at as regarded either the number of patients who suffered from fever or the severity of their attacks, but quite the reverse, there having been only a small number of cases and some of these having evidently been imported. Casual references he made to "mountain fever" caused several speakers to protest against the use of that term, and the reader of the paper said he only used it with the understanding that it meant typhoid contracted in the mountains. Dr. JOHN L. HEEFRON, Syracuse, N. Y., said he had heard that it was impossible to get the words "typhoid fever" out of Florida by telegram, and an attempt that he had made to get them into the State had certainly failed, a telegram he sent when one of his patients was attacked with fever there having failed to get delivered. Dr. FREMONT-SMITH assured the doctor that this must have been due to accident, as there was no such conspiracy as was suggested to prevent the use of the words in reference to Florida.

The Climatology of Augusta, Ga., was next discussed in a paper by Dr. THOMAS D. COLEMAN, of that city. He drew a distinction, however, between the city proper and the elevated suburb of Summerville, on the site of which he admitted that it would have been well if the whole of Augusta had been built. Summerville, he added, was built on a hill of sand, had excellent drainage, enjoyed a pleasant climate free from sudden changes, and was altogether a very suitable place for tuberculous and other patients. Apologizing for the want of some statistics, he said he understood that it was not considered necessary to keep mortuary records in Summerville.

Remarks on the Climatic Influences of Newport, R. I. Dr. W. C. RIVES (Washington), and a paper on **Nantucket and the Ocean Climate**, Dr. HAROLD WILLIAMS (Boston), gave rise to an exchange of courtesies between these gentlemen. Among the principal advantages claimed for the climate of Newport by Dr. Rives were its coolness in summer and mildness in winter. These he attributed to the prevailing winds and the gulf stream. He admitted that the winter was not good for consumptives, but said he would prefer it to other parts of the New England coast. Dr. Williams inquired the authority for the statement regarding the effect of the gulf stream, his impression was that that stream did not come within 300 miles of Newport. Dr. Rives said the temperature of the water was undoubtedly warmer than at Cape Cod, and it seemed reasonable to attribute this to the gulf stream, as was done in a paper by Dr. Storer. Dealing with Nantucket Dr. Williams said its climate resembled that of the ocean more nearly than that of all other Atlantic resorts, with the possible exception of Atlantic City, and for the reason principally that it was further out to sea than any of the rest. Dr. Rives asked whether a few years ago the deathrate from tuberculosis in Nantucket was not

the highest in the State. Dr. Williams explained that fact by saying that the population was very much reduced some time ago by the abandonment of certain industries causing a great number of people to go elsewhere. Many of these, however, came back to Nantucket to die.

Notes on the Climate of New York and New England were given in a paper by Dr. GUY HINSDALE (Philadelphia). He said the peculiar changeableness of the climate of this region was due to the fact that it was the meeting ground of 2 storm tracks. The cyclones from the Great Lakes and the storms that moved along the coast from the South met in New England. Cyclones were not to be confounded with tornadoes, the element of extreme violence not being involved in them. It had been said that New England was the exercise ground of the weather, and that as a consequence a New Englander was a person who was always about to be warm and comfortable. Still, that, as Charles Dudley Warner said, was the sort of stuff of which martyrs and heroes were made. The speaker proceeded to give interesting details of records he had kept of the climatic conditions with particular reference to the coast of Maine, which was free from some of the disadvantages alluded to, and mentioned that when his paper was published it would be found to contain some notes in regard to the great blizzard. A remark he made to the effect that it was a mistake to suppose that the prevailing wind in Boston was from the East was confirmed by other speakers, and Dr. W. F. R. PHILLIPS, of the Weather Bureau at Washington, made the official statement that Boston has in reality 2 prevailing winds—southeasterly in summer and northwesterly in winter. The reason for the popular error, it was suggested, was that when the wind did blow from the east it produced such an effect that its impression was not easily forgotten.

In a paper entitled **Some Observations on Southern California**, Dr. SAMUEL A. FISK, in spite of the fact that he hails from Denver, Col., gave a glowing account of the pleasure and benefit he had derived from a trip to the lower part of the Pacific Slope. Contrasting the climates of the 2 regions he said that Colorado was stimulating while Southern California was soothing; both were good for invalids, though at different stages and under different conditions. Dr. NORMAN BRIDGE (Los Angeles) read a paper on the same subject. He remarked that Southern California was the paradise of the old and of children, and that tuberculous patients usually did well there. It was a question whether intense dryness of atmosphere was as important as had generally been assumed. The quality of climate they required for tuberculous patients was one that enabled them to live largely in the open air, and that was the kind of climate they had in a marked degree in Southern California. Several of the Colorado doctors present referred to patients who were in the habit of coming from Southern California to Colorado for tonic effects, and one said that if patients were going to try both climates he would advise them to try Colorado first. In replying on the *discussion*, Dr. FISK said he went to Southern California a consumptive and he came back cured. He was loyal to Colorado, but as some cases did better there than elsewhere, so other cases did better elsewhere than there.

The Proper Definitions of the Terms Usually Applied to Tuberculosis to indicate stages of advancement of the disease and results of treatment, were discussed in a paper by Dr. J. EDWARD STUBBERT (Liberty, N. Y.), who gave illustrations of the different meanings that were attached to the following: (1) Pretuberculous or prebacillary stage; (2) incipient stage; (3) moderately advanced stage; (4) far advanced stage; (5) improved condition; (6) arrested condition; and (7) cured or apparently cured condition. He pointed out among other things that the pretuberculous stage was not recognized by many authorities, that the other terms were all used with different meanings, and that there was a complete absence of agreement as to the conditions under which and after what lapse of time a patient could be pronounced cured. After discussion it was agreed to appoint a committee of 5 to draw up definitions of what the members of the association should agree to understand by the terms in question or others that might be decided on. The selection of the committee was left to the president, and he subsequently announced the appointment of the following: Dr. Charles E. Quimby (New York), Dr. F. I. Knight (Boston), Dr. James C. Wilson (Philadelphia), Dr. Edward R. Baldwin (Saranac Lake, N. Y.), and Dr. J. E. Stubbert (Liberty, N. Y.).

Tuberculin Tests was the next subject brought to the notice of the association, Dr. EDWARD O. OTIS (Boston) reporting the results of further tests he had made, and Dr. W. E. CASSELLBERRY (Chicago) reading a paper in which he described the cases in which he thought the test seemed justified and decisive. The discussion which followed showed the general opinion to be favorable to further experimentation with tuberculin and also with other substances which were reported as giving similar reactions. The fact that syphilis sometimes responded in the same way as tuberculosis was considered only an additional reason for pursuing the investigation further.

Dr. R. G. CURRIE (Philadelphia) reported 2 cases of **Aneurysm of the Heart and 1 of Spontaneous Rupture of the Heart**, and the proceedings of the first day were brought to a close by Dr. SHERMAN G. BONNEY (Denver) reading a paper on the influence of the Colorado Climate upon **Pulmonary Hemorrhages**.

SECOND DAY.

The second day's proceedings were devoted almost exclusively to the consideration of questions connected with the **treatment of tuberculosis**. Before this subject was reached, however, there was an interesting discussion on the question raised by Dr. F. I. KNIGHT (Boston), **The Association of Tuberculosis and Syphilis—Is it always injurious, or does one disease exert an inhibitory action upon the other?** Dr. KNIGHT mentioned that, having had his attention directed to the subject he looked into the literature, and came across very conflicting opinions, one being that syphilis predisposed a person to tuberculosis and aggravated the disease, and another that it might in the course of time be found desirable to make use of a vaccine of syphilis in order to save the people from tuberculosis. The matter was of great importance, on account among other things of the difficulty in some cases of diagnosing between the 2 diseases and the impression which prevailed that antisyphilitic treatment was apt to complicate tuberculosis. He had never himself found antisyphilitic treatment have this effect, and indeed had had cases where its effect or that of the syphilis was to make the tuberculosis symptoms disappear. Rheumatism and some other diseases were recognized as being antagonistic to tuberculosis. Might not this also be true of syphilis? All the speakers who took part in the discussion agreed that the subject was deserving of further investigation. A case of **Mechanical Obstruction of a Bronchus Simulating Rapid Tuberculosis** was then described by Dr. J. B. WALKER (Philadelphia); and Dr. THOMAS W. HARVEY (Orange, N. J.), gave an account of a case in which a **Case of a Piece of Meat in the Bronchus Disappeared by Apparent Absorption**, followed by the recovery of the patient.

The symposium on tuberculosis was introduced by a paper on the **Selection of Favorable Cases of Pulmonary Tuberculosis for Sanatorium Treatment**, by Dr. E. R. BALDWIN (Saranac Lake, N. Y.). In no other disease, he said, was it so difficult to make a prognosis, many cases that were regarded as incipient being really incurable, while others that were apparently far advanced might be cured. This showed the necessity of coming to a better understanding than now existed as to how cases should be classified, and he submitted a scheme (which he explained in some detail) not with the belief that it was perfect, but in order that the members might have something to work upon. Under the present system or want of system a great deal of harm was done—on the one hand by patients who were thought to be only in an incipient stage being given extravagant promises of speedy improvement or recovery, and on the other hand by the stamp of "incurable" being put on those who, in spite of the fact that the disease appeared to have reached an advanced stage, might be cured, or at all events much improved. Apart from such considerations, the success of State and municipal or semicharitable sanatoriums required discrimination in favor of curable cases. Economic reasons, indeed, compelled it at present, the interests of the curable necessitating the exclusion of very ill patients. Separate provision, he contended, should be made for the latter because of the impossibility of which he had spoken of determining prognosis. Probably many years would elapse before adequate provision was made for all classes, and until such a time had arrived encouragement should not be given for obviously unfavorable cases to apply for admission, as refusal meant incurability in the eyes of the patient and his or her friends. The factors that might be considered as favorable, doubtful or unfavorable in prognosis were tabulated in his scheme, which he admitted could not apply to every case, though he thought it might aid in the selection of cases.

The next paper was by Dr. CHARLES L. MINOR (Asheville, N. C.) and dealt with the **carrying out of the hygienic treatment of tuberculosis outside of sanatoriums**. He had no wish, he said, to belittle the work that was being done in sanatoriums but much could also be done at the residences of patients in health resorts like Asheville. Many patients did not care to go to sanatoriums, and in selecting a place to send such patients to, the doctor could not be too careful in studying the local conditions and also the circumstances of the patient. Pure air and pleasant natural surroundings were of the utmost importance, but these would not atone for bad cooking and a cheerless house. The character and habits of the patient had also to be studied, as had likewise his family and business relations, the object being to place him as far as possible in a position where he would be free from anxiety and worry. For much of this it was necessary to depend on the family physician. When the patient came to a resort it was incumbent on the doctor having charge of his case to impress on him how largely his progress towards recovery or otherwise was in his own hands. It was well to be candid with the patient up to a certain point, the revelation of the whole truth, though not always desirable, being almost always better than concealment. Then they should proceed to build up the system by means of food and exercise, light and air, the patient being requested to keep a record of his symptoms and daily life, but at the same time instructed not to speak to any one but the doctor of his ailment.

Dr. IRWIN H. HANCE, Lakewood, N. J., who had the next place on the program, dealt with practically the same phase of the question, the title of his contribution being **The Home Treatment of Tuberculosis**. He said that what was most desirable was the means of extending to the masses the advant-

ages that the few got in sanatoriums, and this was found in localities where the patients could have plenty of fresh air, good food, and rest. He also attached much importance to baths, rubbing, etc.; medicines played only a secondary part in the treatment of such patients. It was a question in his mind whether the prevailing idea that climatic change was necessary in the treatment of tuberculosis had not had a retarding effect. At all events, for the great majority of people, what they ought to aim at discovering was how they could be best treated at a distance not too far from their homes. Dr. CHARLES FOX GARDNER (Colorado Springs) who read the next paper on the list, insisted on the other hand on the **Importance of Early and Radical Climatic Change in the Cure of Pulmonary Tuberculosis**. He dwelt also on the advantages of high altitudes, and expressed the belief that more patients were cured in boarding houses in Colorado than in sanatoriums in damp climates. No doubt the best of all results were those that could be obtained by the advantages of climate and sanatoriums combined.

Dr. ARNOLD C. KLENS, (Chicago) speaking on the **selection of a proper locality for the treatment of tuberculous patients**, reminded the meeting how first warm temperatures and then cold temperatures, dry climates and ocean voyages, in fact, every variety of atmospheric elements have been recommended for this disease. The conclusion at which he had arrived was that there was no climate, any more than there was any drug, that suited all cases. In spite of the discovery of the bacillus of tuberculosis, they still knew little of the disease, and he was not sure but the discovery of the bacillus had delayed, rather than advanced cures, all the attention being directed to the bacillus and the body itself being neglected. In other words, the bacillus occupied a prominent position among bacteria to the detriment of suffering humanity. Among the objections to climatic change were the expense and the worry it was likely to give a patient if he could not well afford it, homesickness, the fact that the physicians who recommended a change did not know much about the conditions and climates of different places that were supposed to be good for such patients, and above all, the fact that so small a proportion of patients who went to other climates were ever able to return home without having a recurrence of the disease. Condemnation of the climatic treatment might seem radical, but he was looking at the matter from the point of view of the masses, and he did not hesitate to say that what they required was some place not too far from their homes where they could get fresh air and sunshine, comfort and good food.

Dr. VINCENT Y. BOWDITCH (Boston), in discussing the papers, referred to the **vagueness of terms** that were used and the absence of proper data for making accurate comparisons. The results, however, obtained in New England had justified them in changing their views to the extent of believing in the curability of a large number of cases in local sanatoriums. At the same time it must be acknowledged that each case must be treated individually, and that the treatment must be regarded as experimental. Merely **sending patients away haphazard to climates** that were supposed to be beneficial to such cases was not satisfactory. He believed that better results could be obtained in the West than in the East. Nevertheless they required sanatoriums in every locality where tuberculosis prevailed.

Dr. E. O. ORIS (Boston), while admitting the **advantages of climatic change**, said it was sometimes a question whether they were not too dearly bought, especially when a patient had to be acclimated twice over, first say in Colorado and then on his return home to New England or elsewhere. It was no longer recognized that climate was the whole or primary consideration in the treatment of the disease. A revelation had been made within the last few years of what could be done at home, by means of sanatoriums and otherwise. Comparing the treatment in sanatoriums at home with the treatment without sanatoriums in more favorable regions, he questioned whether the advantages of climate in the latter counterbalanced the advantages that were derived from the sanatoriums. Patients cured at home were more likely in his opinion to remain cured.

Dr. FISK (Denver) said that after all it could not be gained that a strong line of demarcation was drawn by the pocket-book of the patient. What was most desirable was to get the best climate and the best home at the same time. There was little use in a man going to a good climate and starving himself or living in a damp room.

Dr. S. G. BONNEY (Denver) regretted the tendency that existed in some quarters to **minimize the importance of climate**. At the same time he fully agreed to the proposition that the best results could not be got without a combination of climate and an appropriate system of daily life. Local hospitals were required everywhere for the hopelessly ill, who were a source of great danger to the rest of the community.

Dr. S. E. SOLLY (Colorado Springs) remarked that if he had his way he would have every patient go into a **sanatorium first**, not necessarily to remain there long, but for observation. The way that home doctors sent patients to Colorado and elsewhere for treatment showed that they did not know enough about them. A short residence in sanatoriums would enable the patients to be classified and an intelligent idea formed of the climate and treatment that would benefit them. He still believed in the value of climate, and said that if a patient were cured in a good climate the good effects would remain to the same extent as if he had been cured elsewhere.

Dr. JAMES A. HART (Colorado Springs) agreed with the statement that **no drug or climate was a specific**. The ideal treatment was one combining climatic benefit with hygienic conditions. Removing patients 15 miles or so from their homes and putting them on regular diet and giving them fresh air, exercise and other things was a step in the direction of giving tuberculous patients what they would get if they went to the Rocky Mountains.

THE CHAIRMAN remarked that he was glad to see so much general agreement in favor of open air, with proper exercise and good food, regimen and rest. Doctors had too long relied in such cases on tonics and cough mixtures. It was not medicinal therapy that was needed; it was the proper regulation of the patient's daily life.

Dr. C. F. MCGAHAN (Aiken, S. C.) said it was undoubtedly better that patients should have **fresh air and good food at home** than that they should be sent to a health resort and put in a cheap boarding house. There were many people, however, who could not endure the discipline of a sanatorium, and who, if they could afford to go to a health resort, might be educated to the point of following a regular course of home treatment.

Dr. ALBERT C. GETCHELL (Worcester, Mass.) observed that an incidental advantage gained from the sanatorium was that the patients who spent some time there assisted on their return home in educating the public. In this way they were assisting in a work that ought to be much more systematically entered on, having for its end the **stamping out of tuberculosis**.

In the course of further discussion, Dr. R. G. CURTIN (Philadelphia) said there could be no doubt that, while there was a great deal in climate, a great deal could likewise be done at home. The difficulty was to get patients to carry out the instructions given them.

Dr. JAMES C. WILSON (Philadelphia) was disappointed that he had not heard more about the **treatment of patients in their actual homes**. Most of what has been said had related either to treatment in sanatoriums in the locality of their homes or treatment out of sanatoriums in other places where the climate was more favorable. It should not be overlooked that in many places, Philadelphia among them, good results had been obtained by getting the patients to carry out regular regimens in their own houses. He thought that municipalities ought to be urged to do more in the way of providing local hospitals.

The readers of papers having replied, the discussion was brought to a close. On the motion of Dr. H. L. ELSNER (Syracuse, N. Y.) a motion was adopted in support of the principle of the **State care of the tuberculous poor**.

THIRD DAY.

Business Meeting.—The election of office-bearers resulted as follows: President, Dr. Samuel A. Fisk, Denver, Colo; vice-presidents, Dr. Norman Bridge, Los Angeles, Cal., and Dr. W. F. R. Phillips, Washington, D. C.; secretary and treasurer, Dr. Guy Hinsdale, Philadelphia, Pa., reelected; member of council, Dr. Robert H. Babcock, Chicago, Ill.; representative to Congress of Physicians, Dr. F. A. Knight, Boston; alternate, Dr. R. G. Curtin, Philadelphia. It was decided to hold the next meeting at Coronado Beach, San Diego, Cal., on or about the first of June and the following days. After discussion it was agreed to limit the membership of the association to 150. Eleven new names were added to the roll.

A paper was read by Dr. C. C. RANSOM (New York) on **Clinical Aspects of Spa Treatment**, and a communication on the same subject was received from Dr. BEVERLY ROBINSON (New York) and ordered to be included in the transactions. Dr. BOARDMAN REED (Philadelphia) contributed a paper on **The Hygienic and Mechanical Treatment of Heart Disease**, and Dr. GUY HINSDALE (Philadelphia) followed with one on **Analogous European and American Mineral Springs**. These papers were all discussed together, and the importance of the work of investigation started by Dr. HINSDALE being recognized, a committee, consisting of that gentleman and Dr. ALBERT C. PEALE (Washington) and Dr. RANSOM (New York), was appointed to carry it on.

Among the other papers on the program several of which were read by title in consequence of the absence of the authors, were: **Devitalized Air Toxemia a Prime Cause of Tuberculosis**, Dr. Charles Denison (Denver); **The Relation of Sunshine to the Prevalence of Influenza**, Dr. Howard S. Anders (Philadelphia); **A Case of Pulmonary Osteoarthropathy**, Dr. R. C. Newton (Montclair, N. J.); **The Physiologic Influence of Climate on Nervous Diseases**, Dr. F. Savary Pearce (Philadelphia); **The Use of Strychnin in Diseases of the Heart**, Dr. Abraham Jacobi, (New York); **The Cause of Death in Aneurysms of the Thoracic Aorta Which do not Rupture—Report of 2 Cases**, Dr. H. D. Arnold, (Boston); **The Etiology, Pathology and Clinical Aspects of the Bovine Heart**, Dr. Leonard Weber (New York); **A Case of Chronic Endocarditis**, Dr. Judson Daland and Dr. W. D. Robinson (Philadelphia); **The Increased Corpuscular Count of the Blood at High Altitudes, especially in Rapid Ascent**, Dr. W. A. Campbell (Colorado Springs); **The Use of Guaiacum in the Treatment of Pulmonary Tuberculosis**, Dr. W. W. Bulette, (Pueblo, Col.); and **Note Upon the Shifting of Apparent Gastric Pain into True Angina Pectoris**, Dr. Glentworth R. Butler (Brooklyn).

ORIGINAL ARTICLES

PULSATION OF THE UVULA IN AORTIC INSUFFICIENCY.¹

BY

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The occurrence of pharyngeal pulsation in aortic insufficiency was, it seems, first brought to the attention of clinicians by F. Müller in 1889. Since then but few references have been made to the subject, and the majority of textbooks are silent upon it. A recent paper by Schlesinger,² of Vienna, has served to stimulate a renewed interest in the phenomenon.

Schlesinger examined 40 cases of aortic regurgitation, but found unmistakable pharyngeal pulsation in only a small number. Much caution is necessary in the examination, as muscular movements produced by attempts at retching or swallowing may simulate pulsatile phenomena. The patient should be instructed to hold the mouth open steadily and to breathe quietly. The employment of a tongue-depressor did not, in my limited experience, seem to interfere with the interpretation of the pharyngeal movements; but it is well to make the examination both with and without the use of this instrument.

Two types of pulsation of the soft parts are distinguishable: a communicated movement, connected with the throbbing of the carotids, and usually affecting the tonsils and faucial arches; and an independent movement, brought about by a systolic increase in the volume of the tissues. This manifests itself in a rhythmic turgescence of the soft parts. Schlesinger has observed the pulsation in the tongue, both by inspection and by palpation. It may likewise be discernible in the half-arches and in the uvula. At times the posterior wall of the pharynx is pushed forward with each systole of the heart; in some cases the swelling is so marked as to produce a distinct rhythmic narrowing of the oral and pharyngeal cavities. I have looked for the phenomenon in 3 cases of aortic regurgitation that have recently come under my observation, and found pulsation of the uvula in 2 of them.

CASE 1.—The first patient was seen in the dispensary of the University of Pennsylvania Hospital. He was a man of 37 years, who had a double aortic murmur and dilated hypertrophy of the heart. The murmur was of the see-saw quality, and could be heard over the greater part of the chest. The capillary and water-hammer pulses were both well marked. On inspection of the pharynx, the uvula was seen to quiver synchronously with the pulsations of the heart; at every systole, its tip was tilted forward and brought nearer to the base of the tongue. The movements were rendered more noticeable by the fact that with every change of position the reflection from the glistening, mucus-covered surface of the uvula was modified. I was not able to convince myself that there was pulsation of the half-arches or of the posterior pharyngeal wall; there was no rhythmic swelling of the tongue.

CASE 2.—The second patient was a girl of 16, who came to the University Hospital Dispensary from Chester, Pa. She had aortic regurgitation and hypertrophy of the heart. There was only a single, diastolic murmur at the base. The capillary and Corrigan pulses were present. In this patient there was also a distinct pulsation of the uvula, synchronous with the heart's action. Other pulsatile phenomena in the pharynx or mouth were not present.

Both patients were exhibited to the students in my ward classes, who witnessed the phenomenon.

CASE 3.—The third case, seen in private practice, was a typical one of aortic disease, with double murmur, in a boy of 10 years. He had a capillary and a water-hammer pulse, but I was unable to find any rhythmic pulsation of the uvula or other parts of the pharynx. Why it was absent in his case, I am unable to say.

The phenomenon is, of course, of the same nature as the capillary pulse, although it is possible that in such soft parts as the tonsils, the half arches, the uvula, and the tongue the vibration of the small arterioles may participate in the production of the pulsation. As a physical sign, pharyngeal pulsation has no special diagnostic value and possesses no greater significance than the capillary pulse. The knowledge of its existence merely adds one more point to be looked for in the critical study of a case, and thus helps to stimulate and to sharpen the powers of minute observation.

PREVENTION AND CURE OF POSTOPERATIVE
HERNIA.

BY

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A paper upon this subject must necessarily be short because the subject is a small one at the present time, but we can all remember when it was very large and important. Modern surgeons very rarely see hernia following their own operations, except after operations for acute appendicitis in which they have been obliged to drain. In the controversy between the advocates of abdominal and vaginal hysterectomy, the fear of a ventral hernia should no longer be an argument against the abdominal route, because any operator competent to perform hysterectomies will not have a hernia follow his operations. All the ventral hernias I have seen during the past 3 years, with one single exception, have either followed operations for acute appendicitis in which it was necessary to drain, or operations performed by "occasional operators." The one exception was in a hemophiliac, who had had her wound packed to save her life.

The causes of ventral hernia are sepsis, improper closing of the wound, and drainage. It follows that hernia may be avoided by asepsis, proper closing of the wound, and by avoiding drainage. Upon the question of asepsis we all practically agree, but concerning the closure of the wound, there are still differences of opinion. This was very manifest in the discussion of Dr. Richardson's paper last year. At one time it was believed that a hernia was more frequently the result of an improperly made or located wound, than of an improperly closed one, but at the time when we were all having some cases of ventral hernia, we were more particu-

¹ Paper read before the University of Pennsylvania Medical Society, April 19, 1901.

² Wiener klin. Wochenschrift, October 4, 1900.

lar as to the location of the wound than we are now. While we always prefer to make the wound parallel with the fibers of the tissues, we do not hesitate to cut crosswise when a cross incision will better expose the field of operation, for we know that by a careful closing of the wound, we need not fear hernia. When we first began to perform appendicitis operations, it was believed that our hernias were due to cutting the muscles crosswise, but we can make a short cross incision now when operating for chronic appendicitis, and by closing the wound accurately and aseptically, can avoid a hernia.

When we cut across muscular fibers in other parts of the body we expect them to unite when properly approximated, why not expect the same of the abdominal muscles?

The fact that every experienced surgeon believes his particular method of closing the abdominal wound the best, proves that when certain rational principles are adhered to, the particular method of carrying them out is of less importance than we are apt to believe. The nearer we approach nature's methods the more rational we are. We are certainly following nature's method when we close a wound by uniting fascia to fascia, muscle to muscle, and peritoneum to peritoneum—and we certainly are not following nature's method when we bury unabsorbable material in the wound. Dr. Coley stated in his discussion of Dr. Richardson's paper last year that he had seen 30 cases of sinus due to buried unabsorbable sutures. We rarely meet with sinuses in the Northwest because of the universal use of absorbable ligatures and sutures.

I will describe briefly the method I have employed for several years in closing the abdominal wound and give my reasons for preferring it. This is also the method employed by all of the surgeons who operate in the same hospitals with me, except my collegue, Dr. A. W. Abbott, who uses the crossed suture of Dr. Fowler with some slight modifications.

The peritoneum is first closed by a running stitch of medium weight catgut. Silkwormgut sutures are next passed through all of the tissues except the peritoneum by means of a full curved needle of a size suited to the thickness of the abdominal wall. The needle passes from without inward through the integument, fascia, muscle and deep fascia, coming out next to the peritoneum. It then passes from within out through the inner fascia, muscle, outer fascia and integument. In a very thin abdominal wall the needle can be passed through both edges of the wound at one sweep but in most cases it is better to take them separately. These stitches are placed about a half inch apart. The fascia of the external oblique is next united by a running stitch of medium weight catgut. All the ends of the silkwormgut are now caught and pulled upon at once so that they are made taut, after which they are tied lightly. Extra skin sutures are applied when needed.

The advantages of this method are: first, the peritoneal cavity is closed without delay; second, there is no unabsorbable material left in the tissues to make future trouble; third, the suturing of the outer fascia gives such support that the silkworm sutures need not be tied so tight as to cause necrosis; fourth, it obliterates all

dead space, and last, it yields eminently satisfactory results. The catgut used is sterilized by the dry heat process of Boeckmann and is always sterile. The advantages claimed for passing the needle from within out is only theoretic, for I have not taken the time to do this and since I have worn rubber gloves stitch abscesses are practically unknown in my work.

Dr. Abbott's cross-stitch differs from Dr. Fowler's original suggestion in two points. He first closes the peritoneum with catgut and instead of tying over rubber tubes he ties the two ends together just as we do in the through and through stitch. After closing the peritoneum he takes a thread of silkwormgut with a medium sized carved needle on each end and passes one needle from within out, first through the deeper fascia then across through the muscle and outer fascia of the opposite side then across through the integument of the original side. He then takes the other needle and passes it from within outward just as he did the first needle but beginning on the opposite side. This is an excellent stitch, for it brings the tissues together layer by layer and leaves no dead space. There are, however, objections to it: it requires much more time to apply it and it causes the patient more pain when it is removed.

In most cases of acute appendicitis drainage through the abdominal wound can not be avoided but the wound should be partly closed leaving just sufficient room for drainage. In the few cases in pelvic surgery requiring drainage it is safer and better in every way to drain through the vagina.

The same rules should govern the treatment of post-operative hernia that apply to other varieties of hernia.

When a patient applies to a surgeon for advice the rule should be to advise operative treatment. Mechanical treatment is unsatisfactory and is only palliative at best. The tendency is for the hernia to grow larger and for the surrounding tissues to undergo changes so that the chances for a successful operation diminish with time.

Until quite recently the tone of the literature upon the treatment of ventral hernia was quite pessimistic because written when ventral hernia was quite common. It follows that an operator who had hernia follow his operations frequently would often fail to cure the hernia.

At the present time the prognosis in the operative treatment of ventral hernia is good. My results since employing the technic described in this paper have been as good as those following operations for inguinal hernia. When we undertake to cure a ventral hernia we should endeavor to restore the tissues to their normal relations and hold them there by artificial means until nature has had time to unite them firmly. I believe that it is unwise to go beyond this and try to assist nature permanently by burying unabsorbable material in the tissues, and I know from experience that it is unnecessary.

It is just as important to enter the peritoneal cavity and remove the sac in this variety of hernia as in any other variety. The entrance should be made well away from the cicatricial tissue for fear of injuring an adherent intestine. All of the scar tissue should be dissected away and the various layers of the abdominal wall care-

fully isolated. When this has been accomplished the operation resolves itself into the closure of an abdominal wound. The wound should be closed by through and through sutures of silkwormgut and buried animal sutures, the method differing from the closing of an ordinary abdominal wound only in that the silkwormgut sutures should be much closer together and the buried sutures should be of kangaroo-tendon or chromicized catgut because the tension is greater and the tissues are not in so favorable a condition for healing.

It has recently been suggested that we use silver wire sutures wound around a piece of ivory, together with buried sutures of kangaroo-tendon. (See *Medical News*, September 1, 1900.)

The reported results are good and the method is doubtless a good one but a return to the old quill suture seems like a step backward and is unnecessary.

Next to asepsis the most important step in this operation is the separation of the various tissues by careful dissection. A simple cutting out of the scar and bringing the freshened edges together is very liable to lead to disappointment. It is of special importance to bring the muscular layer together because it is the best protection against a hernia. We do not often find this tissue in the covering of a hernia. In a median hernia it is often necessary to open the sheaths of the recti in order to bring the muscles together.

After the operation the patient should be kept in bed at least 3 weeks to give the tissues ample time to heal before weight is thrown upon them. When the patient is very fat it is often advisable to keep him in bed on a milk diet for 3 or 4 weeks before the operation just as we do in umbilical hernia in fat people. Patients with pendulous abdomens should wear an abdominal support after the operation but spare persons do not need it.

A FEW USEFUL POINTS IN THE SYMPTOMATOLOGY OF EYE DISEASES APPLIED TO GENERAL PRACTICE.

BY

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I purpose to speak of those eye-cases which may with advantage be treated by the general practitioner. The family doctor often complains that so-called specialism is invading his provinces, whereas the work of the specialist is naturally an aid to general medicine, treating of those conditions in which it fails, and often throwing light into dark corners of disease existing elsewhere.

In the diagnosis of eye diseases the following conditions are readily ascertained and their combined significance will generally lead to a correct diagnosis, even by one who is unfamiliar with the ophthalmoscope. I shall enumerate these symptoms, named in the order of their importance:

1. Diminution in the acuteness of vision.
2. Pain in its various degrees.
3. Redness, accompanying manifest inflammation.
4. Impaired mobility of pupil.

5. Changes in the tension of the globe.

6. Gross lesions visible without the aid of instruments or artificial illumination.

1. Diminution in the acuteness of vision is of paramount importance to the patient. Every physician should be provided with a Snellen test card, by means of which he may tell the gross changes or deficiencies in the acuteness of vision. Each eye should be tested separately, the other eye being covered. Any departure from normal acuteness will suggest 1 of the following 5 conditions:

1. Errors of refraction and accommodation.
2. Opacities of any of the refractive media.
3. Diseases of the fundus and optic nerve.
4. Functional disturbances.
5. Amblyopia.

In regard to errors of refraction the general physician will not as a rule be consulted, except in so far as they bear on the symptoms of pain and headache, which we discuss later.

Opacities of the cornea may be recent, such as those caused by interstitial keratitis, ulcers, lime-burns, etc.; or old, in which case they are generally the result of ulcers, traumatism or trachoma. Opacities on the anterior or posterior surfaces of the lens, or in its substance, can generally be recognized. It should be remembered in this connection that the reflex from that most deadly form of sarcoma found in children, the glioma, has been mistaken by the inexperienced for cataract, and thus delay fatal to the little patient has resulted.

In diseases of the fundus and optic nerve the acuteness of vision is a varying quantity. Pronounced cases of optic neuritis often have normal vision, large peripheral spots of choroiditis not showing functionally until the field of vision is carefully taken. On the other hand, the eye may be absolutely blind from retrobulbar lesion and the fundus at first show absolutely no signs of any disease. Functional loss of vision also requires that the field of vision shall be taken carefully.

In congenital amblyopia there will be a history of the condition dating back to infancy, and very often a squint which has been in evidence since childhood. The diminution of the acuteness of vision will, therefore, indicate, generally speaking, a disease deeply seated or a refractive error, and is thus of such a nature that it will be out of reach of the general practitioner, as the responsibility for the loss of vision is a very serious one.

2. Pain ranks probably as the next subjective symptom of importance, and in questioning the patient one should be sure he is understood correctly. Pain may be only relative, but I here allude to pain of a severe neuralgic variety and not the burning and smarting frequently complained of by the patient as "paining of the eyes." Like other head-neuralgias, this pain is referred to the distribution of the branches of the fifth nerve. These are in the eyeball itself, or in the forehead, temple and scalp.

The main causes of severe pain are refractive, accommodative and muscular errors, and essential inflammation of the branches of the fifth nerve, especially the supraorbital. In the first classification, in which the refraction or the muscles are at fault, the absence of

severe inflammatory symptoms, together with diminished vision or diplopia and headaches, will plainly point to the cause of the trouble. It is worth while to note, however, that in the most marked neurasthenic cases of astigmatism and muscular weakness in which the patient may complain of severe headaches and symptoms even amounting to epilepsy, the acuity of vision may be normal. In the second group, inflammations of the eyeball, the pain is generally severe. Under this head will come keratitis, ulcers of the cornea, iritis, iridocyclitis, irido-choroiditis and acute and subacute glaucoma. Retinitis, choroiditis, optic neuritis and scleritis often pursue their course without severe pain. In the essential neuralgias, that of the supraorbital branch of the fifth will be recognized by the extreme tenderness on pressure at its point of exit. Supraorbital and temporal neuralgias, though occurring alone, are almost a constant accompaniment of the inflammations of the cornea, iris and ciliary body.

Burning and smarting must be distinguished from pain. These are generally due to inflammations of the lids and conjunctiva, and a careful examination will generally reveal conjunctivitis, trachoma, blepharitis or superficial abrasion of the cornea as the cause.

3. Redness accompanying manifest inflammations of the eye may result either from the conjunctiva or, as the ocular conjunctiva is transparent, may come from the deeper sclera.

The conjunctival trouble is diagnosed from the tessellated pattern formed by the injected conjunctival vessels. Owing to the transparency of the conjunctiva and the looseness with which it is applied to the globe, any scleral injection beneath is easily detected. The conjunctival redness is unaccompanied by severe pain and more or less secretion will be present, which will be mucous, mucopurulent or purulent, depending on the cause and on the degree of the inflammation. With the deeper redness the fine, straight circumcorneal ciliary vessels will be injected. These deeper injections occur in keratitis, iritis, glaucoma and scleritis. Pain is often severe. It must be remembered that these deeper inflammations are generally accompanied by a varying degree of conjunctivitis, this complicating the original affection. On the other hand, the conjunctival affections often extend to the cornea, giving, in addition to their own symptoms, those of keratitis. This complication of symptoms often renders diagnosis somewhat difficult. It is perhaps not out of place to mention in this connection edema of the conjunctiva. When this occurs early in the course of a purulent conjunctivitis in the adult, the infection is probably due to the gonococcus, and there is imminent danger to the cornea. Chemois often occurs as the result of trauma.

4. One other important symptom should be recognized, the sluggish or immobile pupil. The pupillary reaction should be taken: for (1) Direct light stimulus; (2) consensual reaction; (3) the reaction of accommodation and convergence. In direct light stimulus the light is thrown into the eye being examined, the other eye being excluded from any light whatsoever. The consensual reaction consists in the response of the shaded eye to light stimulus thrown in the fellow eye. This

test is useful in determining cortical lesions in the occipital lobe, in which case hemianopsia would be an accompanying symptom. The reaction of convergence is obtained by having the patient change his gaze quickly from distant vision to the observation of some object near by. It is useful, as will be mentioned later, in testing for the Argyll Robertson pupil.

A failure of the pupil wholly or in part, to react, may be due to a lesion. (1) In the iris itself; (2) in the third nerve; (3) in the brain centers; (4) in the light conduction paths. The lesion in the iris itself can generally be made out as a swelling or an atrophy of the iris, or an anterior or a posterior synechia. Immobility points to iritis, either old or recent, or to glaucoma; in the former the pupil will be contracted, in the latter dilated. The significance of immobility from other causes demands more minute and detailed statement than is possible here. I will simply refer to a few indications which may be useful. The pupil immobile to light-stimulus and yet responding to accommodation and convergence and known as the Argyll Robertson pupil, is one of the cardinal symptoms in locomotor ataxia. Irritation or paralysis of the pupil-contracting center in the floor of the third ventricle will produce a contracted or dilated pupil respectively. The contracted pupil then is found in the early stages of inflammatory conditions of the brain and meninges. The dilated pupil would follow sufficient pressure in the ventricles.

If these facts are borne in mind and the physiology of the pupillary tracts are recognized, the pupillary action will be intelligently interpreted and will form a valuable indication of the condition of the cerebral centers in constitutional diseases and in brain-surgery.

5. The tension of the globe is ascertained by palpation with the 2 index fingers, the patient in the meantime looking downward, thus bringing the lid over the globe and the sclera under the palpating fingers. The tension thus obtained is compared with that of the observer or with some normal eye. It is also well to compare the 2 eyes. One finds increased tension in glaucoma, certain forms of iridocyclitis, and as the result of trauma. Decreased tension may result from a ruptured globe, degeneration of the globe, and myopia with detachment of the retina.

6. In the final classification of gross lesions visible without the aid of the ophthalmoscope, we bring under one heading a few important aspects of the eye, which, being readily recognizable, should not pass unobserved. Roughness and elevation of the palpebral conjunctiva probably indicates trachoma, vernal catarrh, or a ruptured chalazion. Haziness of the cornea indicates a recent or old keratitis. Photophobia and laceration are generally due to some corneal lesion. A dirty color of the iris is found in iritis. A white spot over the pupil may mean cataract, or an inflammatory pupillary membrane, and a reflex observed from the pupil in a child may signify that rapidly fatal dread destroyer, glioma.

Freezing Mosquitos.—William C. Lovere, the City Treasurer of Evanston, it is said, thinks by working on the system by which steam heat is furnished from a central plant, he can perfect a plan by which liquid air may be suddenly turned on the north shore suburb and chill the mosquitos to death.

FORMALIN IN THE TREATMENT OF SUPPURATIVE OTITIS MEDIA.

BY

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There is no ear affection which the family physician is more frequently called upon to treat than otorrhea, and there is perhaps no ear trouble less amenable to treatment. The idea prevails among the laity that no attempt should be made to stop the discharge and so long as there is no pain advice is rarely sought.

Many children who live among the most unhygienic conditions, surrounded by filth, poorly clothed and half fed, suffer with a constant discharge from one or both ears. Hospital clinics are largely made up from this class, and it is extremely difficult to get them to carry out any mode of treatment, therefore the simplest must be adopted. In these cases I have obtained the best results with formalin, and have adopted the following plan, or slight modifications thereof: The ear is thoroughly cleansed, after which the canal and drum are examined, and note taken of the size and situation of the perforation, with the degree and extent of the inflammation. If the ear is filled with thick, tenacious secretions, and the perforation is small or unfavorably situated to allow free drainage, an incision is made in the posterior-inferior quadrant of the drum. This is rarely necessary, as in most cases there are large perforations, or the entire drum is destroyed. After cleansing, the head is inclined to the opposite side and an aqueous solution of formalin, 5 drops to the ounce, is instilled with a medicine dropper, enough being used to fill the middle ear and external canal. No packing is employed because this class of patients almost invariably remove it and stuff the canal with cotton, which prevents drainage.

Home Treatment.—If the secretions are thick, lysol is prescribed, 15 to 30 drops in a half glass of warm water; with this the ear is syringed, using a soft rubber pus-syringe; sufficient force to cause dizziness cannot be used, nor does it force the pus into the mastoid cells. All syringing is stopped as soon as the discharge is lessened to a degree so as not to block the canal. In those cases not requiring syringing, and also 10 minutes after syringing in those that do, the patient is directed to lie down on the opposite side and 5 to 10 drops of the formalin solution, warmed by pouring it in a spoon and holding it over the gas jet or lamp, or by setting the bottle in warm water, is dropped in the ear. The patient lies in this position for 10 minutes to allow the fluid to permeate and come in contact with all parts of the tympanum; this treatment is repeated night and morning.

I have treated 40 cases by this method. In 35 the discharge ceased entirely in from 3 to 15 days, the average time being about a week; in 5 cases the discharge was lessened but not entirely checked; in 2 of these the treatment was not faithfully applied and in the other 3 there was bone necrosis. In all these cases the fetid odor entirely disappeared in from 2 to 5 days before the cessation

of the discharge; even in the 5 cases not cured there was no odor so long as the treatment was faithfully carried out. After the discharge had ceased for a week the treatments were reduced to 1 a day, then every second day, and finally every third; I have found this necessary to prevent recurrences.

In acute cases 1 to 3 drops of formalin to the ounce is used, as stronger solutions produce excruciating pain. In the most obstinate cases and those with small granulations, alcohol is added.

Formalin	5 drops,
Alcohol (95%)	2 drams,
Aqua	q. s. ad 1 ounce.

Small granulations are quickly reduced by this solution and they do not reappear, but large ones require curetment. As a result of the treatment ulcerations were quickly healed but it had very little effect upon caries of bone.

In a few cases the fluid passed down the eustachian tube and produced severe burning and a choking sensation in the nasopharynx and throat. No serious results were caused thereby but it was unpleasant enough to cause the patient to stop its use; this was entirely prevented by directing the patient to lie on the back with the head partially inclined to the opposite side. Vacher reported a similar effect during his irrigations.

Proper treatment must be applied to the nose and nasopharynx in each case, and attention given to the general health. The excretions are stimulated by small doses of calomel, followed by full doses of sodium phosphate; if there are any indications of worms, anthelmintics are prescribed. As a tonic, arsenic sulfid gr. $\frac{1}{10}$ or calcium sulfid gr. $\frac{1}{4}$, 4 times a day to a child 8 years old, gives excellent results. If the patient's health is again reduced below the normal and the catarrhal process in the upper respiratory tract becomes worse, there are recurrences as from all other methods of treatment.

The reports of the use of formalin in suppurative otitis media prove its value in this disease and warrant its continued use.

Vacher¹ used a 5% or 10% solution. In his earlier experiments he cocaineized the ear before using the formalin. Later, he found that 5% solutions did not irritate and were efficacious, therefore the ear was irrigated with this solution and sterilized gauze or cotton dipped in the same left in the ear. When suppuration was profuse and fetid this application was made daily, otherwise longer periods intervened.

Randolph², in commenting on the use of formol in diseases of the ear (by the method of Vacher), said that his patients with whom he had used it complained so bitterly of the pain following the irrigations that he was obliged to forego its further use. He also adds, "I am constantly hearing of the good formol is doing in this class of cases and am disposed to give it a more extended trial." He thought it wise, however, to thoroughly cocaineize the ear before irrigating.

Cipriani³ reports 10 cases treated with prompt relief. A 2% solution was injected followed by insufflation of iodoform. His conclusions were that formalin assisted healing, protected against excessive granulations, and

improved the hearing by freeing the middle ear of pus.

The antiseptic powers of formalin have been the subject of many experiments and it seems to be pretty well established that it deserves a place in the first ranks. Kinyoun⁴ in his experiments found that a 1:2,000 solution prevented the growth of the bacillus of anthrax.

Walter,⁵ after an exhaustive series of experiments, states that formalin in the strength of 1:1,000 arrests the growth of the germs of anthrax, cholera, typhoid fever, and diphtheria, and of *Staphylococcus pyogenes aureus*. In 1% solutions it kills pure cultures of pathogenic germs in an hour. In dilute alcoholic solutions the effect is more intense.

Bird⁶ states that formaldehyd gas, 1:2,500 solution (which equals 1:100 of formalin) destroys the most resistant microorganisms in an hour. According to Bird, Hoffman discovered formaldehyd in 1867. Loew subsequently demonstrated its germicidal powers, and Trillat suggested its use as a powerful disinfectant free from poisonous properties. It acts as a powerful reducing agent, and Walter asserts that it almost immediately and entirely destroys the most offensive odors.

From these reports it is evident that high percentages of formalin in the treatment of suppurative otitis media are unnecessary. Besides, their caustic action inflicts needless pain, and equally good results can be obtained with weaker solutions. As in the use of other remedies in any branch of medicine, the dose or strength of the solution should be regulated to suit each individual case, following the rule to use the smallest quantity with which the desired effect can be obtained. In the use of formalin I find that the strength which causes momentary smarting produces the best results. In the average case, 5 drops to the ounce, which is practically a 1% solution, is sufficient; although I would not hesitate to increase its strength until this effect is obtained.

By the use of this method, cocainizing is unnecessary, and what is of still greater importance, the escharotic effects of the stronger solutions are avoided. Weak solutions increase cellular activity, which results in the casting off of the dead epithelium, stimulating the living cells to a healthier condition, reestablishing a more nearly normal secretion, and toughening the cells of the middle ear to withstand exposure to atmospheric changes, thus lessening the liability to continued infection through the external auditory canal.

Conclusions.—By the judicious use of formalin the following results may be obtained:

1. Fetid odor quickly disappears.
2. There is an early cessation of the discharge.
3. Protects against the formation of granulations, and small granulations are destroyed by alcoholic solutions.
4. Promotes healing of ulcerated mucous membrane, skin abrasions, and inflammation of the external auditory canal.
5. Retards, but does not entirely check bone necrosis.

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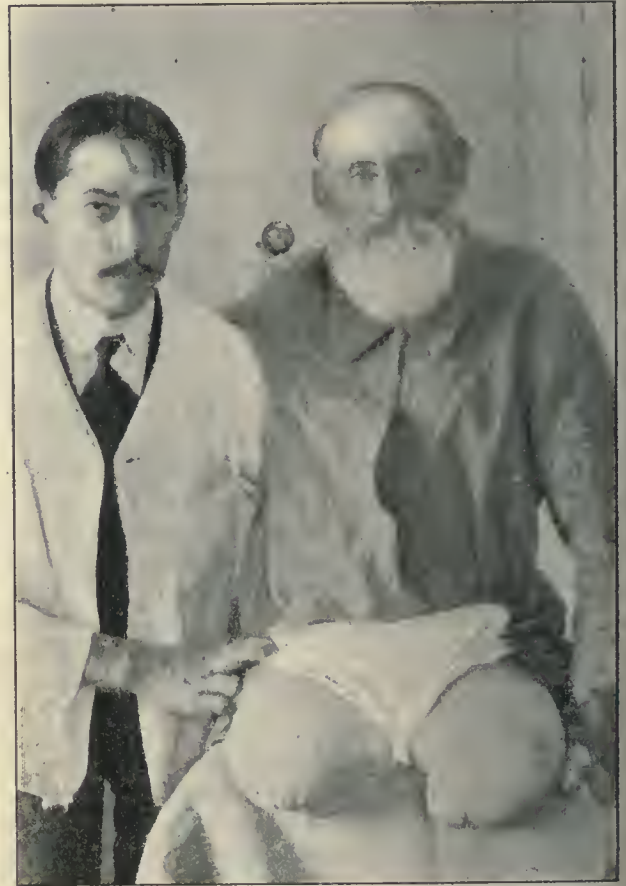
SYNCHRONOUS AMPUTATION OF BOTH THIGHS FOR GANGRENE OF FEET UNDER SPECIAL COCAINIZATION.

BY

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of Brooklyn, N. Y.

James Bell, aged 68 years, a farmer, was admitted to St. John's Hospital, October 26, 1900. His family history was good and he has always been healthy, never having had any serious disease, except pneumonia, when 7 years old. He is a great walker and living on a farm has led an outdoor life. About 5 weeks ago he came to the city to visit his sister and shortly



after was attacked with "chills and fever" of daily recurrence every afternoon. The physician who called diagnosed malarial fever. At the time there were no symptoms referable to the lower extremities. A week subsequent to the malarial attack, the toes of both feet became slightly edematous. The day after the swelling began there was a sense of uncomfortable heat in the feet. Antiperiodic treatment was instituted and in 24 hours the sensation of heat was relieved, to be followed 2 days later by a sensation of cold in both extremities. The supposed "malaria" lasted a week and "disappeared when the feet began to trouble him."

The patient was able to walk with difficulty for 2 days after the swelling in the feet had occurred. There was a sense of great weight in the feet, this with the increase in swelling after 48 hours prevented locomotion. There was no pain in attempting to walk, but the feet were clumsy and heavy. The feeling

weight continued and to this was added a crawling feeling. The sense of weight disappeared after a few days and what he describes as "crawling and creeping" sensations increased, growing more and more uncomfortable day by day. His chief complaint when admitted was inability to move his feet. Physical condition: Marked general hyperesthesia. Heart action weak. Lungs normal. Very slight atheroma of arteries.

Left Foot.—All the toes had turned black and were mummified. The rest of the foot was of a red-brown color. An indistinct line of demarcation extended from the internal malleolus (upper border back to insertion of tendo-achillis, coming up on the outer side below the external malleolus), passing across the arch of the foot to the internal malleolus. The skin on the outer side of foot was not affected. The circulation in the popliteal artery was feeble and in the femoral below the normal.

Right Foot.—Condition to toes same as on left foot. Line of demarcation $\frac{1}{2}$ inches nearer the toes than on the left foot. Circulation in the limb below normal. Pulsation in popliteal artery was feeble and in the femoral less strong than usual.

This bilateral gangrene appearing simultaneously, in both feet, with evident checking of the arterial flow in both femorals and below, indicated an interference with circulation in the abdominal aorta.

The examination of the urine was very carefully made and demonstrated the *entire* absence of either sugar or albumin.

At operation, owing to the poor blood-supply in the limbs it was desirable to avoid the use of a tourniquet or Esmarck bandage. I therefore had digital compression made and so skillfully was this done by Dr. Duffield that there was practically no arterial blood lost during the operation, which was done November 7, 1900, at 3 p. m. under spinal anesthesia with cocain.

Twenty minims of a 2% solution of cocain hydrochlorate, was injected into the sac of the spinal canal, the needle being entered between the 4th and 5th lumbar vertebrae. This solution had been in the sterilizer a long time and must have been decomposed, and it produced no effect on the system. I prepared a fresh solution having the water and container thoroughly sterilized and the cocain hydrochlorate dropped into it. Twenty minims of this fresh solution was now injected, and complete anesthesia of the whole body below the shoulders was produced.

I now proceeded to amputate the limbs at the lower third of the thigh on both sides. In order to save the tissues as much as possible from pressure the amputation was done by transfixion, cutting from within outwards, in this way avoiding any bruising of the skin. There were only 2 cuts made on each limb, each flap being made by a single cut. In this way we left as much muscle and adipose tissue as possible to support and nourish the flaps. The periosteum was pushed back well after being divided and each femur divided with the saw 6 inches above the kneejoint. The arteries were ligated with chromicized catgut. The muscles and flaps approximated with deep silkwormgut sutures. No drainage was used.

The only sensation experienced by the patient was a prick when the point of the amputating knife was entered through the skin, and when the first sciatic nerve was cut through he remarked, "something is going wrong in my foot."

The patient talked freely during the whole operation and did not seem to experience any shock. He was returned to bed in fine condition and a half-hour after the operation, in answer to my inquiry as to how he felt, said "I feel fine."

There was no nausea; this is the only case in which I have seen it absent when I have used cocain as an anesthetic.

At 9 p. m. he became very restless and had to be tied in bed. Normal saline solution administered by rectum. On the eighth, I ordered milk punch with $\frac{1}{2}$ ounce of whisky 3 times a day and beef peptonoids every 4 hours. In the night I gave 3 drams of whisky every 4 hours. He slept but little. On the ninth he picked at bedclothes and was very restless day and night. The next day the stumps were dressed and both were in good condition and perfectly healthy. The condition was about the same on the eleventh. The punch was continued every 4 hours and strychnin sulfate, grain $\frac{1}{16}$, was given every 3 hours. He was quiet during the day on the thirteenth, but delirious during the night. The stumps were inspected and their condition was good. On the fifteenth I found a stitch-abscess in 3 sutures on right leg and 2 in left leg; these 5 stitches were removed. Some discoloration was noticed in the flap of the right stump on the sixteenth and the flaps were separated and some pus discharged. A rubber drainage and tube was inserted. On December 14 a piece of chromicized gut that had been used to ligate the femoral artery was discharged from the wound of the right stump. Patient is gaining in health and strength, is about in a wheelchair.

On January 9, 1901, the patient was discharged with 2 good healthy stumps and apparently in perfect health.

This case is an illustration of the utility of spinal anesthesia in a certain class of cases. In this case chloroform and ether were contraindicated on account of the debilitated condition of the heart. Spinal anesthesia by cocain is being very much abused by indiscriminate use by the profession at large and is in danger of losing its proper place as a useful anesthetic agent in cases in which chloroform or ether are contraindicated. It is not a substitute for these, neither is it free from danger, as the number of fatal cases that have found their way into print go to prove.

In one case in my own hands I came very near sacrificing the life of my patient to this procedure, as there was no anesthetic effect, and only the cocain-poisoning symptoms were manifest.

PERMANENT GOLD PREPARATIONS.

BY

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The marked selectivity of gold chlorid for nerve tissue and the fleeting beauty of the preparations made by the usual methods, are facts linked together by dictum and experience.

Three years ago, in February, 1898, I made some gold preparations of the intercostal muscles of a rabbit. They were successful, but with the authoritative and emphatic words of Bolles Lee in mind—"I warn the reader against indulging the hope that, with all possible precautions, his preparations will retain all their beauty for more than a few weeks" (*Vade Mecum*, fourth edition)—it did not occur to me to doubt their impermanence.

A year later, the appearance of the slides led me to reexamine them under the microscope. Contrary to authority and expectation, they were unimpaired; color, clearness and precision were as fine as on the day they were mounted. Then I repeated the work, again using the intercostal muscles of the rabbit and proceeding

according to the method previously followed. Again the impregnation was successful, and, as before, exhibited not only the motor axones with their terminal organs but also the plexus of sensory fibrils. The latter, as well as the earlier preparations, now 2 and 3 years old, respectively, are still in a state of preservation and apparently will endure indefinitely. This identity of results, which can scarcely be accidental, induces me to describe the method by which the preparations were made.

A mixture of 8 parts of a 1% solution of gold chlorid and 2 parts of formic acid is boiled 3 times and then cooled. Very thin pieces of tissue are put into the cold mixture, which must be kept in the dark. After 1 hour the tissue is washed in distilled water and then placed in a mixture of 10 parts of formic acid and 40 parts of distilled water, and exposed to diffuse daylight. The reduction occurs in from 24 to 48 hours, when the violet tissue is transferred to 70%—and after 24 hours to 90%—alcohol and kept in the dark for at least a week. It is then ready for the final manipulations and may be teased and mounted in acidulated glycerol or imbedded and cut into sections.

Böhm and Opperl¹ ascribe this method to Stöhr and the foregoing description will be found in his "Textbook of Histology." It is similar to Ranvier's² technic, "Procédé de l'or bouilli." But, although the 2 methods agree in some points—as in the reagents used and in the proportions of the mixtures—they differ in essential processes. Stöhr advises longer boiling of the gold chlorid and formic acid mixture, a process which is said to facilitate the reduction of the gold and thereby to promote its selective action on the nerve-tissue. Another important factor in obtaining successful and permanent results is the modus operandi of reduction. The tissue must be so exposed that it is penetrated by the light, which is conveniently accomplished in a test-tube or in a beaker placed on a sheet of white paper. Sunlight is unnecessary.

In the fifth edition of his work Lee insists less on the impermanence of gold preparations and says "that the greater care taken in preparation, and particularly the greater care taken to ensure thorough reduction of the gold, the longer will be the life of the preparation."

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The Michael Reese Hospital, of Chicago, is the recipient of a gift of \$25,000 from the children of Jacob and Hannah Rosenberg. This sum is supplemental to a bequest of \$10,000 provided for in the will of Mr. Rosenberg, filed a year ago. The will also provided that \$5,000 be given to the United Hebrew Charities, which is affiliated with the Michael Reese Hospital. The gift is without condition, but it is understood to be the wish of the donors that it be used as a nucleus for a fund to erect a larger hospital building. Last year, 1,841 cases were treated at the hospital, 1,353 of these being charity cases.

Private Hotel and Sanitarium.—In view of the fact that the sick can have better attention in a hospital than in a home, and to fill the need for satisfactory quarters where opulent patients may be cared for during difficult operations or the process of cures, and to accommodate friends and relatives and secure for them quarters near the sick, the erection of a hotel combined with a sanitarium is purposed by 5 of the leading physicians and surgeons of Chicago. The cost is estimated at \$400,000, and in addition to the heads of the institution a staff of attending physicians and a corps of nurses will be enlisted.

AN IMPROVED BEDSTEAD FOR INVALIDS.

BY

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The late Mr. Lawson Tait made this observation: "There is no article in ordinary life-long use with which we are so closely related, with which we spend so much of our time, which we occupy with such affectionate readiness and leave with such affectionate regret as our bed. Yet how little care is given to the principles of its construction and use. It was this matter of the bed during illness, especially in surgical ailments, which first forced the question of its proper construction upon my notice. In cases of illness the nurses are fearfully handicapped, and the number of serious illnesses acquired by young women and caused by the strain of lifting heavy and helpless invalids has been very large in my experience."

Ashhurst's Encyclopedia, and the American Textbook of Surgery, are authorities, for the following statements respectively: "All patients who are obliged to lie in bed for any length of time are often greatly relieved by even a very slight change of posture, from the shifting

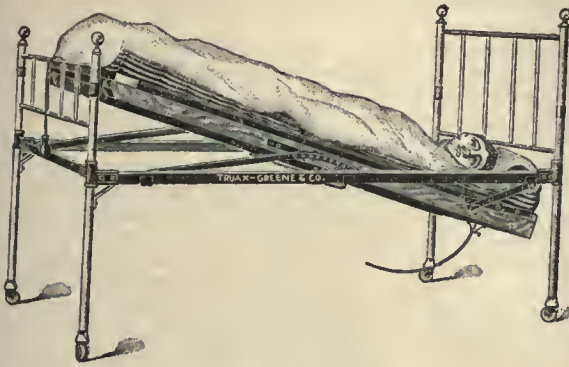


of the bearing points of the body," and "recovery is hastened by enabling a patient to gradually sit up after a serious surgical operation and during the repair of a wound."

In view of these facts it is apparent that there is need for a bed whereon the invalid may rest in comfort, and, without effort on his part, be afforded such desirable changes of position as are not contraindicated by his physical condition. The bed illustrated herewith is of such construction that the patient can be afforded every possible comfort in the way of position and conveniences; at the same time it serves as an assistant to the nurse or other attendant so that the patient, without regard to the cause or degree of illness, may be handled and have his wants attended to without undue labor or exertion.

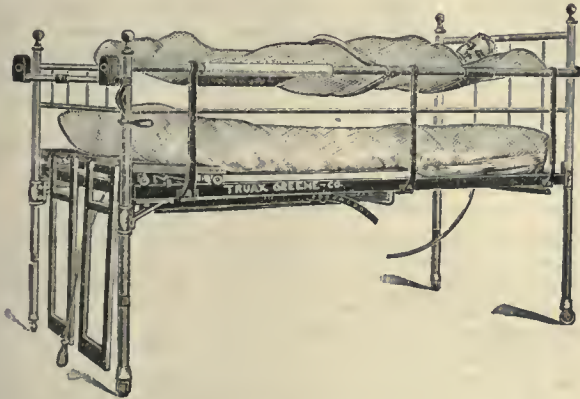
Briefly described, the bed consists of a strong frame with an ordinary woven wire spring mattress, the frame of the latter being transversely pivoted near its center. This mechanism permits a depression of the head and trunk in cases of narcosis or extension, or an elevation to a semi-sitting posture. A back rest accentuates the latter until an upright position is secured. Sliding downward

in this position is prevented by a seat board placed between the hair mattress and the one of woven wire. To the seat board are attached two limb supports, each working independent of the other, and so adjusted that one or both of the lower limbs may be placed at any desired height without regard to the position of the trunk of the patient. A longitudinal central slit in the hair mattress permits the introduction of a bedpan, thus avoiding the elevation of the hips caused by using the ordinary bedpan. With the seat board in position



beneath the hair mattress, the bed may be readily converted into an upholstered chair form and the patient in many cases relieved from the strain of a long continued lying posture.

The bed is supplied with lateral revolving side bars or shafts, to which may be attached broad bands that pass underneath the patient. Suitable means are provided for rotating the shafts outwardly, thereby raising the patient above the mattress, thus facilitating a change of bedding, or the application of bandages, and affording access to any part of the body. This mechanism also permits the introduction of a suitable bathtub directly



beneath the typhoid patient, into which he may be lowered.

With this bed, fractures necessitating a long confinement may be treated and the patient made comparatively comfortable without danger of displacement. For the prevention and treatment of bedsores, in using enemas or douches, and in lessening the work of both physician and nurse, the utility of this bed is obvious. Its advantages are apparent alike to the surgeon, gynecologist, obstetrician and the general practitioner. It does not differ in general appearance from the ordinary hospital bed. It is simple in construction, certain in action and easily operated by anyone.

EXCESSIVE EOSINOPHILIA IN TRICHINOSIS.

BY

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of Milwaukee.

Since the discovery by Dr. Thomas R. Brown, of Johns Hopkins Hospital, in 1897, that the eosinophile cells of the blood suffered an enormous increase in cases of trichinosis, corroborative evidence has been brought forward; the reported cases, so far as I am aware, numbering 20. Considering the small number of the cases, and also the fact that trichinosis is rather an uncommon disease (one might more correctly say that it is a disease not often recognized, for doubtless it is less uncommon than we think) all additional evidence that places this new diagnostic sign upon a secure footing will be welcomed. I have but a single case to report:

A young man, aged 21 years, ate pork sausage that was not thoroughly cooked, and soon thereafter suffered from gastrointestinal disturbances. He suffered from severe muscular pains which in a few days became milder and then disappeared altogether. The sausage, being suspected, was examined and found to contain trichinae. I heard of this case and requested the attending physician, Dr. Fred. Weber, to furnish me with some of the patient's blood in order that I might examine it. My request was granted and I have the pleasure of corroborating the statements of the other observers.

It is probable that the degree of eosinophilia is dependent upon the severity of the muscle involvement and the attendant symptoms. Most of the cases described were seen in the acute stage and showed 50 to 60% eosinophilia. In this case late in the progress of the disease 30% of the leukocytes were eosinophilous, the differential count being as follows:

Eosinophile	30%
Polynuclear	55 "
Transitional	7 "
Large mononuclear	5 "
Small mononuclear	3 "
	100%

Added interest attaches to the cases in which diagnosis is made from blood examination, for here the utility of this sign is evident; although in this case the evidence was sought in the blood, after the diagnosis had been established. It affords one much pleasure to have an opportunity to contribute to the value of this new sign of trichinosis. So far as I am aware, in no other disease has such an excessive degree of eosinophilia been found, and therefore until evidence to the contrary is presented we are tempted to consider it diagnostic. There is no doubt that—as soon as the value of the sign is more generally recognized—it will be discovered that trichinosis is, after all, not very uncommon, and that for many an obscure (rheumatic?) muscle-pain we may thus find satisfactory explanation.

Dr. Ernst Stadelman, director of the medical department of the Urban Hospital, Berlin, and professor in the University of Berlin, has just died. Before coming to Berlin Dr. Stadelman was associated as privatdozent with Naunyn, then at Königsberg, and Erb at Heidelberg. He was also an assistant professor at the Russian University of Dorpat before the Russian Government began to so thoroughly Russlanize all its Universities. His chief scientific contributions dealt with disorders of metabolism. He was first to show the importance of the presence of oxybutyric acid in diabetes and especially in diabetic coma. He also thoroughly studied peptonuria, the origin of icterus and the metabolism of the albumins.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

May 25, 1901. [No. 2108.]

1. A Clinical Lecture on Appendicitis and Its Surgical Treatment. J. CRAWFORD RENTON.
2. An Address on the Symptoms and Modern Methods of Diagnosis of Stone in the Bladder, Kidney and Ureter. P. J. FREYER.
3. Notes on 206 Operations for Stone. W. F. ADAMS.
4. A Method of Sterilizing Soft Catheters. HERBERT T. HERRING.
5. A Case of Almost Universal Ankylosis. T. K. MONRO.
6. Strangulation of Meckel's Diverticulum. KEITH CAMPBELL.
7. Case of Cancer of the Larynx with a Long Course. E. DONALDSON.
8. Furunculosis of the External Auditory Canal Simulating Mastoid Periostitis. JAMES GALBRAITH CONNAL.

1.—Renton for convenience divides the inflammatory affections of the vermiform appendix into 3 forms: Catarrhal appendicitis; appendicitis with swelling and acute perforating appendicitis. He says operation is recommended as a rule after a second catarrhal attack, that the appendix is apt to give way after 2 attacks and lead to a third and more serious form. When swelling is present always examine the rectum, bulging may be detected, and the abscess should be opened at that point. When the abscess is backwards, it may be opened without entering the free abdominal cavity, if downwards or inwards, this cavity must be opened and protected by gauze. Cases of acute perforative appendicitis should be classed with ruptured gastric or typhoid ulcer. Patients operated on before the third day may recover, but after the third day the chances of recovery are very small. Operate, if possible, within 6 hours of the beginning of the attack. [C.A.O.]

2.—Freyer mentions 4 characteristic symptoms of stone in the bladder: (1) Increased frequency of micturition is the earliest and most constant symptom. (2) Pain, reflex in character, situated near the posterior aspect of the glans penis, and gradually increasing in intensity toward the end of the act of micturition, is almost invariably present. The pain diminishes in intensity as life advances, being much more severe in children than in aged persons. (3) Hematuria, gradual in onset, occurring toward the end of micturition and increased by exercise is the symptom which generally causes the patient to seek medical advice. (4) Sudden stoppage of the flow of urine is more common in the earlier stages of stone. Many other diseases which present somewhat similar symptoms are discussed. Of 1,000 operations for stone in Freyer's practice almost 98% were in males. The diagnosis should be confirmed by the sound, having first made a rectal examination by the finger to ascertain the condition of the prostate. Mercier's solid steel sound is thought to be the best. The aspirator and cannulas employed in Bigelow's operation may be used as a means of diagnosis and are very valuable in many cases. A suprapubic operation may be necessary for a diagnosis and, as a rule, is the preferable one. Pain in the loin corresponding to the affected kidney is as a rule the earliest and most constant symptom of renal calculus. The testicle is generally retracted and gastrointestinal disturbances with reflex disturbances of the urinary tract are frequently present. The ex-ray is valuable as a means of diagnosis. The symptoms of stone in the ureter are usually extremely obscure unless the stone is impacted in the lower end of the ureter. Leiter's electric cystoscope has been valuable when the stone is in this position. [C.A.O.]

3.—Notes on 206 operations for stone by Adams show 6 deaths. Lithotripsy was the operation generally used and was successful in the smallest boys; 48 cases were in boys under 10 years; 15 were in children under 3 and all did well. Lithotomy was performed only when lithotripsy was impossible or inadvisable. The mortality was naturally higher, 3 of the 36 patients operated on died. [C.A.O.]

4.—Herring considers first the various methods commonly adopted for sterilizing soft catheters and then describes a process that he thinks more efficient. He finds that water at 150° F., even for 30 seconds, is a reliable sterilizer of catheters for ordinary work. An apparatus is described that allows the easy and rapid sterilization of instrument and lubricant by this

method, both being free from irritating chemical antiseptics. [C.A.O.]

5.—Monro reports a case of almost universal ankylosis. The articular affection was first noticed in the young man at the age of 18, and at the age of 20 he was forced to give up work. From the age of 22 till his death at 46 he was completely confined to bed. The disease in each joint began with pain, followed by swelling and ultimately by fixation. His death was apparently caused by an accumulation of bronchial secretion. Permission was refused even for an external examination of the body after death, but the case appears to correspond to the subacute type of the very rare disease described by Dr. Joseph Griffiths as universal bony ankylosis or arthritis ossificans. [C.A.O.]

6.—Campbell reports a case of intestinal obstruction due to strangulation of Meckel's diverticulum in a man of 70, which is of surgical as well as of pathologic interest. The diagnosis was strangulated left femoral hernia with peritonitis. Operation was decided against on account of the patient's general condition. Necropsy revealed the fact that the bowel joined the ileum at right angles, being attached 3½ feet from the ileocecal valve and arose from the lower and anterior aspect of the intestinal tube. The diverticulum was 4¼ inches in length and resembled the ileum. It is interesting that this fetal relic should have persisted in such proportions, and from a surgical point of view that this, evidently the most freely movable of the abdominal contents, should have been forced into the canal by the intraabdominal pressure, and that, having become adherent at its extremity, a volvulus, apparently secondary in point of time, should have formed. The chief danger in these cases is the presence of a fibrous band, but in this instance the diverticulum itself produced the obstruction which gave all the signs of being complete. [C.A.O.]

7.—Donaldson reports a case of cancer of the larynx of 9 years and 1 month duration. For a long time a benign growth was diagnosed. The fact emphasized is that a warty laryngeal growth in an elderly person may present symptoms of a benign tumor for about 8 years and in the end turn out to be malignant. The microscope proved that the growth was an epithelioma. [C.A.O.]

8.—Connal reports 2 cases of furunculosis of the external auditory canal, in which the clinical picture is that of mastoid periostitis. The difficulty in diagnosis is increased if there is—as sometimes happens—a coexisting purulent otitis media. A thorough inspection of the external auditory meatus when the presence or absence of a localized furuncular swelling with its attendant sensitiveness to touch with the probe will settle the diagnosis. [C.A.O.]

The Lancet.

May 25, 1901. [No. 4056.]

1. An Address on the Operative Treatment of Abscess when Situated in the Brain. CHARLES A. BALLANCE.
2. The Erasmus Wilson Lectures on the Pathology and Diseases of the Thyroid Gland. WALTER EDMUNDS.
3. The Surgical Treatment of Chronic Ulcer of the Stomach. A. W. MAYO ROBSON.
4. Analysis of Stools and Urine from Epileptic Patients Under Treatment with "Brominal," Compared with Similar Specimens from Patients Under Potassium Bromid. W. HARRISON MARTINDALE.
5. Two Cases of Carcinoma Treated with Cacodylate of Soda. EDWARD MARTEN PAYNE.
6. Acute Colitis in Children. EDMUND CAUTLEY.

1.—Ballance, in an article on the operative treatment of abscess of the brain, states that the abscess may be latent, producing only general symptoms until excited to renewed activity by some other condition. An acute abscess and an old encapsulated abscess may exist together; such a case is reported. An abscess replacing the right optic thalamus is reported, the capsule of which was very firm and ½ of an inch thick. Owing to a mistake in diagnosis, the abscess was not removed. The most important principle in the treatment is free drainage. When a purulent collection is encapsulated, enucleation is the

proper treatment. The details of operation are taken up step by step. The writer believes there is less risk of the abscess being missed when search is made for it with a sharp knife, than when any other instrument is employed. [C.A.O.]

2.—Edmunds, in the third Erasmus Wilson lecture on the **pathology and diseases of the thyroid gland**, discusses the various opinions held, and the results of experiments, regarding the nature of myxedema, cretinism, and Graves' disease. He points out especially the differences between myxedema and exophthalmic goiter, and suggests that one is due to deficiency of the thyroid secretion, the other to increase and perversion of the secretion. There follows also a critical review of the work of other observers, and of the indications for, and the results of, operations upon the thyroid gland. [A.O.J.K.]

3.—Robson believes surgical treatment to be the only satisfactory method of dealing with **intractable or relapsing gastric ulcer**, and that operation should be resorted to much earlier than has hitherto been the custom. When treated by general and medical means only, the mortality is from 20 to 50%. The mortality in operations for simple diseases of the stomach, excluding perforation and hemorrhage, is less than 5%. The surgical treatment of gastric ulcer is taken up in detail, as is also the treatment of its complications, which are no less numerous than serious. Any one of the following operations, or a combination of one or more, may be called for in each individual case: Exploratory gastrotomy; gastroenterostomy to secure physiologic rest to the stomach and relieve the hyperchlorhydria, or in other cases to short-circuit a stenosis; excision of the ulcer; pylorotomy; pyloroplasty; gastroplasty; gastrostomy; gastrolosis; pylorodiosis; and gastroplication. In the absence of special complications, gastroenterostomy is the operation to be relied on in the treatment of gastric ulcer. [C.A.O.]

4.—Martindale, with a view of determining whether the halogenised oil, brominal, passes through the system unchanged, or whether it is absorbed, undertook a series of investigations, and details the results of analyses of stools and urine from epileptic patients under treatment with brominal, as compared with similar specimens from patients under treatment with potassium bromid. It was possible under both treatments to account in the urine for somewhat more than $\frac{1}{2}$ of the quantity of bromin administered in the day. In the brominal treatment, small quantities of unaltered brominal and bromids are passed by the rectum. It is suggested that the digestion and absorption of the brominal is due to the pancreatic enzyme splitting up the compound and forming free, fatty acids, which are, to a large extent, saponified by the alkali present, and that the bromin is by the same agency converted into alkalin bromin. The bile then causes solution of this saponified mass of soap, fatty acid, and alkalin bromid, the latter by its easy solubility passing off in the urine. [A.O.J.K.]

5.—Payne reports 2 cases of **carcinoma**—1 of the uterus, the other of the tongue—treated with **cacodylate of sodium**, with marked improvement in both cases. The drug was given hypodermically in doses gradually increased to a maximum of 7.5 centigrams once daily. It is believed that arsenic has a specific action on epithelial cells—at first, beneficial; ultimately, destructive—and that, coming in contact with the epithelial cells in a person suffering with carcinoma, the deleterious action of the drug is resisted more by the normal cells than by pathologic cancerous cells. The latter are overcome and destroyed, whence the cure. [A.O.J.K.]

6.—Cautley records his observations of an epidemic of **acute colitis occurring in children**. Six out of 30 children were affected, and of these 4 died. Three out of 13 adult women were attacked less severely, and recovered. The cases occurred in a London barracks, and are thought to have been due to microbial infection or toxemia, although no source of infection could be determined upon. The disease was characterized pathologically by inflammation, superficial erosion, and hemorrhages into the mucous membrane of the entire colon, and clinically by sudden onset, vomiting, diarrhea with mucous stools, and pyrexia. The only organisms isolated from the intestinal discharges were *Bacillus enteritidis sporogenes* and *Bacillus coli communis*. [A.O.J.K.]

The **Journal of the American Medical Association**, **New York Medical Journal**, **Medical Record** and the **Medical News** for June 8, published in their Original Article Departments the addresses before the American Medical Association, and which appeared in **AMERICAN MEDICINE**, Vol. I, No. 10, which see.

Boston Medical and Surgical Journal.

May 30, 1901. [Vol. CXLIV, No. 22.]

1. The Diagnosis and Surgical Treatment of Renal Tuberculosis. F. TILDEN BROWN.
2. Asthma. F. P. EMERSON.
3. A Case of Trichinosis. GEORGE G. SEARS.

1.—Brown in an article on the **diagnosis and surgical treatment of renal tuberculosis** reports 16 cases. The author has had 5 operations, and reports having seen 10 done by others, where no fatalities occurred; but claims that with a full series no one could expect less than a 5% to 7% mortality. He strongly advocates the combination of surgical treatment and climatic influence and leads to the conclusion that too great pains cannot be taken by physician and surgeon to determine the location and extent of the disease before determining upon the treatment. The integrity of the other kidney has great bearing on the surgical aspect of any case. To determine in any particular case just what rate of progress the disease may pursue if left untreated, or what degree of immunity from some of the annoying symptoms can be promised the patient by a nephrectomy, is not easy. In ward hospital cases the immediate operation appears to be the only alternative. For those who can afford climatic changes and rest, a careful preliminary observation of the existing conditions of the urinary tracts should precede their travels, and the same examination, when at all indicated should be repeated in order to keep posted regarding such an advance of the disease as to call for operation. [C.A.O.]

2.—Emerson reports 5 cases of **asthma** with intranasal hypertrophies and ethmoiditis. The former were removed but relief did not come until local treatment had cured the ethmoiditis. [H.M.]

3.—This is the twenty-fifth case of **trichinosis** reported in which there was a marked eosinophilia. In some cases this has been found as early as the fifth day, and in 1 case the eosinophilic cells still composed 15% of the whole at the end of 4 months. Even 60% and 80% have been reached. The severity of the disease seems to have no effect on the relative number. Large numbers appear after reparation processes must have begun. [H.M.]

June 6, 1901. [Vol. CXLIV, No. 23.]

1. The Surgical Treatment of Gastric Ulcer, with report of Cases. F. B. LUND.
2. Idiopathic Abscess of the Kidney. A. T. CABOT.
3. The Effects of Training. Second Paper. EUGENE A. DARLING.

1.—In an article on **surgical treatment of gastric ulcer**, Lund considers active ulcer and its complications and reports cases. He states: (1) that in perforation immediate operation is absolutely indicated; (2) that in cases in which the symptoms fail to yield after medical treatment for a reasonable period, operation, consisting either of excision of the ulcer or gastroenterostomy should be performed, and this before the patient has become so exhausted as to render surgical intervention dangerous; (3) early operation is indicated where slight, frequently repeated bleeding promises to produce grave anemia or exhaustion; (4) when a patient has suffered more than one copious hemorrhage, operation should be performed, and the extent and nature of the procedure should be decided upon according to the power of the patient to withstand operative manipulations, and the conditions found during the progress of the operation. [C.A.O.]

2.—Cabot in an article on **idiopathic abscess of the kidney** considers mainly those cases of **kidney infection through the blood**, a rare condition if tubercular abscesses are excluded. The pathology of the subject is reviewed and a case reported of an extremely septic process in one kidney in which the infection was due to a pure culture of colon bacillus. Oper-

ation gave excellent results. Cabot believes an exploratory incision should be made in every case of doubt. If an abscess is not found, but only a tense, congested kidney, an incision of the capsule along the convexity will afford, usually, great relief. If there is any question of the existence of a calculus the exploratory incision will afford opportunity for a thorough search and for removal of the stone if one is found. If the kidney is movable and suffering from congestion or intermittent hydronephrosis, induced by the twisting of the vessels and ureter, it can be drawn up and stitched in the loin. The operation has little or no danger attaching to it, and if an abscess is found, the operation done early will stand a far better chance of cutting short the septic process than it would if it were kept as a last resort. [C.A.O.]

3.—The paper contains observations on the condition of the Harvard football squad for 1899 and the crews of 1899 and 1900. In the first, examinations of 17 men made before afternoon practice showed no disturbance of cardiac action in 14, although there was hypertrophy in all, which became less as the season advanced. Some showed irregularity in rhythm with or without abnormal sounds, but not in most cases amounting to a murmur. Two members had temporary murmurs and 1 a permanent one, probably due to an organic lesion. There is risk in allowing such men as the latter to take part in contests like football and rowing. In all cases after a hard game, as after rowing, acute dilation, always temporary and becoming less marked with each succeeding effort, was formed. During training the urine averaged 1,124 cc. specific gravity 1.027, urea 3.30%, total urea 36.2 gm. In 6 out of 16 cases albumin, hyalin and granular casts, excess of leukocytes and occasionally red blood corpuscles were present. The effect on the crew from an accident to the captain and stroke just before the contest is noted, there being an excessive loss of weight, attributed partly to indigestion, partly to insomnia, and partly to increased work. The effect on the substitute stroke is given in detail. Hypertrophy appears to be more or less permanent, but this is no more undesirable than a corresponding hypertrophy of the biceps. No ill-effects which could be reasonably attributed to training could be discovered 9 months after it ceased. [H.M.]

New York Medical Journal.

May 25, 1901. [Vol. LXXIII, No. 21.]

1. Hyperacidity (Superacidity, Hyperchlorhydria, Snperaciditas Chlorhydrica): A Clinical Study. H. ILLOWAY.
2. Nasal Condition Observed in the Aged. BEAMAN DOUGLASS.
3. What Route Shall We Adopt in Examining the Eye Muscles? ALEXANDER DUANE.
4. Ossiculectomy for Chronic Suppurative Otitis Media. J. A. STUCKY.
5. The Importance of the Early Recognition of Abdominal Infections. W. D. HAMILTON.
6. Antistreptococcus Serum in 2 Cases of Puerperal Septic Infection. A. J. PRIMROSE.

1.—Illoway, in the first installment of his paper on hyperacidity of the stomach, states that the normal acidity of the stomach is greater than .22% (the degree of acidity generally given), and reports some investigations of his own showing that the average percent. ranges from .29% to 3%. He claims that a diagnosis of hyperacidity cannot be based upon the total acidity alone, but must be largely dependent on the accompanying symptoms. The true explanation is that every stomach has a "physiologic individuality of its own, and thus the one organ may perform its function—digestion—perfectly with a degree of acidity that might be insufficient or more than sufficient for another. Any further addition to this normal proportion of hydrochloric acid must render that particular gastric juice hyperacid and provoke the manifestations dependent upon such a condition." He classifies the condition under 2 forms—the acute and the chronic, the acute lasting generally not more than a few hours, while the chronic form may be of any duration from 1 month to several years. [H.H.C.]

2.—Douglass, in discussing nasal conditions in the aged, states that nasal affections of the catarrhal or inflammatory character are more common during middle age, and that when such conditions exist in the aged they do not give rise to

symptoms. The theory is advanced that the gradual onset of the condition arising from internal blood or lymphatic irritation may explain the absence of active symptoms. Another cause may be the absence of neurotic tendencies and nerve irritation in the aged. [J.W.M.]

4.—Stucky has performed ossiculectomy in 20 cases of chronic suppurative otitis media with most satisfactory results. The anatomic construction of the middle ear favors pathologic conditions, and he considers the establishment of free drainage most important in the cure of this condition. In all cases in which there is a large-sized canal with chronic disease of the attic, perforation of Strapuell's membrane, and all the conditions attending suppuration and often necrosis, removal of the ossicles with a portion or all of the anterior attic wall and remnants of the drum membrane is considered the most conservative and satisfactory treatment. In chronic suppuration with cholesteatoma and necrosis of the posterior superior wall of the canal the radical operation should be performed. The following claims are made for the conservative method, viz.: (1.) It gives free drainage. (2.) It affords an opportunity to successfully combat the suppurative process. (3.) It is free from danger to life and health. (4.) In a large percentage of cases the disease is arrested, the hearing improved, only rarely made worse. (5.) There is no deformity or scar. [J.W.M.]

5.—Hamilton emphasizes the importance of the early recognition of abdominal infections, and makes a plea for the early use of every available means of diagnosis, so that if necessary operative intervention may be employed at the earliest time practicable. He believes that a properly conducted exploratory operation involves less danger to a patient than delay and speculation. [J.W.M.]

6.—Primrose reports 2 cases of puerperal septic infection successfully treated with antistreptococcus serum. It was administered in doses of 10 ccm., injected at intervals into the right leg, the left leg, and abdomen, causing rapid abatement in the high temperature and convalescence. In both cases there was subsequent pain and stiffness in the kneejoints, which, however, soon subsided after a few doses of sodium salicylate. [W.K.]

June 1, 1901. [Vol. LXXIII, No. 22.]

1. On Theories of Inheritance, with Special Reference to the Inheritance of Acquired Conditions in Man. J. GEORGE ADAMI.
2. Appendicitis Perforativa in Irreducible Right Scrotal Hernia, with a Report of a Case. O. THIENHAUS.
3. Muscular Action of the Arteries. ANDREW H. SMITH.
4. Hyperacidity (Superacidity, Hyperchlorhydria, Snperaciditas Chlorhydrica); a Clinical Study. H. ILLOWAY.
5. A Case of Sarcoma in the Muscles of the Right Shoulder, with Perforation into the Spinal Canal, and Paraplegia. LEONARD WEBER.

2.—Thienhaus gives statistics to show that an appendix, as well alone as together with omentum and intestine, situated in a hernia, chiefly an oblique inguinal hernia, is not uncommon. He believes the appendix demands strict observation, and removal if necessary, in all operations for hernia. It is probably true that in every case of hernia in which the appendix is an inmate it must be removed. When appendicular inflammation is present in a hernial sac, operative procedure must be advised immediately, and in incarcerations under such conditions he denounces the use of any palliative method, or attempts at taxis. In cases of appendicular abscess in a hernial sac or gangrene of the appendix, resection with free drainage is the appropriate treatment. [C.A.O.]

4.—In the second chapter of his paper on hyperacidity, Illoway deals exclusively with the symptoms of the disease. He considers the cardinal symptoms to be (1) gastralgic seizures, (2) burning in the stomach, (3) sour stomach, (4) ructus, and (5) bowel symptoms, which generally consist in constipation of varying degree. [H.H.C.]

5.—Weber reports a case of sarcoma developing in a young man beneath the superficial fascia in the fleshy part of the right shoulder between the scapula and spine. The growth followed trauma and it is believed that a gumma that would not yield to treatment was situated in the same region a few

years before. The cord symptoms in this case were due to hemorrhage and degenerative myelitis as shown by a microscopic examination. Weber believes the case teaches that it is wise to excise a supposed gummatous tumor located in accessible regions when it does not yield to proper specific treatment in due time. [C.A.O.]

Medical News.

June 1, 1901. [Vol. LXXVIII, No. 22.]

1. Some Factors Relating to the Etiology of Prostatic Enlargement. J. BENTLEY SQUIER.
2. Gastric Ulcer and Mucomembranous Colitis at the Paris Congress. JAMES J. WALSH.
3. Streptococcus Bronchitis in Influenza. F. FORCHHEIMER.
4. Fourth-of-July Tetanus. H. GIDEON WELLS.
5. The Use of Methylene-Blue Injections in Pleurisy, with Effusion. CHARLES H. LEWIS.
6. The Appearance of the Soft Palate a Pathognomonic Symptom of Epidemic Influenza. LOUIS KOLIPINSKI.

1.—One out of every 3 men has some **prostatic enlargement** after reaching middle life, and 1 out of 5 symptoms for which he seeks relief. The function of the gland is described and it is shown how abnormal sexual indulgences, including masturbation, prolonged excitement without gratification, and coitus interruptus, which tend to keep up a chronic hyperemia, lead oftener to hyperplasia than senility, gout, rheumatism or atheroma. The statistics of 300 cases are given. The necessity of instruction in sexual hygiene is emphasized. [H.M.]

2.—Walsh reviews some points of special interest. **Gastric ulcer** is more frequent than has been thought, occurring often, not only idiopathically, but as a complication in infectious diseases and diseases of the circulation and metabolism, as anemia. There is little doubt they are due to self-digestion in conditions of hyperacidity, the immediate cause being certain irritative and traumatic influences. There is an acute as well as chronic form, almost the first symptom of which may be hemorrhage. Many of these are due to the pneumococcus, which may be present without involvement of the lung. They also occur in appendicitis, induced by septic elements carried in the circulation, and in puerperal cases as well. It is important in anemia and subseptic conditions therefore, to lessen gastric acidity and avoid coarse food and slight trauma of the abdominal walls. It may be simulated even to hemorrhage in neurotic conditions. Surgical measures should be resorted to more frequently because of disturbed function from contractile deformation and liability to the development of cancer on the scars. Olive oil, 100 to 300 gm. daily, is recommended. Morphine increases hyperacidity. **Mucomembranous colitis** is increasing. Statistics point to an essentially nervous origin, due either to increasing struggle for existence or abuse of laxatives, causing hyperexcitability and congestion of the colon. Were it an inflammation appendicitis would be a frequent complication. There may be either constipation or diarrhea between attacks. Intestinal lithiasis is noted in 8% of cases. Treatment must be directed to the nervous condition. [H.M.]

3.—**Streptococcus bronchitis** is so called because this is the predominant and in some cases the only organism present, the influenza bacillus having in most cases disappeared. Any type of influenza may be followed by this form, the symptoms of the influenza disappearing before the bronchitis develops. The attack begins suddenly and commonly will be fully developed in 24 to 48 hours. The dominant symptom is frequent spasmodic cough simulating pertussis, the expectoration not being proportionate. The principal localization is in the middle-sized tubes. The diurnal temperature range is abnormally great varying from 96 to 100. The pulse may be slow or rapid. The average duration is 2 weeks when properly treated; otherwise it may be months. Rudimentary and excessively developed forms are described. Protracted cases are differentiated from tuberculosis by the physical signs of a general bronchitis and absence of tubercle bacilli. In attacks of respiratory influenza quinin should always be given to prevent secondary infections such as this. When this bronchitis has developed 1 gram of sodium benzoate should be given every 2 and then every 4

hours with cough sedatives, etc. Unguentum Créde and anti-streptococcic serum have given good results in the severer forms. [H.M.]

4.—Every **Fourth of July** an epidemic of tetanus occurs because the bacilli are carried deeply into wounds before wads from blank cartridges, and these wounds are improperly cared for. Thorough cleansing and drainage under an anesthetic is indicated. As tetanus sometimes occurs after all precautions, and is so frequent after these cartridge wounds, it would be better to administer 5 cc. of tetanus antitoxin, the prophylactic dose. [H.M.]

5.—The objection to aspiration in **pleurisy with effusion** is the rapid reappearance of the fluid. The ordinary therapeutic measures to promote absorption are uncertain and debilitating. **Methylene-blue** is antiseptic and anodyne and diuretic and promotes adhesion of the pleural walls by exciting a deposit of fibrin. From 5 to 15 grains are mixed with serum which has been withdrawn by a specially devised aspirating syringe and which is immediately returned. This diffuses evenly throughout the effusion and appears in the urine in from ½ to 4 hours. The average duration of treatment for 23 serofibrinous cases was less than 14 days. Some cases received no other internal medication. [H.M.]

6.—Small convex projections of pearly whiteness or transparency are seen on the **soft palate**. They are the size of a sand grain, and either few or abundant. Direct or diffused sunlight, or bright artificial light are needed for the examination. Sometimes they are obscured by tenacious mucus, which must be removed. There is a peculiar rough feel. Alcohol consumption, tobacco, and tuberculosis modify the color. Hemorrhages sometimes complicate their presence. They will be found in all cases in which the diagnosis of influenza is certain, and their presence will clear up the diagnosis in anomalous cases. [H.M.]

Philadelphia Medical Journal.

June 8, 1901. [Vol. 7, No. 23.]

1. What I Have Learned from 161 Operations for the Relief of Senile Hypertrophy of the Prostate Gland. ORVILLE HORWITZ.
2. Progress of Medicine in the United States During the Nineteenth Century. CHARLES W. DULLES.
3. A New Clinometer for Measuring Torsional Deviations of the Eye, Delimiting Paracentral Scotomata and Metamorphopsia, and Detecting Simulation of Blindness. ALEXANDER DUANE.
4. Membranous Enteritis Erroneously Treated for Phthisis: Presentation of Patient. J. PRESTON MILLER.
5. The Kneejerks in Chorea. AUGUSTUS A. ESHNER.
6. Heredity as a Factor in Mental Deficiency. T. ALEXANDER MAC-NICHOLL.

4.—Miller reports a case of **membranous enteritis** which had baffled all previous attempts at diagnosis, and had been treated unsuccessfully for phthisis. The case presented the usual diagnostic symptoms of phthisis, together with those of asthma and an unusually weak stomach. At the time Dr. Miller was called the patient was unable to retain either medicine or food of any kind. The treatment employed consisted of a daily washing out of the stomach and the thorough cleansing of both mouth and teeth with a solution of hydrozone in water. The nausea and vomiting soon subsided, and the following was administered:

R
Ext. filicis fl.
Chloroformi ãã 1 dram.
M. S.—A dose.

This was followed after 4 hours by repeated doses of olei ricini (gms. 5) in flexible capsules. The result was the passage of numerous shreds resembling tapeworm segments. Upon microscopic examination these proved to be mucous strips. Following this the routine treatment for mucous enteritis was employed, and a most favorable recovery followed. [H.M.C.]

6.—In a paper on the **heredity of mental deficiency**, MacNicholl cites statistics bearing on the subject showing that less than 12% of the children of drinking parents are normal in mind and body, while over 82% of the children of total abstain-

ers are normal. The author was able to trace the family histories of 463 children in 150 different families, through 3 generations. Seventeen (2 males and 15 females) were precocious in some one thing, as music, drawing, etc.; 403 were generally deficient (193 males and 210 females); 17 had neurotic fathers; 78 neurotic mothers; 313 had drinking fathers; 51 drinking mothers; 43 had neurotic grandparents; 265 had drinking grandparents; 246 had drinking parents and grandparents. Of these children 2% had parents of less than average intelligence. A most notable fact in these families was the constant relation of alcohol in the ancestry to abnormal physical conditions in the descendants. While 87% of these children of drinking and neurotic ancestry were mentally deficient, 76% suffered from some neurosis or organic disease. [H.H.C.]

Münchener medicinische Wochenschrift.

April 2, 1901. [48 Jahrg., No. 14.]

1. Treatment of Labor in Narrow Pelves by Version. ALBERT.
2. Biologic Identification of Human Blood. DIEUDONNÉ.
3. Localized Engorgement and Effusion in Heart Disease, with Remarks on Functional Diagnosis of Transition Forms of Exudate and Transudate. ROSENBACH.
4. Diseases of Those Employed in the Manufacture of Chrome. HERMANNI.
5. The Bloodless Treatment of Congenital Dislocation of the Hipjoint in Relation to Deformity of the Femur. GHILLINI.
6. Multiple Necrosis of Fatty Tissue. OSTERMAIER.
7. Aneurysm of the Ascending Aorta Treated with Subcutaneous Injections of Gelatin. BARTIL.
8. Club-finger. LACHER.
9. Urticaria with Albuminuria. GÜNZBURGER.
10. Report on the Ambulatory for Internal Diseases of the Medical-Clinic Institute in the Year 1900. KIRSCHENSTEINER.
11. August Brauser. MAYER.

1.—Albert has made a careful study of the subject of labor in cases having narrow pelves and presents the results in a tabulated form showing that out of 1,187 births in the clinic, in 4 years, there were 105 versions, 60 of these being in patients having contracted and flat pelves, resulting in 48 living children and no maternal mortality. From these statistics and those of other writers he concludes that when the pelvic contraction is not excessive, the true conjugate being from 7 to 9½ em., in the case of a primipara the aim should be a spontaneous delivery, and hence a waiting policy should be followed and early operation avoided; in multipara, with version, there should be no omission of external care since even here spontaneous delivery is possible; and in all women of this group, the dilation of the os uteri and the persistence of the fetal membranes are conditions most favorable for delivery, and on this account the use of the colpeurynter may be of great advantage. Chrobak advises its use: (1) When there has been a premature rupture of the membranes and the head is not yet engaged, for the protection of the fluids, the widening of the os uteri, and the stimulating of the labor pains especially in primipara. (2) When with persistent membranes there is incomplete dilation of the os uteri, and the head does not engage on account of narrow pelvis and oblique or transverse position. (3) When one cannot form any clear judgment as to the course of delivery, one with the colpeurynter may reach conditions favorable to version delivery namely, dilation of the os uteri and preservation of the fetal membranes. In the further course of labor, in primipara, use the Waleher position; the same in multipara if the head is well engaged. In a bad or high position of the head, version with immediate extraction is advised. Albert describes the process of delivery in such cases. When there has been premature rupture of membranes and loss of fluids and the uterine muscle is hard and unyielding determine the best instrument and the least dangerous method of operative procedure. [W.K.]

2.—The work of Bordet, Wassermann, Fisch, Uhlenhuth, and others, has developed the interesting fact that if animals are injected with the blood serum of another species, their blood acquires the property of dissolving the red corpuscles

of this species and, furthermore, of producing a precipitate in the latter's blood serum. By the injection of defibrinated human blood into rabbits, a serum is obtained which produces a decided cloudy precipitate when added to human blood. This precipitate occurs only in human blood, and not in that of other animals, except that of monkeys—a fact that throws an interesting side light upon the relationship of these animals to man. Dieudonné made similar experiments with human blood serum obtained from placental blood, with albuminous urine, and with pleural exudate. The serum of rabbits treated with human blood serum, added to a solution of human blood, produced a flocculent precipitate; normal rabbits' serum did not have this property. The serum of animals injected with albuminous urine, added to human albuminous urine, also produced a precipitate. No such reaction was obtained in the normal urine from human beings or rabbits, nor by the addition of normal rabbits' serum to albuminous urine. The serum of the animals treated with pleural exudate, added to the latter, caused a distinct precipitation. These different serums were reciprocally tested, and it was found, for instance, that the serum from the rabbit treated with human blood not only precipitated blood, but also the pleural and peritoneal exudate, although not in such marked degree as when the homologous serum was used. The reaction was produced only in blood, urine, and exudate coming from human beings; not in that coming from other animals. The forensic importance of these discoveries is apparent; with the serum obtained from animals, particularly by the injection of human blood serum, rather than urine or exudate, it is possible to test human blood that has been dried for weeks. [D.R.]

3.—Rosenbach calls attention to the fact that a cardiac hydrothorax may be confined to the right side, or, if bilateral, the effusion on the right side may be larger than that on the left. The cause of unilateral localization must be a local one. A left-sided effusion with atelectasis, or a catarrhal condition of the lower lobe of the left lung, is not rarely a sign of muscular weakness of the left ventricle. Attention is also called to isolated stasis in the liver and ascites in heart disease, and to passive congestion of the liver in diphtheria, as the result of weakness of the right ventricle. Rosenbach believes that it is possible to differentiate exudates and transudates by what he calls functional diagnosis. If iodine or iodids are given by the mouth, they will rapidly appear in transudates, while exudates will take up only traces. If, by means of nitric acid and choleform, the iodine test can be obtained in a fluid removed by exploratory puncture, a passive transudation exists, and not an inflammatory exudate. [D.R.]

4.—The laborers employed in chromate factories are subject to a variety of diseases. The principal one is necrosis of the nose, which in a large proportion leads to perforation of the septum. Intractable eczema of the hands and conjunctivitis are other lesions most frequently produced. Gastrointestinal disturbances and inflammations of the respiratory tract occur, but are not definitely attributable to the chromic acid. Renal changes were not observed by Hermann. The prophylaxis concerns prevention of the inhalation of chromate dust or vapor, and protection against its caustic action on the skin. Regarding the former, the laborers in the factory supervised by Hermann use wet sponges. Instead of these, respirators devised by Klein, of Giessen, may be employed. The prevention of dermal lesions consists in carefully treating with plaster the smallest abrasion of the skin, and in the use of gloves. [D.R.]

5.—Ghillini reports another case of reposition of a congenital dislocation of the hipjoint by means of his modification of Fabbri's bloodless method. He finds that in general the procedure leads to excellent results. [H.H.C.]

6.—A case of multiple fat necrosis in a woman of 69, which presented itself with the usual symptoms of intense pain in the epigastrium and signs of internal strangulation, and rapidly proved fatal. The pancreas was not diseased; the spleen was small; nothing is said of the existence of gallstones, so, presumably, none were present. Local peritonitis existed, particularly over the areas of fat necrosis. [D.R.]

7.—A case of aneurysm of the aorta successfully

treated with subcutaneous injections of gelatin. The dyspnea, vertigo, and pain were lessened, the aneurysm became smaller, and the pulsation grew distinctly less marked. [L. BOU.]

8. Sacher, of Munich, reports the case of a man of 60, who (7 years before) had suffered from an acute attack of suppurative pleuritis. At that time a thoracic fistula was performed and drainage established. The man finally left the hospital with a large thoracic fistula which never closed and continued to excrete large quantities of pus. The man's fingers were all decidedly clubbed. A bacteriologist examined the excretion for tubercle bacilli. But the Röntgen apparatus showed what appeared to be a foreign body in the neighborhood of the fistula besides the fact that the clubbing of the fingers was due to thickening of the soft parts and not to hypertrophy of the bones. An operation resulted in the removal of an old piece of rubber drainage tube from the pleural sac after which recovery was rapid. Three months after the operation Sacher noticed a decided reduction in the size of the clubbed fingers. [H. C.]

9. A case of urticaria in a boy of 13, associated with albuminuria (Piper, Millé, by Esback). Casts epithelial cells, and leukocytes, were absent. [M. D. R.]

April 9, 1901. [48 Jahrg., No. 15.]

1. The Transfusion of Blood, Especially of Heterogeneous Blood, and its Applicability to Therapeutic Purposes, Considered from a New Point of View. BREW.

2. The Treatment of Abdominal Gunshot Wounds. PEERSEN.

3. Experiences from the War Department with Gunshot Injuries and their Treatment. THAMER.

4. Multiplicity of Primary Malignant Tumors of the Skin. HENNING.

5. Further Studies of Serous Inflammation of the Skin. HENNING.

6. Two Cases of Embolism of the Abdominal Aorta. BEKKER.

7. The Value of Glutoid Capsules in the Diagnosis of Intestinal Diseases, Especially Those of the Pancreas. FROMME.

8. Bismuth Poisoning. MÜHLIG.

9. Nonmalignant Diseases of the Esophagus, Occurring in the Form of Stricture. SCHUTZ.

10. Hard, Slight Corrosion from Soft Soap in a Child 18 months old. LANGER.

11. A New Point of View for the Treatment of Whooping-cough. SPREISS.

12. A Case of Unilateral Luxation of the Inferior Maxilla. KAREHNKE.

1. Bier finds that transfusion of blood from animals causes transient hyperemia due to capillary stasis, and results in greatly increased appetite and consequent metabolism, but that repeated transfusions are followed by disagreeable reaction-phenomena. [H. C.]

2. In spite of the more favorable results obtained by the conservative treatment of penetrating gunshot wounds during the South African war, Peersen continues to favor during times of peace such abdominal wounds, especially when perforation is suspected, should always be followed by operation. [H. C.]

3. Thamer, in his paper on abdominal gunshot wounds, in the Boer war, observes that, of those cases coming under his own observation, the majority (12 out of 19 cases) recovered under the conservative treatment. This statement, however, does not include the cases ending fatally during transportation to the distant German field-hospitals. [H. C.]

4. Schirker reports cases of multiple primary malignant tumors coming under observation in the surgical clinic at Heidelberg. The combinations were mamma and uterus, bladder and uterus, uterus and rostrum and epiglottis and base of the tongue. [H. C.]

5. In unicellular organisms and in others provided with vascular system, chemotaxis occurs in the absence of inflammatory phenomena. Hahn made some experiments to determine whether a pure chemotaxis could be produced in white-blooded animals, and used in his experiments finely divided carbon in an artificial medium. In both cases, where chemotaxis occurred inflammatory phenomena coexisted, and he concludes from these results that chemotaxis does not exist independently of inflammation in animals provided with a circulatory system. In agreement with these studies, he observed as an interesting phenomenon

very distinct and prominent in the detached endothelial cells of the pleural cavity. [D. R.]

6. Bühler reports 2 cases of embolism of the abdominal aorta, both occurring in patients with mitral stenosis and thrombosis of the femoral and iliac appendices. In the second case there was also multiple embolism of other vessels. In both cases the development of the aortic embolism was characterized by sudden, intense pain in the lower extremities. Probably because of these pains the patients presented a peculiar state of anxiety and excitement. The subsequent symptoms of embolism of the aorta depend upon the size of the embolus and the possibility of a collateral circulation, and also upon the degree of secondary thrombosis. These symptoms are as follows: Pallor and coldness of the skin; lessening and suspension of the sensibility; paralysis; pulselessness, and finally, gangrene. Whether the paralysis is peripheral or central is not definitely known; it is more likely, however, that it is of peripheral origin. Even in complete obstruction of the aorta, some collateral circulation is possible, through anastomosis of the inferior epigastric artery with the internal mammary and the lumbar arteries, and of the ilio-lumbar artery with a branch of the epigastric with the lumbar vessels. In 1 case, despite complete obstruction of the aorta, and thrombosis of the iliacs, a line of demarcation formed above the knee. The parts above were, therefore, still supplied with blood. Psychic symptoms in the form of a state of excitation and severe pains were present. In the cases reported the temperature rose gradually, the pulse became accelerated, the urine contained albumin—in the second patient, also blood. Treatment was out of the question. [D. R.]

7. Glutoid capsules are gelatin capsules treated with formaldehyd, and thereby rendered resistant to the action of the gastric juice, but still amenable to that of the pancreatic juice. It is the trypsin in the latter and not the alkali that dissolves them. Peptic digestion after a time destroys the capsule, usually in 7.25 hours, while the pancreatic solutions act in 2.2 hours. The capsules are recommended as a test for motility of the stomach and for the activity of the pancreas. Those used by the author were filled with iodoforn, and the saliva was tested for iodine with nitric acid and chloroform. Normally the reaction is obtained in from 3 to 5 hours after the administration of the capsule. A reaction developing within that time indicates normal motility of the stomach and normal pancreatic activity. If the reaction occurs later than 7 or 8 hours after the administration of the capsule, the causes may be various: (1) The capsule may be retained in the stomach; (2) the pancreatic function may be inadequate. If, for any reason, the contents of the capsule should escape into the stomach, the reaction would be obtained too early, and a false notion formed as to the motility. To guard against this, the glutoid test should be combined with evacuation of the stomach; if the capsule has opened, the contents will have an iodoforn odor. [D. R.]

8. Mühlig reports 2 cases of bismuth poisoning following the local application of bismuth subnitrate to wounds. In both cases there was a well-marked stomatitis, with bluish-black discoloration of the tongue, gums, soft palate and uvula. Recovery followed. It is interesting to note that the bismuth was pure and not contaminated with lead or arsenic. [D. R.]

9. A case of poisoning by soft-soap in an child of 18 months. The child had found the soap on the table, and had swallowed an unknown quantity. Death occurred, and at the autopsy signs of corrosion of the mucous membranes, and of pneumonia were found. Whether the pneumonia was due to the poison could not be definitely determined. [D. R.]

10. In the belief that the spasm of whooping-cough is due to reflex action, originating in the superior laryngeal nerve, Spreiss recommends the production of typhlosthesia of the mucous membranes by means of orthoform. The orthoform powder is put in an instilling apparatus, by which the laryngoscope may be used to control the spraying. In children above 3 years of age a narrow admittable every 30 seconds. In infants, the nose is held and the child forced to breathe through its mouth at the time of the insufflation. In addition to the instillation the author sometimes uses the method of inhalation, which is done by means of a special apparatus. [D. R.]

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended June 8, 1901:

SMALLPOX—UNITED STATES.		Cases	Deaths
California:	Los Angeles.....May 18-25.....	1	
	San Francisco.....May 18-25.....	5	
Dist. of Columbia	Washington.....May 25-June 1....	1	
Illinois:	Chicago.....May 25-June 1....	7	
Iowa:	Ottumwa.....Apr. 27-June 1....	16	
Kansas	Leavenworth.....May 1-31.....	3	
	Wichita.....May 18-June 1....	42	
Louisiana:	New Orleans.....May 25-June 1....	4	
Massachusetts:	Boston.....May 25-June 1....	1	
	Fitchburg.....May 17-24.....	1	
	New Bedford.....May 25-June 1....	1	
	Quincy.....May 25-June 1....	1	
Michigan:	Detroit.....May 25-June 1....	57	
	Grand Rapids.....May 25-June 1....	2	
Minnesota:	Minneapolis.....May 18-June 4....	15	
	Winona.....May 25-June 1....	1	
Missouri:	St. Louis.....May 19-26.....	27	
Nebraska:	Nebraska City.....Apr. 27-May 18....	6	
	Omaha.....May 17-June 1....	25	
	South Omaha.....May 24-31.....	26	
New Hampshire:	Manchester.....May 25-June 1....	7	
New Jersey:	Jersey City.....May 26-June 2....	4	
	Newark.....May 25-June 1....	2	
New York:	New York.....May 25-June 1....	64	17
North Carolina:	Charlotte.....May 1-31.....	11	
Ohio:	Cincinnati.....May 1-31.....	10	
	Cleveland.....May 25-June 1....	31	1
	Youngstown.....May 18-25.....	1	
Pennsylvania:	Lebanon.....May 25-31.....	5	
	Philadelphia.....May 25-June 1....	4	
	Pittsburg.....May 18-June 1....	7	
Rhode Island:	Providence.....May 25-June 1....	1	
	Warwick.....May 23-30.....	1	
Tennessee:	Memphis.....May 25-June 1....	13	
	Nashville.....May 25-June 1....	6	
Utah:	Salt Lake City.....May 18-June 1....	19	1
Washington:	Aberdeen.....May 21.....	4	
Wisconsin:	Green Bay.....May 26-June 2....	6	
	Milwaukee.....May 25-June 1....	2	

SMALLPOX—FOREIGN.		Cases	Deaths
Argentina:	Buenos Ayres.....Mar. 1-31.....	76	
Austria:	Prague.....May 11-18.....	5	
Belgium:	Antwerp.....May 6-11.....	7	2
Ceylon:	Colombo.....Apr. 20.....	1	1
Colombia:	Panama.....May 20-27.....	6	
France:	Paris.....May 11-18.....	15	
Great Britain:	Glasgow.....May 11-18.....	3	
	Nottingham.....May 16.....	1	

Apparently transmitted from Salt Lake City, Utah, by fomites.		Cases	Deaths
Italy:	Naples.....May 3-10.....	114	25
India:	Bombay.....Apr. 23-May 7....	12	
	Calcutta.....Apr. 20-May 4....	125	
	Karachi.....Apr. 21-28.....	8	5
	Madras.....Apr. 20-May 3....	28	
Russia:	Moscow.....May 4-18.....	29	13
	Odessa.....May 4-11.....	5	1
	Warsaw.....Apr. 29-May 4....	1	1
Switzerland:	Geneva.....May 4-11.....	1	

YELLOW FEVER.

Costa Rica:	Liberia.....May 25.....	Present.	
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CHOLERA.		Cases	Deaths
India:	Bombay.....Apr. 22-May 7....	4	
	Calcutta.....Apr. 20-May 4....	126	
	Madras.....Apr. 20-May 3....	7	

PLAGUE.		Cases	Deaths
Africa:	Cape Town.....To Apr. 27.....	377	160
India:	Bombay.....Apr. 22-May 7....	778	
	Calcutta.....Apr. 20-May 4....	371	
	Karachi.....Apr. 21-28.....	273	233

Changes in the Medical Corps of the U. S. Navy, for week ended June 8, 1901:

BACKUS, J. W., ASSERSON, F. A., MURPHY J. F., SEAMAN, W., and RICHARDSON, R. R., Doctors, appointed assistant surgeons in the navy—June 1.

CORDEIGO, F. J. B., surgeon, detached from the Buffalo, June 10, and ordered home to wait orders—June 4.

CURTIS, L. W., surgeon, ordered to the Buffalo, June 10—June 4.

BOGERT, E. S., Jr., passed assistant surgeon, commissioned surgeon, from December 15, 1900—June 4.

PLUMMER, R. W., assistant surgeon, detached from the Nashville and ordered to the Princeton—June 6.

SEAMAN, W., assistant surgeon, ordered to the Independence, June 17—June 6.

HAAS, H. H., assistant surgeon, detached from Naval Hospital, New York, and ordered to the Norfolk Navy Yard, June 10—June 6.

RICHARDSON, R. R., assistant surgeon, ordered to Naval Hospital, New York, June 10—June 6.

BRISTER, J. M., assistant surgeon, detached from the Independence, June 17, and ordered to the Asiatic Station via transport Hancock—June 6.

Changes in the Medical Corps of the U. S. Army for the week ended June 8, 1901:

DORSEY, RUFUS T., Jr., contract surgeon, will proceed to his home, Atlanta, Ga., for annulment of contract.

MOSES, HOMER C., contract surgeon, is relieved from temporary duty at the Army general hospital, Presidio, and will proceed to Seattle, Wash., where he will report for duty as transport surgeon

of the Army transport Egbert, to relieve Contract Surgeon James L. Day. Contract Surgeon Day will proceed to Lebanon, Mo., for annulment of contract.

BARTLETT, COSAM J., contract surgeon, is relieved from duty at the Army general hospital, Presidio, and will proceed to Fort McDowell for duty at that post.

WINTER, Captain FRANCIS A., is granted leave for 1 month with permission to apply for an extension of 2 months.

BELL, JOSEPH L., contract surgeon, now in Washington, D. C., on leave, is relieved from further duty at Fort Crook, and will proceed to Fort Morgan for duty to relieve Contract Surgeon Lawrence A. Felder, who will proceed to his home, Atlanta, Ga., for annulment of contract.

ALLEN, Captain IRA A., assistant surgeon, leave granted March 26, is extended 5 days.

RICHARDSON, GEORGE II., contract surgeon, having reported to the surgeon general of the Army, in compliance with orders heretofore issued, will proceed to Plattsburg Barracks for duty.

GARRETT, NEVIL M., contract surgeon, is granted leave for 1 month.

WOLVEN, F. HOMER, contract dental surgeon, will proceed from Washington, D. C., to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

The following named assistant surgeons are honorably discharged as majors, surgeons, United States volunteers only, to take effect June 30, 1901: Captains Henry C. Fisher, Eugene L. Swift, John S. Kulp, Frederick P. Reynolds, Merritte W. Ireland, William F. Lewis, Paul Shillock, Alexander N. Stark, Powell C. Fauntleroy, Charles Willcox, Henry A. Shaw, First Lieutenant George W. Mathews.

HARTSOCK, First Lieutenant F. M., assistant surgeon, is granted leave for 1 month upon his being relieved from duty at Fort Warren.

DECKER, GEORGE M., contract dental surgeon, will proceed from Troy, N. Y., via Tampa, Fla., to Havana, Cuba, and report to the commanding general, department of Cuba, for assignment to duty at Columbia Barracks, Cuba.

HAGAN, CHARLES M., hospital steward, now in Washington, D. C., having performed the duties assigned him May 30, will return to that station with permission to delay 5 days en route.

DOUGHERTY, JAMES C., contract surgeon, now in New York City, will proceed to Albonito, P. R., for duty, to relieve Contract Surgeon Harry A. Eberle, for the purpose of enabling him to avail himself of the leave granted May 31.

WYETH, Major MARLBOROUGH C., is granted leave for 3 months.

KENDALL, Major WILLIAM P., surgeon, is granted leave for 14 days, to take effect June 5.

CHAMBERLAIN, First Lieutenant WESTON P., assistant surgeon, leave for 7 days granted May 31, is extended 23 days.

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Sentiment and Fact as guides of opinion and legislation are illustrated in the unfortunate controversy over the canteen question. One writes that "the sale of liquor and the regulation of vice are crimes against God and man." But it is plain that all such statements beg the question, and that if we govern our minds and conduct by such methods of reasoning we cannot govern them by the scientific method of dependence upon facts. At the recent meeting of the American Medical Association a competent observer brought out the truth of the interdependence of morals and disease in a way to throw a new light upon the canteen controversy. He said that statistics had shown in some posts that there had been twice as many cases of venereal disease since the canteen had been done away with, as compared with the records made during the existence of the canteen. It is not yet definitely settled that this is generally true at all army posts, and what we need is scientifically prepared statistics. These we are in the way of having, the Secretary of War having commanded them to be made by post commanders. Until these reports have been made public we have only sentiment and dogmatism upon which to base judgment, and these are certain to lead us astray. Let us wait for the facts.

Flies as Disseminators of Disease.—A number of investigators recently have called attention to the important role played by insects in disseminating disease. Because of their great numbers and active habits, flies are no doubt the most dangerous insects in this respect. After feeding on the expectoration of the tuberculous, on the feces of typhoid patients or other infective material, they carry disease germs into innumerable places and deposit them not only by direct contact with their filthy little bodies, but by their excreta and the dust formed by the crumbling of their dead bodies. Restaurants infested with flies are special abominations. The danger from this source is not small and as the summer will now soon be on us in good earnest with hordes of these pests, it seems desirable that everything possible shall be done to limit the amount of mischief done by them. More effective measures are needed for destroying flies and preventing their multiplication. The war on mosquitos by our sanitary department in Cuba has shown what can be done in exterminating insects, and the preparations which are already being made in several different places in our country to carry out the Cuban methods show that the people are willing to act

if they are shown the best ways. Until some successful method has been devised for exterminating flies special care should be taken to prevent their access to sputum, pus, or other infectious material; fruits and foodstuffs should be thoroughly cooked or washed if flies have been allowed to come in contact with them, and should be protected from flies after preparation for use.

Raising the Standards in Medical Colleges.—Wholesale denunciation of medical schools because they turn out so many imperfectly equipped graduates is rapidly becoming unjust, since so many schools are making positively heroic exertions to elevate the standards. We shall have to learn to discriminate carefully hereafter and place the blame where it belongs. There are a number of Faculties which have entered upon a systematic course of exclusion of the less fit which for many years almost means ruin for the institution and certainly does mean positive hardship for the teaching body. One instance has come to our notice in which this ruling would surely reduce the annual income from tuitions, etc., by at least \$25,000, and to that extent creating a deficit; and yet the vote was passed, and the refused applicants of course at once went to the rival schools with lower standards. The greatest need in medical education is today an extension of this spirit to all the schools. The overcrowding would not be so harmful as it is if it were an overcrowding by competent men.

Practical Applications of Extract of Suprarenal Medulla.—Some very interesting and important suggestions regarding practical uses of extract of suprarenal medulla have been made by Schafer in a recent number of the *British Medical Journal*. His first suggestion is that a trial should be made of the extract in all cases in which it is desired to strengthen or to induce uterine contractions. The observations that Schafer and his assistants have made show that this extract has a far greater power in causing contraction of the muscular tissue of the uterus, whether pregnant or nonpregnant, than any other drug having the same reputed action, and this whether the extract be applied directly to the muscular tissue or be introduced into the circulation. It appears that the active principle is unaffected by the gastric juice, and that in consequence the extract may be given by the mouth. It is suggested, however, that in

postpartum cases it would doubtless be more advantageous to inject it directly into the uterine cavity, where it would not only tend to produce immediate contraction of the uterine musculature, but also of the uterine arterioles, and thus more effectually control uterine hemorrhage. The solution recommended consists of an infusion of dry medullary substance, 30 grains to a pint of water, which should be sterilized by boiling, and injected while fairly hot. Such a solution is said to be a powerful styptic, but is rendered still more powerful by the addition of 60 grains of calcium chlorid. In addition, it is stated that another class of cases in which the extract in question may prove of the greatest clinical value are those of sudden cardiac failure, whether the result of shock, or of an overdose of anesthetics. In these cases the sterilized decoction, which may be of the strength of 5 grains to a fluid ounce, and must be filtered, should be injected with a hypodermic syringe very slowly into a superficial vein, or even in extreme and apparently hopeless cases, into the heart itself through the thoracic wall. Schafer reports that he has seen such remarkable results from the application of this method to animals in which the circulation had apparently ceased, and in which the heart had been completely resuscitated by the action of the drug, that he has no hesitation in recommending that it be tried in this class of cases in the human subject. The material used consisted of the separated healthy medulla of the ox or sheep, rapidly dried in thin layers at a temperature of not more than 50° C., then powdered and kept in well stoppered bottles. In this form it is said to retain its activity for a considerable time, and an infusion may be prepared from it in several minutes. The exact strength of the solution for purposes of intrauterine solution is said to be immaterial; any that might be absorbed into the general circulation would be beneficial rather than otherwise. For intravenous injection in cases of cardiac failure a weaker decoction than that above indicated can be used, but it should then be made with a 0.9% salt solution, and injected warm. It is said that a dose of 5 grains of the dry medullary substance may be introduced into a vein in this way slowly without fear of deleterious results, and that it may be repeated if found necessary. These suggestions seem of extreme importance and well merit the attention of careful clinicians. If the test of experience should confirm their practical utility the field of organotherapy will have become considerably enlarged. To the indications for the employment of the suprarenal extract will be added several others of not less importance than those already known. Perhaps we may find that the medulla and the cortex of the suprarenal gland subservise different functions, and that the range of the therapeutic applicability of the extract of the one is different from that of the extract of the other.

The Analysis of Commercial Food Products is engaging the attention of some of the State laboratories in which splendid work is being done and it is a pity that such reports as that recently issued by the Connecticut Agricultural Experiment Station could not be placed more generally in the hands of physicians. The general

practitioner should be informed of the sophistications commonly present in the ready-prepared food stuffs so largely consumed by Americans. The percentage of baking powders which contain alum, gypsum, or talc as adulterants, is astonishingly high, and it is a satisfaction to learn the real constitution of brands made familiar by the ever present advertisements lauding their purity. Let us hope that in the near future some similar means will be found of making public analyses of the nostrums with which the people are deluded.

The Sacrosanct Tub-Bath.—The typical Englishman has been pictured as refusing to enter heaven when he found that he would not be allowed to carry in his bath-tub with him. We have never been able to determine whether this gentleman flattered himself more by his pronunciation of the word *baath* or by his reputation for cleanliness by means of it. Both the bath and the cleanliness are excellent things, far superior indeed either to the assumption of superiority, the pronunciation or the immersion. There is only one Lodge of Perfection above that of the tubber—the unexpressed contempt of the clean man for the tubbing egotist who advertises that there is no cleanliness without the tub. The simple truth is, of course, that perfect cleanliness of the body is far more easily secured by means of the sponge or a wet towel with a pitcher of water than by a huge tub full of water. We have no doubt that the rage for tubbing has not only harmed or (mercifully) killed thousands of tubbers, but has in a general way made the world a dirtier one. By everlasting inculcation of the untruth that there is no (sanitary) salvation except by immersion, millions of people go to another extreme and do not bathe at all or use an insufficient amount of water. Do half the people in the world wash their bodies once a year? Bathing in such water as we have in many cities may be considered dangerous or disgusting according to the amount of water used. In order to have pure water for bathing or anything else it must be filtered. This will inevitably bring the water meter. Then the financial argument will reinforce the sanitary one, that perfect cleanliness is as attainable with two gallons of water as with 200 gallons.

A Survival of Another Age.—Those who have looked a little carefully at the politics, the jealousies and the hatreds, half-smothered or in volcanic eruption, of some of our medical schools, may have been startled by a recent phenomenon wholly at variance with these ferocities. Two men of great scientific ability in the same specialty and in the same department of a college, expect that the coveted professorship must in time come to one or to the other. And yet there is not the least suspicion of one seeking advantage at the expense of the other; neither forms alliances, or enters cliques, and the friendship between the two is so pure and sincere that one dedicates to the other, his equal, his exceptionally fine surgical text-book. The fact is enheartening; may it encourage others to renounce the savage animosities and self-seekings that justify the pointed finger of scorn, and that cripple all our educational and professional progress.

A More Scientific Study and Treatment of Stammering is one of the demands of progress and humanity. It has been said that there are more "speech-hesitants" than there are blind, mute and insane combined. This large class of sufferers has been left in a shameless inconsideration. The affliction is always wide-reaching in its influence upon the patient's life and character and frequently results in the most pathetic of tragedies. There is reason to believe that proper attention and treatment would usually lead to perfect cure. Here is a reform and a work waiting for wide-awake and progressive school boards, and medical officials interested in our public schools. Stammerers have quite as just a claim for public guidance and help as have those afflicted with disorders of sight, hearing, etc. It is not sufficiently well known that the first regular professorship of disorders of speech in a medical college was established in Philadelphia several years ago and has in practice demonstrated the wisdom of those who advocated it. So far as we know there is not a second in the world. There should be a hundred, as the work is in the interests both of humanity and of science.

Journals edited and published by the insane, judging by a sample copy before us, are brighter and more sane than many that are sent out by supposedly normal-minded people. We are surprised to see Vol. IV., No. 4, upon the copy of the *Maryland Hospital News* just received. (How many such periodicals are there in the world?) We can scarcely understand in what way a man can be insane who has such good judgment as is shown by the editor, especially in his tart but just criticism of the *Lunatic Herald*.

Among the "Local Briefs" we note:

"Private instructions in dancing will be given during the coming summer. Special attention to physicians' movements."

"One ounce of mother is worth one pound of clergyman."

We cannot forbear making one longer quotation:

"The hospital physician always means well, and does a great deal of genuine good in his work as a medical man; but he is not a shoemaker, and his opinion that a number nine shoe is comfortable for a number seven human hoof does not add glory to his fame as a medical man. . . . But the hospital physician, in the subordinate relation to the superintendent, is sometimes chary and cautious, and while not neglecting the more important issues that confront him, he is inhibited with a feeling of social reserve. Sometimes what he says does not always meet with the approval of his chief; if he happened to be like his practising brother of the rubber-tired buggy and hob-tailed horse, he would frequently find physical complaints which would baffle his skill and cause him to seek consultation to clear his way for responsibilities of life. The hospital physician in the treatment of his patients has to deal with mental maladies as well as physical; therefore the man who is the best judge of human nature, and not necessarily the best diagnostician of mental diseases, is the one who is superior in results. When a person has been drugged, tricked, fooled and hood-winked by his friends and physicians, and arrives in the hospital for the insane, the new patient is sometimes intensely aggravated at the deception, and strangely alarmed by the condition in which he is placed. The hospital physician has to overcome this state of affairs and establish himself as the friend of the patient; to do this, preconceived ideas based on the history of the individual committed must be a minor consideration until the confidence of the patient is mutually created."

"The Cause was Traceable to Heredity," says the recent excellent report of a medical director of a hospital. In one-fifth of the cases of insanity the cause was directly traceable to this factor and the hereditary taint existed in one-fourth. "With predisposition and certain environments, insanity is but the natural sequence." And yet we smile at the old cosmogony which said that the world rested upon the elephant, the elephant stood upon the tortoise, etc., etc. What caused the heredity, becomes the pertinent and discriminating question. It is remarkable in our hunt for the pathogenesis of disease that we are so often satisfied with words and with secondary causes. Of course the word heredity explains nothing and we must search for the cause of the cause. What made the "predisposition?" It is all a repetition of the old error of much laboratory pathology—satisfaction with slide-making of the finished and dead products of disease. But the physician's function can only be to cure disease or to prevent it. If the bit of morbid dead tissue teaches no practical lesson of how to stop the living pathologic process it is useless. So, if insanity is due to heredity, as good physicians and citizens we must study heredity in the making. Is it not true that symptom-treating is usually our confession of ignorance of etiology? And if insanity, as well as many other diseases, are due to social evil, are we not social sinners as well as poor scientists if we refuse to follow up the etiology, and thus prevent the morbid results?

The Devil is an Ass, said the wisest American, and it is most fortunate that this is so. Were it not for the stupidity of the malignant, society, and especially medical society, would quickly and hopelessly degenerate. When cliqueism, medical college politics, or newspaperdom, for instance, inject themselves into medicine, some boorish blunder soon defeats the very ends sought. The old politician loses his tact, and goes stumbling to obscurity and death. Even Napoleon finally forgot to plan with the old time foresight. Hate and intense selfishness blind even the best intellects and obtund the best sensibilities, until good men at last come by their own. One of the most pathetic things is to watch physicians starting in life with good mental endowment and scientific ability, but with heathenish selfishness and recklessness of the profession or of the rights of others—to watch them deteriorate until friendship, honor, and at last even success, are all lost. Koch and Behring make no scientific discoveries after selfishness and success become their ruling motives.

Health Resorts and "Kurs" as a Substitute for Quackery.—There are no words in English that have the same significance as *Kur* and *Kurort* in German. Some enterprising German doctor discovers that the water of a spring near his village contains a large percentage of alkalis; he furnishes a few rooms in his house for the accommodation of patients, advertises the marvelous curative properties of his spring water in the treatment of various diseases, and if he has a good business head and a fair degree of skill in treatment he soon has a large sanatorium, his little place becomes a well-known *Kurort* or health resort and his system of

diating, bathing and exercise, with the few medicines which he judiciously uses and drinking the harmless mineral water becomes a recognized "Kur" or system of curing certain diseases. There is a "Kur" for every known disease and many of these, such as Schott's system of treatment for heart disease and the springs at Karlsbad and Marienbad now have a world-wide reputation. But not alone the virtues of mineral springs are used as an excuse for establishing a Kur: there are numerous *Molkenkürs* where the patients are expected to drink large quantities of whey to improve their health; *Traubenkürs*, where the patients eat several pounds of fresh grapes a day; *Luftkürs*, where the air is supposed to be specially favorable for respiratory troubles, and others too numerous to mention. Prices can be found suited to every purse; from the princes and barons who go to the expensive Karlsbad hotels to the petty official who goes to an inexpensive resort in the Black Forest. There are numerous people in every community who when their chronic ailments are not promptly cured by the rational treatment of well-educated regular practitioners of medicine are credulous enough to turn to ignorant quacks, Christian science, osteopathy, and kindred delusions. Intelligent people who would never allow themselves to be swindled by bunco-men are daily swindled by these forms of quackery and by patent medicines. In Germany, where the proprietors of patent medicines must make public property of their formulas, and where the strict laws discourage quackery, there must be something for the credulous to turn to and the Kurs supply this demand in the best possible way. No doubt much more good comes from the regime than from the mineral waters, etc. The carefully regulated diet, bathing and exercise, the quiet, rest and change of scene for several weeks or months, cannot fail to do almost any person good and in very many cases a real cure results. The proprietors of such resorts are by no means without justification for their extravagant claims. It would not be a bad exchange for us in America if we could see a part of the thousands which now go into the pockets of quacks turned to reputable members of our profession as proprietors of such well-regulated resorts.

Mr. Eustace Miles, in *Health Culture*, suggests that on ocean steamers there is too much and too expensive food eaten (at least served) and that a line of steamers which should furnish cheap, simple and wholesome food would be in the interests of the traveler's health and of his expense account.

A digest of the laws now in force, and a transcript of the laws, rules and regulations, and proclamations in reference to bovine tuberculosis in the several States and Territories of the United States has been issued by the Chief of the Bureau of Animal Industry, D. E. Salmon.

The *British Medical Journal* has received a report from a contributor ascribing an epidemic in Southwark of enteric fever as due to infection conveyed by the fried fish of a particular dealer. If proved true this is a new method of convection of the infection.

EDITORIAL ECHOES

Proofreading as She are Done.—From recent editorials in medical journals we quote a few pleasing sentences:

"In spite of the assiduous endeavors of certain philanthropic medical editors to guide the literary aspirant through the mazes of syntax and autography—"

"Patches of tinea versicolor frequently occur in the public region in both men and women."

"A well developed systolic murmur, significant either of vulvular atheroma and sclerosis, or—"

"The author culls from the literature a number of other reported cases, the most remarkable of which is that of a German surgeon, the pregnancy resulting in a tube implanted in the vaginal vault after hysterectomy."

Trephining.—At a recent meeting of the Society of Anthropologists a very interesting communication was received on the subject of trephining in the South Sea Islands. The operation appears to be done at the present time for the relief of headache, for injuries to the skull, and as an aid to longevity. The author of the paper, Rev. J. A. Crump, mentions that he has in his possession a skull which has been trephined in no less than five places; this was done for severe headache. After the reading of the paper Mr. Horsley pointed out that the fact that it was a common thing for the South Sea Islanders to resort to trephining for the relief of headache supplied the absolute proof that was wanting to corroborate the opinion expressed in regard to the trephine holes found in the prehistoric Peruvian skulls. —[*The Medical Press.*]

Bovine and Human Tuberculosis.—The *Journal of the American Medical Association*, describes the experiments of Dr. Dinwiddie of the Arkansas Agricultural Experiment Station which negative the belief that there is much danger that animals may be infected from man, and adds:

"There are a large number of exaggerated statements going about, many of these from medical sources, that may seem to some justifiable in view of the real peril that exists and the need of popular education in regard to it. Their publication, however, is not scientific, and it is just as well to have our attention occasionally called to facts that seem to indicate that some of the expressed views may not be as scientifically accurate as the impression created by their utterance would imply. Tuberculosis is enough of a peril; its real dangers, when stated, are formidable enough; there may, therefore, be some little consolation in occasionally recognizing facts which indicate that in some ways and in some cases the danger of infection may be less serious than some commonly-uttered statements would lead us to suppose."

The Treatment of Osteopathy.—What is the kernel of therapeutic truth in osteopathy? Simply that the more or less judicious movement of diseased parts cures such parts. This fact is demonstrated by the position of the Ling system in Swedish medicine, by the cures wrought among us by the imported masseurs and their imitative rubbers, and by the great popularity of osteopathy among the laity. What is the harm of it? The harm of it is its indiscriminate application as a "cure-all"—a system of cure—by its enthusiastic but poorly educated leaders. What is the profession doing to reclaim this lost territory to its own? With us the little done is left to the untrained or the imported. Nothing is done to popularize the method, and this remedy of undoubted therapeutic value is wholly neglected in our smaller communities. The time is ripe and the ground ready for a well-officered and well-equipped school of massage and physical culture.—[*Northwestern Lancet.*]

Christian Science and Life Insurance.—"In denying insurance to the dangerous fanatics of whom the

'Christian Scientists' are the best known variety, the New Jersey Grand Council of the Royal Arcanum has taken a stand that is open to criticism only because it was not taken long ago. Every other organization of the same character ought instantly to imitate the example thus set, and delay in doing so simply subjects to unjustifiable risk the property rights of the sane members of the societies. 'All persons,' to use the words of the resolution adopted by the Grand Council in explanation of its course, 'who reject, refuse or neglect the aid of medical science are a very dangerous risk from an insurance standpoint.' That is an unquestionable truth, clearly stated. Since the 'Christian Scientists' deny the existence of disease and of death itself, the commonest sort of consistency demands that they voluntarily get out of the mutual insurance organizations, allow their policies in the regular insurance companies to lapse, and carefully refrain from stultifying themselves by taking out any new policies. If they will not do this—and of course they won't, as consistency is something they know nothing about—compulsion should be applied exactly as the Royal Arcanum has applied it. A little discipline of the same sort, used in this and other directions where it is needed, would tend to bring back to their senses all the believers in 'faith cure' except those whose insanity is irremediable, and there are not many so far gone as that. The follower of any one of these delusions is not a safe person with whom to have either business or social relations. The means of applying pressure are numerous, and as soon as sensible people begin to utilize them 'Christian Science' and all the allied or identical humbugs will be dissipated as rapidly as are other filth-laden miasms by the attack of good fresh breezes."—[*The Times.*]

The Pathologic Unity of Tabes and General Paralysis.—Mott has examined twelve cases of the tabetic form of general paralysis, and found in the brain the changes characteristic of general paralysis and in the cords the general changes peculiar to tabes, namely, degeneration of the exogenous system of fibers. He emphasizes as supporting the general trend of his argument that juvenile general paralysis and juvenile tabes probably occur only in congenital syphilites. Krafft-Ebing's epigrammatic summary of the etiology of general paralysis, in the two words, "civilization" and "syphilization," with special emphasis on the latter, represents the general teaching of a number of prominent students of this perplexing malady. Many of the prominent London clinical neurologists took part in the general discussion, and on the whole the views expressed agree with those of Mott. All the speakers endorsed the view that syphilis is the preponderant factor in tabes, and this seems to have been generally accepted as true also of general paralysis. Indeed, Ferrier has come to the conclusion that if there were no syphilis there would be no general paralysis or tabes. Of course it is impossible to prove a statement like this, but certainly there is much in favor of this view. The question whether tabes and general paralysis are one and the same morbid process affecting different parts of the nervous system, although perhaps to a certain extent a question of words, receives an affirmative answer in so far as both are considered as the result of parasymphilitic lesions of similar pathogenesis. From the standpoint of prevention this is an exceedingly important doctrine, because all measures limiting the spread of syphilis will diminish the frequency of tabes and general paralysis.—[*Journal American Medical Association.*]

The *Medical Press* calls attention to a new symptom of paralysis agitans, immediately preceding other recognized symptoms of the disease. This consists of the contraction of the toes, so that these are curled and flexed under the foot, making the patient liable to be thrown down.

AMERICAN NEWS AND NOTES.

GENERAL.

To Act as Surgeon-General.—Col. William H. Forwood, of the Medical Department of the Army, who has been in charge of the important medical depot station at San Francisco for months, has arrived in Washington, D. C., to take charge of the Medical Department of the Army, during the absence of Surgeon-General Sternberg in the Philippines.

Yellow Fever in Costa Rica.—A report from Marine Hospital Surgeon Goodman, at Port Limon, Costa Rica, announces that no passengers are now being taken by the fruit companies there for southern ports of the United States. An official report to the Costa Rican national authorities tells of the prevalence of yellow fever at Liberia, a city of 6,000 inhabitants, in the Province of Guana Caste, Costa Rica.

Obituary.—CHARLES S. SEEBOLD, of Baltimore, June 12, aged 51; B. F. REYNOLDS, of Oakmont, Pa., June 12, aged 67; ARTHUR J. DRESSER, of Tewksbury, Mass., June 12, aged 28; LOUIS S. TESSON, at Vancouver Barracks, June 7; R. W. LINGLE, of Orleans, Ky., June 11, aged 63; ALLEN T. BARNES, of Louisville, Ky., May 30, aged 67; JOSEPH FARRAND TUTTLE, at Crawfordsville, Ind., June 8, aged 73; J. H. McCARTY, of Birmingham, Ala., June 11, aged 50; C. B. BROOK, of Baltimore, Md., June 11; WILLIAM J. CAMPBELL, at the Worcester City Hospital, June 14, aged 27; WILLIAM S. WORCESTER, of Danvers, Mass., aged 56; P. A. HARRIS, of Glendale, May 30; FRANCIS W. COLEMAN, of Tulane University, New Orleans, May 28, aged 55; LILLIAN E. ABBOT, of New York, May 28, aged 33.

EASTERN STATES.

The King's Daughters and Sons' Hospital, Springfield, Mass., has applied to change its name to "The King's Daughters and Sons' Hospital Company of New England." It was also voted to so enlarge the hospital that space might be secured for incurable patients.

NEW YORK.

Physician Declared Insane.—Dr. Charles J. Kane, of New York, was transferred to the Manhattan Asylum for the Insane, June 11.

The New York Institute for the Deaf and Dumb held its eighty-third annual commencement June 11. It has 432 pupils and 40 teachers. There were 20 graduates.

Rockefeller Institute for Medical Research.—Articles incorporating the institution, with its principal headquarters in New York City, were filed recently with the Secretary of State.

Memorial to Dr. Skene.—A monument will be erected in Brooklyn to the memory of the late Dr. Alexander J. C. Skene, at a cost of \$25,000. Dr. Skene was a man of great eminence, and well known to the medical profession all over the world.

Home for Incurables.—At the thirty-fifth anniversary of this institution, at Fordham, it was announced that \$30,000 would soon be received, to be used for improvements. There are 265 patients in the Home. Last year there were 75 deaths.

Suit Against Physicians.—The second trial of an action brought by Miss Lucy W. Kellen, of New York, against Drs. Morris Menges and Julius Rosenberg for \$60,000 damages, resulted in a victory for the physicians. Miss Kellen alleged that they had operated on her unskillfully and without her consent, and that she was permanently injured. The first trial of the action resulted in a disagreement of the jury.

PHILADELPHIA, PENNSYLVANIA, ETC.

The Jewish Seaside Home for Invalids, at Atlantic City, opened for the summer June 13. The home has been remodeled and renovated and is under the management of the Jewish Maternity Association.

The Delaware State Medical Association held its 112th annual session at Lewes, June 11. The officers elected for the year are Drs. E. S. Dwight, of Smyrna, president; Robert Elligood and H. G. Koilock, vice-presidents; John H. Palmer, secretary, and W. C. Pierce, treasurer. The next session will meet at Newark.

Pottsville Hospital.—From the stocks and bonds in the bequest of Joseph Jeans the hospital will enjoy a yearly income of \$737.50, while to the endowment fund has also been added the sum of \$5,000 by a friend who does not wish to have his name known. This makes the total endowment fund \$33,714, with an assured annual income of \$2,009.75. In this is not counted the Gressle bequest of \$10,000 and several others of equally liberal amounts which have been made.

State Aid for Hospitals.—In the House the following bills have been reported from the Committee on Appropriations: German Hospital, Philadelphia, \$53,000; Wilks' Eye Hospital, Philadelphia, \$10,000; Pottstown Hospital, \$12,000; Homeopathic State Hospital, \$300,000; Chester County Hospital, \$12,000; St. Francis Hospital, Pittsburg, \$15,000; Mercy Hospital, Pittsburg, \$80,000; South Side Hospital, Pittsburg, \$30,000; Bradford Hospital, \$19,000; Phoenixville Hospital, \$17,000; Western Pennsylvania Humane Society, \$2,000; Home for Feeble-minded, Polk (special), \$3,476.35; St. Mary's Hospital, Philadelphia, \$10,000; Women's Hospital, Philadelphia, \$25,000; Beaver Valley Hospital, Beaver, \$7,000; Mary M. Packer Hospital, Sunbury, \$8,000; St. Timothy's Hospital, Philadelphia, \$30,000; Charity Hospital, Norristown, \$23,000; West Side Hospital, Scranton, \$15,000; Christian H. Buhl Hospital, Sharon, \$13,000; Shenango Valley Hospital, New Castle, \$15,000; McKeesport Hospital, \$27,000; Butler Hospital, \$15,000; Women's Hospital, Philadelphia, \$5,000; Jefferson Hospital, Philadelphia, \$158,000; Institute for Feeble-minded of Western Pennsylvania, \$510,000; Hahnemann Hospital of Philadelphia, \$50,000; Garretson Hospital, Philadelphia, \$40,000. The following appropriations passed the House: Howard Hospital and Infirmary for Incurables, \$8,000; Philadelphia Lying-in Hospital, \$15,000; Western Pennsylvania Hospital for the Insane at Dixmont, \$25,000; for the care and treatment of the indigent insane, \$1,700,000; Easton Hospital, \$15,000; State Hospital for Injured Persons of the bituminous and semibituminous coal region, located at Blossburg, Tioga County, \$18,500; West Philadelphia Hospital for Women, \$2,500; Pennsylvania Epileptic Hospital and Colony Farm, \$10,000.

SOUTHERN STATES.

Mosquitos.—James Bosley, Commissioner of Health, of Baltimore, has issued a statement to the citizens, showing the efficiency of kerosene oil in preventing the breeding of mosquitos, and requesting that every householder pour 1 gill of the oil into their privy wells and a proportionate quantity into all pools and drains where stagnant water may collect, at least once every 2 weeks. He states that in 1902 the city government will be asked for an appropriation for this purpose. Dr. Alexander N. Stark, a surgeon in the United States Army, recently returned from Cuba, has tried the plan in Cuba with pronounced success. His experience was at Columbia Barracks. Crude petroleum was floated on the surface of the lagoons, the proportion used being 1 ounce to 10 square feet of surface. The result was that not only the larvae were destroyed, but the adult insects were deterred from depositing their ova. At the same time, all soldiers suffering from malaria were carefully confined beneath nets and subjected to the usual treatment for malaria until free from symptoms and the examination of blood showed absence of all evidences of the disease. The result of this experiment was the absence of a fresh case of malaria for a period of 18 months.

WESTERN STATES.

Bequests to Charity.—The will of the late Dr. Marie J. Mergier, who died last month at Los Angeles, Cal., leaves \$3,000 for a scholarship in psychology to the University of Chicago and the same sum to the Women's Hospital of that city.

Spencer Hospital for the Insane.—Dr. A. J. Lyons, of Parkersburg, W. Va., was elected superintendent. The resignation of Dr. A. F. Guthrie was accepted, he having been elected superintendent of the Home for Incurables at Huntington, another State institution.

Suicide by Suggestion.—An epidemic of suicides in Emporia, Kansas, caused the Mayor and Board of Health to forbid publication of details of suicides or attempts in local papers. The board is acting on the theory that publication spreads the contagion of suicide by psychic suggestion, and contends that the liberty of the press is secondary to public health, and is prepared to use force, if necessary, under the nuisance act. In the last 30 days there have been 7 cases, 3 successful.

CANADA.

Notre Dame Hospital.—Dr. Aldege Ethier, medical superintendent, who leaves in a short time for Paris, will be succeeded by Dr. Fleury. Drs. Brosseau, Chapdelaine, St. Pierre, and Grenier have been appointed members of the staff.

The Canadian Tuberculosis Association has recommended to the Canadian Government restrictions similar to those recently issued by the United States Superintendent of Immigration in refusing to allow into the United States immigrants suffering from tuberculosis.

The Halifax Board of Health recently reported that the city was free from contagious diseases and that there were no patients at the Infectious Disease Hospital. Dr. Venables wrote the Board in reference to his campaign of vaccination. He had recently covered a large territory and had met with great opposition in many quarters. In fact, in one section of the city he had received a personal attack in the discharge of his duties.

FOREIGN NEWS AND NOTES

GENERAL.

Obituary.—Surg.-Captain FRANCIS WELFORD, at Vlaktefontein, South Africa, May 29. JAMES AITKEN MYRTLE, at Harrowgate, England, May 27, aged 40. Prof. W. H. HEINEKE, at Erlangen, Germany, April 28. JAMES GRIFFITH HALL, at Swansea, England, May 28, aged 87. HENRY LLEWELLYN WILLIAMS, April 30, at London, aged 73.

The Vision of the Boers.—In view of the extraordinary powers of vision credited to the Boer soldiers by numerous war correspondents, it is of interest to hear the opinion of an expert ophthalmologist on this subject. Mr. R. Brudenell Carter, who some 5 or 6 years ago conducted the examination of the vision of a large number of London school children, and who is an authority on visual standards, stated very recently at the Society of Arts that, from the application of his experience to the course of the war in South Africa, he believed the great majority of British soldiers, after a fortnight's exercise on the veldt, would see distant objects as quickly and distinctly as the native Boers, and their interpretations of appearances were quite as accurate. This opinion is endorsed by several British army surgeons who served in the Transvaal.

Bubonic Plague.—A despatch from the Governor of Hongkong announces that 215 cases of the bubonic plague were officially reported during the week ended June 1, and that the total number of deaths thus far from the disease is 207. The report from Cape Town states that 700 cases have been reported, and that 58 Europeans, 61 colonists and 207 negroes have died from the disease. In British East India the disease appears to be increasing. In the Presidency of Bombay, during the week ended April 12, there were 1,947 new cases and 1,632 deaths. This is an increase of 172 cases and 127 deaths over the previous week. The increase is noticeable in Karachi, where, in the same week, 230 fresh plague cases and 209 deaths occurred. In the same week 715 deaths were reported and 492 others suspected in Bombay city. There are many thousands of plague deaths reported from other provinces of India, the largest number being in the Patna division of Bengal, where, up to April 27, a total of 437,681 cases were reported.

GREAT BRITAIN.

Gift to Charity.—Foxhall Keene has sent £2,650 to the Prince of Wales's Hospital Fund, the amount being one half of the Oaks purse.

F. Richardson Cross, of Bristol, delivered the annual oration of the Medical Society of London on May 20, on the subject, "Some Landmarks in the Progress of Medical Science."

CONTINENTAL EUROPE.

Berlin Hospital.—The intention of the Sultan of Turkey to present a wing to the Berlin Hospital, the plans of the addition having been sent to Emperor William for approval is announced at Berlin.

Absinthe consumption in France is markedly on the decrease. This is officially regarded as a consequence of the new liquor law, which greatly reduced the tax on wines; increasing their consumption, since the first of the year, 50%.

A Moscow physician, according to the *St. Petersburg Medical Wochenschrift*, charged with inoculating 3 of his patients with syphilis, has been condemned by the courts to 6 months of imprisonment and loss of all his professional privileges for a certain length of time.

Economy in the Use of Drugs.—The Secretary-General of the Bureau of Public Aid of Paris has issued an order to the hospital chiefs in which he points out that the expense of modern medicinal preparations is enormous; he begs the profession to be as economic as possible in the use of a number of drugs, such as crystallized digitalin, which costs 15,000 francs a pound. Musk, osmic acid, pilocarpin and its salts can henceforth be prescribed by no one but the hospital chief himself.

Diphtheria in Paris.—During the first 4 months of 1901 there have been reported in the city of Paris 1,262 cases of diphtheria, 225 of which were fatal. In the corresponding period of last year 563 cases, 121 deaths; in 1899, 624 cases, 180 deaths; in 1898, 624 cases and 138 deaths. Roux considers the increased mortality due to defective administration of the antitoxin. He emphasizes that the serum must be used as early as possible. Bayeaux proves from statistics that if the disease is treated during the first day, the mortality is reduced to between 1 and 13%; if used on the second day the mortality rate increases to between 6 and 10%, rising to 20-25% if serum injection is delayed to between the second and fourth days. The Prime Minister, M. Waldeck-Rousseau, has issued a circular to the medical men of France, pointing out these facts, and urging them to make immediate use of antitoxin.

SOCIETY REPORTS

NINTH CONGRESS OF THE GERMAN GYNECOLOGICAL SOCIETY.

May 29-31, 1901.

[Specially reported for AMERICAN MEDICINE by J. EDWIN SWEET.]

The German Gynecological Society, which meets every second year, assembled for its ninth session in the city of Giessen, in the grandduchy Hesse-Darmstadt, the seat of the University of Giessen. The society has some 350 members, about half of whom were present. The Congress began with the usual informal greeting on Tuesday evening. The first session, after the President's address by LÖHLEIN (Giessen), was devoted to the first main topic, **Carcinoma Uteri**. The topic had been referred to FREUND, Senior, (Berlin, late of Strassburg) and WINTER (Königsberg), who had compiled very elaborate papers; these papers, together with those on the second main topic, **Eclampsia**, referred to FEILING (Strassburg) and WYDER (Zürich), had been published and sent to the members of the society before the opening of the Congress, so that each member could inform himself at his leisure as to the present stand of the question. The plan has also the advantage of saving the Congress much time and patience otherwise spent in listening to lengthy theoretic discussions. The paper by FREUND, taking up the pathologic side of the question, **The Radical Operation for Cancer of the Uterus, with Especial Consideration of the Lasting Results**, is a very complete monography, reviewing exhaustively the late publications on the subject, with the view of finding whether the modern pathologic-anatomic study of cancer in general and cancer of the womb in particular has brought to light new facts which point out sure indications for a rational prophylactic or operative treatment. FREUND arrives at the conclusion that the clinician must wait for what the future has in store—the present stand of pathology throws no light on the question. From the theoretic standpoint the total extirpation with removal of the lymph-glands is the only rational procedure in every operable case. The vaginal route gives better immediate results, but the extent of the operation must be more limited than in the abdominal route. Freund specifies as follows the indications for operation: The portio carcinoma can be operated by vaginal total extirpation; cancer of the cervix and the corpus must be attacked by an early and widely extended abdominal operation, if one wishes radical cure. As regards a comparison of the 2 routes, one must operate all cases by the same method, not the early cases vaginal, the advanced cases abdominal, and then after 5 years we can arrive at some definite and just conclusions.

The paper by WINTER (Königsberg) discusses the so-called **Practical Methods of Operation for Carcinoma Uteri**, and endeavors to determine their utility and practicability. He examines carefully the 7 methods which have been devised, and comes to the following conclusions: (1) The amputation of the portio vaginalis cannot be considered a radical operation because it generally leaves carcinoma behind in the cervix, and pays no attention to the parametrium. He finds no scientifically founded objection to leaving the corpus uteri, and considers therefore (2) the amputatio cervicis supravaginalis indicated in cases when patient wishes to bear children, when there is great danger from the opening of the peritoneal cavity, where the removal of the corpus is extraordinarily difficult, or when patient is too weak to justify total extirpation. Nearly all those cases can be radically cured by (3) the vaginal method in which the disease has without doubt not gone beyond the bounds of the uterus. Only the ovarian metastases can be avoided by removal of the adnexa; recidivations in the lymph-glands cannot be prevented by the vaginal route. His statistics show about 10% lasting cures. Only cases of beginning disease or where the cancer has not spread to the lymphatics and the parametria can be operated by this route. (4) The sacral method must be struck from the list of the radical operations. (5) Freund's operation, *i. e.*, the abdominal extirpation of the uterus, paying no attention to the parametria and the lymph-glands, is justifiable in the same class of cases as is the vaginal method; it is advisable, however, to make full use of the laparotomy and remove lymph-glands, etc. (6) The amputatio corporis uteri supravaginalis is to be struck from the list of the radical operations. (7) The radical abdominal operation has 2 advantages over the vaginal route—it permits more thorough removal of the pelvic connective tissue and the removal of diseased glands. As regards the number of cases in which diseased glands have been found, Winter believes we cannot as yet form an opinion; careful studies in this direction are greatly needed. The abdominal route has given in Germany a primary mortality of 24.6%. The abdominal route can find its justification only in a consideration of the lasting results, and it is too early to know these, since the operation is but some 4 years old. When we consider the results of the vaginal method and what we can attain with this route by adding 10 early cases, and compare these results with the problematic success of the abdominal radical operation, it seems very probable that the vaginal uterus extirpation will remain the operation of the

future, and that the abdominal route will be attempted as a therapeutic measure where we can hope for no success with the vaginal route. Winter concludes: "The future of the surgical treatment of cancer of the uterus does not lie in the most extensive operation possible, but in the earliest operation possible."

Before the Congress FREUND speaks briefly: The discussion will bring nothing new. The main question is, **Shall we choose the vaginal or the abdominal route?** There are 3 factors to be considered in our decision: Has the pathologic-anatomic study of cancer brought us any light? No, for we are still in the dark as to the way in which cancer spreads and as to the real cause of the malignity of the disease. A second factor in our choice is analogy; surgeons operate in all other regions of the body—tongue, breast, etc.—as radically as possible; by analogy we must do the same in carcinoma uteri, and to do this radical operation we must choose the abdominal route. A third factor is the result of statistic study. Freund emphasizes that a statistic can only then be of value when we compare cases of the same kind operated upon under similar conditions. WINTER (Königsberg) speaks briefly, adding a few cases to his statistics.

The first paper is read by KÜSTNER (Breslau) on the **Abdominal Operation for Cancer of the Womb**. He prefers the abdominal route, because one can perform a more radical operation. He used Veit's modification, considering it a life-saving method. Before opening from the vagina he sews several tampons to the corpus, which absorb the blood in the abdomen, and then when the uterus is drawn out through the vagina sweep everything before them. Küstner thinks one should eventually resect the lower end of the ureter, since Winter has shown that the lymphatics run very close across the end of the ureter to the sacral glands.

SCHUCHARDT (Stettin): **The Paravaginal Method for the Extirpation of the Uterus, and its Final Results in Cancer of the Uterus**. Schuchardt points out first that cancer exists in different forms, that cancer of the rectum, for example, is less malignant than in other organs, and it is therefore unjust to compare the results of such cases with cancer of the womb. He considers it still an open question whether the extensive operation for cancer of the breast has really given better results. It is impossible to perform an unquestioned radical operation for carcinoma uteri, and we must therefore strive to remove the primary disease focus as early and as completely as possible. Schuchardt claims for his method, the so-called paravaginal incision, (1) that it is easily performed, hemorrhage is easily controlled, operative injury to neighboring organs is easily avoided; (2) indications for operation can be made much broader, in cases of stenosis of the vagina and where bladder and rectum are attacked by the disease, etc., and, further, the shock following the abdominal method in advanced cases is avoided.

LEOPOLD (Dresden): **Further Investigations on the Etiology of Malignant Growths**, reports on the organisms which he demonstrated at the Paris International Congress, as the cause of malignant tumors. Those organisms belong to the Blastomycetes; they grow in acid gelatine, best of all in bouillon. Leopold takes perfectly fresh and aseptic material, cultivating from this the organisms on the warm stage or inoculating animals and culture media. He has found the same organism in 8 cases of ovarian, uterus and mamma carcinoma. The results obtained from inoculation of animals were positive; the animals died, after a longer or shorter time, from extended tumor formations, which were sarcoma or carcinoma. In these tumors he found pure cultures of the original yeast organism. These second cultures proved more virulent than the mother culture. Leopold modestly sums up his results: Blastomycetes have been found in a number of malignant tumors; have been cultivated in pure culture and have caused tumors in animals. He does not claim that they are the only cause of malignant growths.

MACKENRODT (Berlin): **The Radical Operation for Cancer of the Uterus and Vagina, with Cleaning out of the Pelvis**, believes that the lymph-glands of the pelvis are infected more often than Winter has found—20%—or even than von Rosthorn—50%. A second more important point is the prevention of metastasis caused by the operative implantation of cancer particles. To avoid such implantations, Mackenrodt formerly performed the entire operation with the cautery. He has operated in 38 cases, of which 31 survived operation. Of 20 cases so far advanced that the vaginal route was impossible, he has 10 patients who are alive, 3 to 4 years since operation. He believes his results due to the prevention of implantations. He has now forsaken the cautery, believing that he has devised a better method for preventing inoculation, *i. e.*, operating with intact peritoneum. He makes 2 incisions on each side above the spine ant. sup., unites them by a cross incision, thus obtaining a large field for operation; the incision does not open the peritoneum. He then separates the peritoneum from the abdominal wall and the organs, sews it above the uterus and so removes the uterus without bringing it in contact with the peritoneal cavity. Sepsis is the main danger. He mentions that one of his assistants has discovered microbes of extraordinary virulence in the carcinomatous uterus.

At the close of the first session, KLEIN (Munich) describes the library of old medical books dating from the fifteenth century, which forms a special feature of the Congress. It

shows the progress made in the art of illustrating medical books.

The second session began with the paper by AMANN (Munich), **Remarks on the Therapeutics of Carcinoma**. He points out first that the better results of the last few years are to be ascribed in part to improved diagnosis. Local recidivation is most important. The results with the vaginal route are better than those for cancer of the breast with cleaning out of the axilla. Amann has operated in 14 cases, 3 of which he lost; in 4 cases the lymph-glands were affected. He has seen 2 cases where carcinoma of the retroperitoneal lymph-glands developed after 5 years, the pelvis remaining free. The vaginal and the parasacral routes do not permit an extended removal of the parametria. Amann has devised a new method; he first dissects the vagina from its surroundings and folds it in over the cancer, thus shutting off the purulent disease focus; then he incises above the os pubis without opening the peritoneal cavity, works forward by blunt dissection from the cavum Retzū, separating the peritoneum from the organs. He then makes a small incision in the peritoneum, draws out the corpus-uteri, and sutures the peritoneum behind the uterus. He claims that the method is practically extraperitoneal.

OLSTRAUSEN (Berlin), **The Statistics of and Operation for Cancer of the Uterus**, considers that the main danger is still from sepsis; formerly more than 60% died from sepsis; the improved results of modern operations are due to the thorough disinfection of the cancer before operation. He uses for this purpose Paquelin cautery, ferrum candens, or a 40% alcoholic solution of chlorid of zinc. His statistics show 683 cases, with 5% operative injury to the organs of the urinary tract. He has always preferred the abdominal route, considering that all our knowledge of cancer must lead us to choose the abdominal route. In his former operations he had 6% primary mortality; in the last 3 years 5%. In regard to the final results, his statistics show that of 169 cases 74% were free from a return of the disease for 2 years, 62% for 3 years, and 38.8% for 5 years. During the last 3 years he has performed the radical operation in over 50% of all cases. His views are in short, as follows: (1) When a collum carcinoma or a corpus carcinoma is but slightly advanced, the vaginal route is justifiable; (2) if a corpus carcinoma is further advanced, the abdominal route alone is indicated, in order to remove affected glands; (3) if the pelvic connective tissue is affected the chances of successful operation are small; (4) when the uterus is so enlarged that it cannot be extracted in its entirety, the abdominal route alone is indicated; (5) statistics showing lasting results of less than 5 years' standing are deceptive.

WERTHEIM (Vienna): **A New Series of Operations for Cancer of the Uterus with Extirpation of the Parametria and the Neighboring Lymph-glands**, first described his method; he operates with pelvis raised, incises from navel to symphysis. Catheterization of the ureters is superfluous and dangerous. He frees the uterus, parametria, etc., and the vagina, and then from above clamps the vagina tightly shut below the diseased part, and then removes the organs by severing the vagina below the clamps; he washes out the vagina before operation, but considers cautery, etc., unnecessary; by holding the vagina with clamps no septic material can escape into the abdominal cavity. He removes all glands to the dividing point of the aorta; swollen glands are not always cancerous, affected glands are not always swollen, so he removes everything. He advises not to free the ureter entirely from the surrounding tissue, fearing disturbance of the circulation. Twelve of his last series of 27 cases were too advanced for the vaginal route; of the 27 cases he lost 5, 2 from ileus with no demonstrable peritonitis, 1 miliary tuberculosis, 1 shock, 1 pyelonephritis. He believes with Gussenbauer that the lymph-glands are early affected, and illustrates his standpoint by schemata which show the glands which were affected in his cases. In regard to the indications, Wertheim emphasizes that infiltrated parametria are by no means always cancerous, and that cancerous parametria can often not be palpated, therefore he prefers the abdominal route to be able to operate radically if glands are affected.

LATZKO (Vienna) favors the catheterization of the ureters, not as Wertheim stated as an aid in finding the ureters, but to prevent injury to the ureters during operation.

FREUND, junior (Strassburg), has operated 15 cases by the abdominal route. He considers this method accompanied by less hemorrhage and cleaner. He uses Wertheim's method, and has never had septic peritonitis, although he does not even clamp the vagina as advised by Wertheim, to prevent the escape of septic material into the abdomen. He lost 2 cases from injury to the urinary tract. He does not fear implantation of tumor particles, holding that such implantations degenerate sooner or later. He thinks he placed his indications too broad, but would still use the abdominal route exclusively, and place the indications according to the case.

ZWEIFEL (Leipzig) considers that emboli are due to septic infection; he formerly had cases of embolus, but since then ligates, severs, and cauterizes, and has no trouble. Of the 246 cases recorded in the Leipzig clinic, 219 were operated by the vaginal route, 22 combined, the rest parasacral. Statistics show 4.8% operative injury to neighboring organs. The statistics are not complete as regards lasting results.

STANDE advises the double-sided incision according to Schuchardt. The operation is not easy, however, as Schuchardt

claims, and the hemorrhage can be enormous. Of 42 cases, Stande has lost 5, 1 from shock, 1 heart trouble, 1 six weeks after operation from diffuse carcinomatosis, 1 septic peritonitis, 1 died 12 days after operation with a constantly sinking temperature—cause not clear—autopsy refused. Of 36 of his cases, 15 have a return of the disease, 4 are lost from control, the rest cured, for how long Stande does not state.

HOFMEIER (Würzburg) thinks that the results of the last few years show the complete failure of the vaginal method as thus far performed. The hope of the future is not in a more extended operation, but in earlier operation. He thinks it impossible to completely clean out the pelvis, and the danger of the operation is great. Ten years hence we will consider the operation with cleaning out of the pelvis a mistake.

CHROBAK (Vienna) thinks we must wait and see which route is best. He records 212 radical operations, of which 37.1% were cured up to 5 years; results about the same as those of Olshausen. He has had no case of operative injury to other organs. He thinks cancer an infectious disease, and that we should use prophylaxis.

VON ROSTHORN (Graz) emphasizes the great difference between different cases of cancer, as regards malignancy, affection of the lymph-glands, etc. He operates always by the abdominal route because he has a better view of the field of operation; he advises long-continued preparation of the patient with syringe, cautery, etc. There is also a great difference in operations. Von Rosthorn tells how he operated 40 cases without losing a case; he thereupon described the operation to his students as simple and safe; "the punishment of God was swift, the next week I lost 3 successive cases." Death is not due to infection alone; the long narcosis, position of the patient during operation, anemia, suppurations of the pelvic tissue following the maltreatment to which it was subjected during operation account for a good deal. He believes in short, that one should individualize his cases; in many fresh cases the high amputation will suffice.

In the evening the members of the Congress were entertained at the "Philosophenwald," by the city of Geissen.

Thursday morning from 7 to 9, before the regular session, was devoted to demonstrations in the clinic. Of the numerous demonstrations might be mentioned AHLFELD'S method of disinfecting the hands. LEOPOLD demonstrates 2 cultures of his yeast organisms. VON ROSTHORN shows a rare case of cervix infarct. The third session was devoted to the second main topic, **Eclampsia**. The paper by FEHLING (Strassburg) treats of **The Definition and Pathogenesis of Puerperal Eclampsia**. He advances and endeavors to support the following propositions: (1) Definition: puerperal eclampsia is a definite, well characterized disease, which is connected with the reproductive period of woman; (2) there is no such thing as a characteristic eclampsia placenta; (3) there is no form of kidney disease pathognomonic of eclampsia; (4) a connection between eclampsia and dilation of the ureters is to be denied; (5) albuminuria is lacking only in the rarest cases of eclampsia; (6) there is no such thing as a specific eclampsia liver; (7) a definite characteristic anatomic picture of eclampsia does not exist, according to the autopsy findings known at present; (8) the view that eclampsia is infectious is at present entirely without proof; (9) Bouchard's view that the cause of eclampsia is an increased toxicity of the blood-plasma, continued with a decreased toxicity, or an entire absence of toxicity of the urine, cannot be held; (10) the explanation of eclampsia as a hepatotoxemia, or as a leukomaiemia is not proven; (11) some substance which causes coagulation, and which courses in the circulation seems to be of significance for the origin of the eclampsia changes in the body; (12) eclampsia is an intoxication of fatal origin. It will be noticed that the first paper of the session by SCHMORL (Dresden) overthrows a number of the propositions advanced by Fehling.

[To be concluded.]

AMERICAN MEDICAL ASSOCIATION.

ANNUAL MEETING AT ST. PAUL, MINN., JUNE, 1901.

[Specially reported for AMERICAN MEDICINE.]

Joint Session of Sections on the Practice of Medicine and Hygiene and Sanitary Science.

[Concluded from page 178.]

FOURTH DAY.

Further Report on Pseudo or Modified Smallpox: Dr. T. J. HAPPEL (Trenton, Tenn.) said that at the Atlantic City meeting of the Association last year he reported to the section his experience with 300 cases of pseudo or modified smallpox, which was made from a bedside study of the cases in all stages of the disease. This paper dwelt with some of the anomalies met in 400 cases recently coming under his observation. In many cases the disease was noncommunicable. That many vaccinated persons had the disease whilst many who had not

been vaccinated escaped the disease was a point made by him. He took up the diagnostic points between the disease, or epidemic that occurred in Gibson county, Tenn., and the variola vera of the writer's prior to 1895. He asked whether it could be classed as variola vera, or was it a hybrid? The following differential points were presented: in the modified form there did not appear to be any prevailing types of the prevailing diseases; that had the same general character, differing in degree only. The incubation was from 14 to 18 days. In smallpox, the varies were varioloid, discrete, hemorrhagic and confluent, and the incubation period was from 14 to 21 days.

Symptoms.—*From the first to the third day.* In the modified form, at the onset the patient complained of cold; felt as though an attack of gripe or tonsilitis was coming on. Temperature 102° to 105°. Little or no vomiting. Pulse full and rapid. Little or no prostration. No delirium. No convulsions in the young. In a few cases there may be sleeplessness. In smallpox the onset is sudden, violent chill, persistent vomiting, agonizing pain in back and head, shooting pains in the limbs. Temperature 103° to 104°. Pulse full, strong and rapid. Prostration great from the onset. Eyes injected. Sleeplessness, delirium and convulsions in the young. *The third day.* In modified smallpox no coarse red spots appear. In smallpox, coarse red spots appear on the lips and forehead. With appearance of these spots the temperature falls to the normal and the patient is comfortable. *Fourth day.* In the modified form an eruption appears, whose character is generally that of an acne. In some instances the shot-like papules appear, but rarely. Temperature falls to the normal and the patient almost invariably gets up, if he has gone to bed, and says he is well. The eruption first appears on the face. In men about the forehead, cheek and chin; in women and children irregularly about the face. There is usually a sore throat. In smallpox the small red spots appear on the forehead at the juncture of the hair, and are followed by their appearance on the extremities. Papules follow the red spots. They have a shot-like feel. *Fifth day.* In the modified form the acne-like eruption and papules develop into vesicles which assume an opalescence at once. These vesicles are unicellular and are not umbilicated. The serum which exudes at their apices dries and turns brown, which in some cases, gives them the appearance of umbilication. There is no puckering of the vesicle, at its border. The temperature is generally normal unless it rises from abscess formation or other causes. The vesicle may dry up and the disease may be said to have aborted. A rapid recovery follows. In smallpox, papules appear on the wrists and forehead. *Sixth to the ninth day.* In the modified form the vesicles become filled with an opaque lymphoid fluid; in some cases with a brown nucleus in the center, which gives it an umbilicated appearance. This vesicle with its opaque fluid, miscalled pus, shrinks to ½ its diameter and becomes a thin brown scab, perfectly circular. There is no stench. The patient is well after the appearance of the eruption, and insists upon getting up and having plenty to eat. If the eruption is copious he looks bad but he will tell you that he feels good. The eruption in a few cases affects the conjunctiva. There is no secondary fever. From this time on it is simply a matter of scabs dropping off. By the tenth day the patient may be entirely clear. If the eruption spreads over the entire body he may not be clear of scabs until the fourteenth day. In true smallpox the vesicles appear in place of the papules, and the eruption spreads gradually over the entire body. The vesicles are umbilicated and multilocular. On the eighth and ninth days the vesicles become pustular and each is surrounded with broad, red bands, or efflorescence, the features becomes distorted, there are severe rigors and fever, the original symptoms appear, stench is beginning, etc. There is great delirium and convulsions in the young. This is a very critical period. *Tenth to twelfth day.* In smallpox, pus oozes and forms scabs, and the stench is particularly bad. *Seventeenth to twenty-first day.* In smallpox the scabs drop off, leaving red glistening pits which soon become white. Ulceration is deep, reaching the corium. Ophthalmia is generally present. Pustules pervade the mouth, larynx, pharynx and trachea. Petchia forms on the lower part of the abdomen and inner aspects of the thighs on first and second days in some cases. *Papules.* In the modified form papules, when present, are the same size as in smallpox, perhaps a little smaller, but fewer in extent. There may be no papules. Vesicles range in size from the head of a pin to the size of a split pea. They are not umbilicated, and when punctured, collapse. The vesicle is unilocular. Convalescence begins on the appearance of the eruption. The so-called pustule does not extend into the derma. The epidermis is the only structure of the skin involved; hence, there is no pitting. The vaccinated take the disease. In smallpox the papules are about the size of No. 4 shot and have a translucent appearance, encroaching on the entire body including the palms and soles. It appears first on the face and hands. Vesicles are umbilicated and multilocular. So is the pustule, and neither will collapse in toto if pricked with a needle.

Smallpox—the Old and the New: Dr. W. L. BEEBE (St. Cloud, Minn.) stated that he had been identified with 2 epidemics (20 years apart), and though they were evidently both species of smallpox, they were very dissimilar in many characteristics. He thought that many of the recent cases had been better diagnosed chickenpox than smallpox.

Remarks Covering the Sanitary Features of Smallpox:

Dr. LOUIS LEROY (Nashville, Tenn.) said that in the event of an outbreak, a competent physician should be placed in charge and given absolute power to act; he should communicate with Boards of Health, and there should be police backing. Daily official reports should be made to newspapers, stating exact condition of affairs. Smallpox treatment in private is really a makeshift. Complete and perfect isolation was insisted upon. All articles should be disinfected in the usual way. Everything possible should be destroyed by burning after the patients have been discharged. In Tennessee this year he had introduced on a large scale the hypodermic needle as a means of introducing the vaccine beneath the skin. He had first used this method in Philadelphia in 1895, using then the aqueous solution; he now uses the glycerinated lymph. A solid piston hypodermic needle is used. The skin is cleansed in the usual manner and the needle inserted into the skin—not through it—and a drop of the lymph is forced between the epithelial cells and diffuses at exactly the locality desired. It has many advantages. In cases of compulsory vaccinations it cannot be washed off; there is absolute freedom from infection at the time of vaccination. It is painless and no immediate dressing is necessary.

The Diagnosis of Mild Smallpox, as in the Present Outbreak of the Smallpox in this Country: Dr. HERMAN SPALDING (Chicago) read this paper, in which he stated that, February 15, 1899, smallpox was introduced into Chicago from Cincinnati; in the 17 months following there had been 72 cases of smallpox, 25 of which were direct importations. For a period of 3½ months they were entirely free from the disease. Then there occurred another outbreak. These 2 outbreaks gave him an opportunity to study 310 cases in the Chicago Isolation Hospital. There was 1 hemorrhagic case (fatal); 13 confluent variety (3 deaths); 24 semiconfluent variety (2 deaths); 54 severe discrete cases (no deaths); 179 mild, discrete cases, with no deaths; 39 modified forms, no deaths. He thought the term varioloid should not be used. Many are under the impression that varioloid is not smallpox, and think that if taken to the smallpox hospital while sick with the former, that they are liable to contract the disease. The term he considered to be a useless one, for smallpox is smallpox, whether mild or severe. In Chicago they placed all patients with smallpox—whether hemorrhagic, confluent or so mild that they would go to work unless prevented—into the same wards in the hospital. Two hundred and seventy-one of these never were vaccinated. None of those afflicted with the mild form of the disease contracted smallpox from the severer typical cases in the wards, where the exposure had been prolonged and certain. The mild form of the disease gives immunity from smallpox, and yet will transmit typical confluent or hemorrhagic smallpox, of which statement he had abundant proof in Chicago.

The Distinguishing Characteristics between Mild Discrete Smallpox and Chickenpox: Dr. FREDERICK LEAVITT (St. Paul) made the following summary:

	Smallpox.	Chickenpox.
Age.....	Any age.	Childhood.
Incubation.....	Two weeks.	13 to 17 days.
Invasion.....	Marked headache, backache, fever, general malaise, lasting 3-4 days.	Is none, or at most only slight, in the covered portions—thorax.
Surfaces attacked.....	Worse on the exposed parts—extremities. Invariably on the palms.	Rarely or never seen on the palms or soles.
Character of the eruption.....	Progressive; papules, vesicles, pustules, crusts.	Papules and crusts. Lesion very superficial. Easy to rupture.
Histology.....	Lesion includes the lower layers of the derma. Hard to rupture. Multilocular.	Unilocular.
Temperature.....	Remains high (103-105) till eruption appears. Then drops and does not rise again for a week, and not then in the milder discrete forms.	Rises with the severity of the attack.
Contour of the eruption.....	Quite uniform in size. Has a reddened area at base. Frequently umbilicated.	Not uniform. Also inflamed area about the vesicle, but less marked.
Sensation.....	Painful to the touch; may itch.	Not painful to touch.
Duration, including period of invasion and desquamation.	Two to four weeks.	One week to fourteen days.
Vaccination.....	Protects.	Does not protect.
Pitting.....	When confluent on face; will occasionally mark in the discrete form.	Seldom unless infected.
Complications.....	Generally none.	None.
Mortality.....	High in severe confluent and hemorrhagic types.	Nil.
Resolution.....	By crisis.	By lysis

Variola: Dr. H. M. BRACKEN (St. Paul) stated that in the State of Minnesota there had been reported 7,211 cases of variola, with 49 reported deaths during the past 2½ years. He did not think we could be governed in our diagnosis of all cases in this present epidemic by the usual textbook descriptions of variola. Typical prodromal symptoms may be present, but the rash may vary in degree, in form, in type of progress, and in final disappearance in a way that is described in but few textbooks. He asked if vaccination protected against the disease. Of 662 cases in 244 houses but 10 patients had been successfully vaccinated at any time prior to their infection, and of these 10, 30 years had elapsed since successful vaccination for 2 of them, over 25 years for 4 of them, 20 years for 1, and 6 years for 1. The Chicago Board of Health made the following statement: "Out of a total 171 cases of smallpox found in Chicago between November 30, 1900, and April 10, 1901, 140 had never been vaccinated. Of the remaining 31 cases, 29 were adults showing faint, poor or irregular scars, claimed to be evidence of attempted vaccination in infancy or childhood—the most recent being 23 years old. Only 2 out of the 171 cases exhibited typical scars of successful vaccinations. Since vaccination had been made compulsory in the schools of Chicago smallpox had disappeared from them. The degree of immunity depends upon in part at least the intensity of the infection." Marson gives the following deatheate among those who have been vaccinated: One cicatrix, 7.73%; 2 cicatrices, 4.7%; 3 cicatrices, 1.95%; 4 or more cicatrices, .55%.

Section on Surgery and Anatomy.

[Concluded from page 483.]

THIRD DAY.

A Synopsis of 267 Cases of Amputation at the Hipjoint by the Author's Method: JOHN A. WYETH, M.D. The operation was first described at a meeting of the American Medical Association, in 1890. The 267 cases were classified in 3 groups: neoplasms, 137 cases, of which 131 were sarcoma, 5 epithelioma, and 1 osteocarcinoma. Fourteen died, or 10.2%. All fatal cases were sarcoma; septic infections, 94 cases, 16 deaths, or 17% mortality. Subdivided into a pyogenic osteitis or osteomyelitis (not tuberculosis) 36, with 5 deaths, or 14% mortality. Tuberculous osteitis or osteoarthritis (hipjoint disease) 41 cases, with 4 deaths, 9.7%. Gangrene, moist and diabetic, 12 cases, 6 deaths, 50%. General cellulitis, 3 cases, with 1 death. Two cases of extensive ulcer, both recovered. Injuries; 36 cases, with 23 deaths, ratio of mortality, 63.9%. Twenty-four of these were performed on account of extensive injury to one or both lower extremities by railway trucks or heavy machinery. Of these 16 died, deatheate of 66%. Although this rate of mortality seems large these injuries were of the most severe type, with one or both lower extremities crushed into a condition of pulpification, while several were complicated with rupture of internal organs with hemorrhage so that they were practically dead when the operation was undertaken. Moreover, no doubt some of these could have been saved by the intravenous injection of hot salt solution, which was not done in a number of fatal cases. The great improvement made in the saving of life may be appreciated when we compare the statistics given in Ashhurst's International Encyclopedia of Surgery, issued in 1881, where in a total of 633 cases of amputation at the hipjoint by other methods than the one here reported the ratio of mortality was 64%, while in 267 cases reported by my method the deatheate is 19.8%. In other words, the deatheate in 1881, 20 years ago, for all causes being 64%, is now 19.8%. The deatheate 20 years ago for all causes being equal to that for crushes from railway trucks or heavy machinery at this date. In the *Lancet* (London) of March 5, 1892, Mr. Frederick Page gives 16 cases in which the amputation was done by other methods in the Royal Infirmary at Newcastle-on-Tyne, a ratio of mortality of 37.5%, against 17% by the method here described. Dr. John Erdmann, of New York, collecting the figures of 8 hospitals of this city, gives 18 cases, done by all methods, with 8 deaths, a mortality ratio of 44%. Of these 18 cases, 7 were performed by the method of hemostasis herewith advised, and all of these recovered, leaving in the list 18 fatal cases in 11 amputations done by other methods. Antiseptics must share with the improved hemostasis the credit of this diminished rate of mortality. The simplicity and efficiency of this method is evident in the fact that from the country practitioner with inefficient assistance and limited experience in major surgery to the metropolitan surgeon with all the accessories of modern technic, it has almost without exception, met with full approval and adoption.

Discussion.—MEANS (Columbus) has used the Wyeth pin in amputation of the hipjoint in 2 cases and 1 emergency case recovered permanently and the other case of carcinoma recovered from the operation but died 3 months later from recurrence. Means believes that the pins are of great value in these cases, and uses them also in the amputation of the shoulderjoint.

SYLVESTER (Ohio) has used the Wyeth pin in 2 cases. In 1 case a boy's leg was cut off completely by a locomotive, and he died while on the table while the operation was being made.

Sylvester suggested that in cases where there is much oozing, that the wound should be packed with gauze and long sutures inserted which may be tied in a bowknot and in removing the gauze, the sutures can be drawn tight.

WRIGHT (Bridgeport, Conn.) uses a heavy rubber bandage and converts it into a roll, passing it around the groin. He has been able to produce a hemostasis which was quite satisfactory. It occluded the vessels and saved the necessity of the pins.

WYETH, in closing, emphasized the importance of using infusions of normal saline solution in cases in which there was a great deal of shock.

Antoplastic Suture in Hernia and Other Diastases: While at work upon the inguinal hernial operation it occurred to McARTHUR to utilize a strip of the tendinous portion of the external oblique, which, possessing fibers in the adult from 5 to 6½ inches in length, would have sufficient strength to act as a substitute for the absorbable kangaroo sutures. Experiments on dogs and operations on the human being having proved the feasibility of the procedure, it remains for the future to determine the actual value of the suggestion. Any of the accepted operations can utilize this material without great variation in the technic. White fibers which enter into the formation of the *internal pillar* of the ring are split off from the edge of the internal flap of the external oblique quite up to their insertion in the muscle belly, where they are cut loose from the muscle but left attached to the spine of the pubis. This strip should vary in width from ½ to ⅓ or ⅔ inches, according to the development of the tendinous fibers, which in children and women are not so strong as in the male adult. In case a Bassini is done, a similar strip is taken from the outer flap, the lower end of which strip terminates in the fiber of the external pillar of the ring. These strips are used as suture material for *running* stitch. McArthur has had 12 cases in which to try this method, in all of which a perfect primary union was obtained, with an unusually satisfactory convalescence, the temperature not rising as it usually does during the absorption of the animal suture, and in these few cases there was less than usual of the indurated boggy area surrounding the wound. Some colleagues have likewise tried the operation, making in all 17 cases. Realizing how nearly perfect our absorbable suture material has now become, McArthur presents this paper, believing it to possess undoubted additional merits, viz., (1) The obtaining of a living suture; (2) lessened chance of failure through avoidance on introduction of dead or foreign tissue; (3) the incorporation in the resisting cicatrix of organized white fibrous tissue; (4) the applicability of the same procedure to other situations. Strips of tendon of sufficient size for use as suture material will stand a tensile strain from 11 to 24 pounds without breaking. Sufficient time has not elapsed since any of my operations to state that the method is any *more* successful than with animal suture. It is logical to conclude, however, that if the identical technic is followed using these living strips as is followed with aseptic animal tendon, and a primary union with normal convalescence is obtained, that if they die and be absorbed, they accomplish all that the foreign material does, while if they live (as experiments prove) it remains to offer permanent resistance to future stretching. Experiments are now in progress by means of which after the elapse of sufficient time I shall study the histologic changes, if any, which grafts of this nature may undergo, and hope to have the honor of presenting to this section the findings.

New Method of Skiagraphic Diagnosis for Renal and Ureteral Surgery: G. KOLISCHER and L. E. SCHMIDT (Chicago) have used the following method to perfect the knowledge of the topography of the kidneys and ureter, location of calculi and aid in differential diagnosis. For locating the ureteral openings in the bladder and sounding the ureters in most of the cases, Brenner's cystoscopes are used; only in a few cases where special peculiar conditions prevail an improved modification of Casper's cystoscope is substituted. Extensive cadaver work determined that the most desirable material for the sound is lead, blended with antimony. This kind of lead wire is extremely flexible, so that the natural course of ureters would be changed by introducing the sound. These sounds are soft and their surface polished up to perfect smoothness, so that injuries to the lining of the renal pelvis and of the ureter are not to be expected, and, in fact, are not to be observed as careful examination in cadavers has proved. They sum up the results and possibilities of their method as follows: Our method is free from danger. We can determine (1) the course of the ureters; (2) the location of the renal pelvis; (3) We can diagnose dilations of the renal pelvis; (4) we can determine the location of the renal calculi; (5) we are able to determine the seat of the ureteral obstruction and we are in a position to judge to a certain extent upon the nature of the ureteral obstruction; (6) we have the possibility of differentiating gallstones from renal stones, which differential diagnosis occasionally is a very hard one or even impossible to make by other means; we have the possibility of distinguishing between nonrenal neoplasms and dislocated and enlarged kidneys. When a surgical kidney cannot distinctly be made out by bimanual palpation, cases which quite often present greatest difficulty in finding the kidney after incision was made, our method will give most valuable information concerning the topographic location of the kidney.

Discussion.—POWERS (Denver) believes that McArthur's method promises to prove a useful addition in surgical treatment of hernia.

EISENDRATH (Chicago) has used McArthur's method in several operations. In 1 case he used this method on a young boy, and found that the aponeurosis held well. He is not aware that the operation has been tested in young persons with possibly weak aponeuroses before.

EASTMANN (Indianapolis) inquired how it was possible to obtain an aponeurotic strip for suturing that was longer than the wound itself, and if splitting off a strip of the aponeurosis did not weaken it?

Dr. McARTHUR said that he had found that the edge did not tear out any more than it would in using any other suture material.

Prostatectomy as Prostatotomy: RAMON GUIERAS (New York). Will be treated editorially.

Prostatectomy, the Method of Choice in the Management of Prostatic Obstruction: EUGENE FULLER (New York). Prostatic hypertrophy, directly or indirectly, is the cause of death in such a large proportion of elderly men that its surgical management is a question of great importance. Formerly, Fuller did not operate on patients over 75 years of age, but recently he has obtained several good results in men considerably older. Two cases were mentioned one occurring in a man of 78, and the other in a man of 77 years. The surgeon should always be influenced by age, but other factors should be taken into consideration, such as the physical and mental condition, the condition of the arteries, pulmonary, cardiac, or other defects. Putrid urine and the presence of ascending pyelitis, should not stand in the way of operation, but should strengthen the plea for speedy relief of the obstruction. In many such instances in which infective complication appears extensive and serious, radical operation is followed by perfect recovery. In the relief of prostatic obstruction, Fuller believes that it is usually a question of prostatectomy or nothing. In the minority of cases, castration, or the Bottini operation may be considered. There are a few well-authenticated cases in which relief has followed castration, but they are so few that the operation is at present practically abandoned. The ease with which the Bottini operation is performed is its chief advantage over prostatectomy. Others urge the freedom from after-discomfort, and brief confinement in bed. There is a great difference between relief of symptoms and radical cure, however, and in most cases there is considerable residual urine after the Bottini operation. In a good percentage of cases it fails entirely to relieve, and the mortality is about 10%. The cases suited to this operation are those free from complications, and in which the obstruction is a moderate-sized, middle lobe, or hypertrophy and rigidity of the prostatic fibers about the vesical neck. In many cases, the operation must be repeated. After prostatectomy, on the contrary, the results obtained are perfect and permanent. There has been complaint about the large mortality following prostatectomy, but this is probably because of 3 reasons: because many know nothing about the operation; many are incompetent to perform the Bottini operation; and others have tried the operation in a limited number of cases, and have been unfortunate in their results. Prostatectomy is not an easy operation, and old patients do not bear long-continued anesthesia well. Fuller believes that we should not hesitate, however, to operate, even where the surgical risks are great, for in the bad cases, death, accompanied by great suffering surely occurs if nothing is done, while if prostatectomy, associated with drainage, is performed, death, if not averted, is peaceful. The patient is rendered comfortable and, in a large majority, even of the worst cases, recovery is complete.

A Further Report on Permanent Catheterization: J. RILUS EASTMAN (Indianapolis) reports permanent catheterization in 15 cases. The catheter was retained for more than 10 days in all instances, and in 2 cases, for more than 60 days. The results obtained were quite satisfactory, and Eastman gives the following reasons why permanent catheterization should be selected as the method of choice for routine use in selected cases, in draining the bladder: By its use the urine is removed by the natural exit. If used for operations in opening the posterior urethra, the period of convalescence is shortened, since the wound closes more promptly than if the urine be drained through the wound. The caliber of the urethra is maintained, or even increased, and the subsequent passage of instruments is rendered easy. Much of the tedious work of after-treatment such as passing sounds, is rendered unnecessary. After perineal section involving the removal of a portion of the posterior urethra, catheterization or sounding is difficult; hence, the maintenance of the urethra is a serious problem. If the retained catheter is used, however, this is unnecessary. The urine may thus be drained into a receptacle and bed-sores, dermatitis and discomfort avoided. The danger of uremic poisoning is reduced, since the area exposed to infection is slight. Pain and fever are slight during catheterization, if care is exercised that the instrument does not project too far into the bladder. The soft and hard infiltrations which may narrow the caliber of the urethra, are removed or reduced by pressure absorption.

Perineal Prostatectomy: PARKER SYMS (New York) advocates prostatectomy by a median, perineal incision to bring the prostate down so that it can be readily reached. He uses a retractor, consisting of a soft rubber bulb cemented on the end of a soft rubber tube. The bulb is inserted into the bladder through an opening into the urethra. It is then distended with a definite quantity of water to a diameter of 2½ to 3

inches. The tube is then clamped, and by pulling upon it the rubber bulb acts as a retractor to draw the prostate downward through a small, median incision. The prostate can then usually be readily shelled out. When properly performed, the operation is not formidable, hemorrhage is slight and there is comparatively little shock. Syms believes that prostatectomy will be proved to be a thoroughly sound and proper procedure; that the deathrate will be no more than is compatible with a condition in itself so grave. It should not be left as a last resort, but should be performed before the patient is in a dying condition, or not at all. In men, not physiologically very old, whose arteries are in a fair condition and who are not suffering from severe kidney lesion, recovery may be expected, provided the condition has not been neglected until the bladder is badly inflamed, and the patients are suffering from sepsis. Syms feels sure that every hypertrophied prostate may be removed by simple, median, perineal incision, and, in most cases, the patients are better the day after the operation than the day before, on account of the relief from drainage of the bladder. He has operated in 9 cases, the last 6 by the method which he described. Patients have ranged in age from 53 to 75; all have had cystitis, but only 2 were suffering from stone. All the patients recovered, and in only 1 case was relief partial, the others being completely relieved. In 2 cases there was incontinence of the urine for some weeks, but the patients gradually regained control.

Fallacies in the Treatment of Urethral Disease: ROBERT HOLMES GREENE (New York) states that 8 years ago he advocated that local treatment for urethritis should not be commenced until the acute symptoms had subsided; that is, in from 6 to 8 weeks after the onset of the disease. He has later become confirmed in this belief, as the result of clinical experience, and study, and pathology. The advocates of the irrigation treatment have considerable in support of their method of treatment, but the difference of opinion as to the proper material solutions to be used is so great as to make it evident that this treatment is by no means certain. Greene reported studies by German writers which indicate that prostatic hypertrophy of the aged is an inflammatory disease, and he showed drawings from specimens of his own supporting this view.

Discussion.—WARNER (Ohio) believes that prostatic hypertrophy is usually of very long duration, and that operative intervention should be undertaken early, before changes occur in the bladder and in the kidneys, which would make success impossible.

ANDREWS (Chicago) has used Bottini's operation in 17 cases. In only 3 cases did he obtain a complete cure; 1 patient died of hemorrhage. Some of the other patients were somewhat improved, but his experience has not been such as to lead him to favor the operation. Good results are probably obtained in cases where there is a collar-like condition of the prostate. He prefers the perineal route in performing prostatectomy. The apparatus shown by Syms for drawing down the prostate into the wound seems admirably adapted for this purpose. Andrews has also used Ferguson's prostatic retractor, which is introduced into the bladder and the prostate is pushed downward, using the pubis as a fulcrum for the lever of the instrument. The traction in these cases tends to prevent hemorrhage. A small incision he considered quite important in these cases in weakened people where there is considerable absorption of urine, which might result unfavorably.

McGOWAN (Los Angeles) believes that Schmidt's method will not come into general use because of the difficulties in catheterizing the ureters, and because few perfect themselves in x-ray technic. During the past 50 years McGowan has operated about 50 times, performing prostatectomy and prostatotomy in patients between 65 and 81 years of age. He believes that the perineal operation is impossible in some very fleshy persons with deep perineums. He believes also that Fuller has made the operation of prostatectomy appear too easy. In some cases McGowan has seen very severe bleeding.

GUIERAS, in closing, emphasized the importance of not emptying the bladder entirely, in cases of retention from prostatic hypertrophy, for this may cause inflammation, and even acute suppression of urine. The bladder never regains a perfectly normal condition, if before operation it is trabeculated and contains diverticulae; but the improvement is very marked and patients get on very comfortably. Prostatectomy is the ideal method if the condition of the patient permits it. Bottini's operation seems crude and imperfect, but the results are often very good. In 23 operations which he has performed, all the patients were relieved. In 2 cases there was more or less burning and in 1 case, frequent micturition, but many of the other recoveries were most remarkable. One patient who had had complete retention for over 4 years, was completely relieved by the operation. It is not always possible to shell out the prostate. Guieras mentioned a case in which he found it impossible to do so, even at the necropsy; but in these cases it may be removed piecemeal.

FULLER, in closing, expressed the hope that the discussion would bring increased attention and interest to this field of work. He excises the prostate in certain cases where he finds enucleation impossible. Inflammation in the region of the prostate urethra and seminal vesicles is often taken for enlargement of the prostate. It is difficult to determine what is the cause of prostatic hypertrophy. Probably it is not an inflammatory condition alone, as Green suggested, for a prostatic

hypertrophy is unknown in Asiatics, although they have a great deal of venereal disease. The idea that the bladder has not sufficient expulsive force in cases of prostatic hypertrophy with retention is incorrect. This used to be given as a reason for not operating. Fuller has never seen but 1 patient in this condition, and in this case there was a tuberculous pericystitis.

EASTMAN believes that Green is right in his belief that inflammation is the cause of prostatic hypertrophy. He bases this belief on the results of examinations of 40 prostates, which he carried out in Virchow's laboratory.

SYMS, in closing, emphasized the importance of early operation. He believes that Bottini's operation is an unsurgical procedure.

Pneumectomy and Pneumotomy: J. B. MURPHY (Chicago). Pneumectomy is frequently indicated. It can be performed with safety to the patient. The danger of pneumothorax is not great. The unpleasant manifestations from pneumothorax are entirely overcome when the causes of the symptoms are understood. Portions of the lung may be amputated without danger of hemorrhage and without danger from pneumothorax from division of the branches of the bronchi. Pneumotomy is frequently indicated; is not a dangerous procedure; may be accomplished with or without adhesions of the lung; the hemorrhage is easily controlled. The scalpel should be used in place of the Paquelin cautery in opening pulmonary abscesses, interlobar abscesses and bronchiectatic cavities.

Removal of Foreign Bodies from the Air-passages: DEFOREST WILLARD (Philadelphia). Foreign bodies such as seeds, nuts, toys, food, etc., are exceedingly liable, especially in children, to be sucked into the trachea during laughing, crying, etc. The immediate effects are most alarming. The violent efforts at coughing usually dislodge the offender if it has not reached the larynx, but it may be arrested at the vocal cords, or may pass on and become impacted in one of the bronchi, usually the right, from anatomic reasons. It may partially or totally occlude the bronchus; in the latter case $\frac{1}{2}$ the respiratory functions being destroyed, dyspnea will be very great, and septic pneumonia will speedily follow, possibly with gangrene of the lung. Inversion of the child and succussion are dangerous unless the means for immediate opening of the trachea are at hand, as lodgment in the larynx may quickly suffocate the patient. A careful physical examination, with study of all the symptoms is absolutely essential to determine the lung condition. A low tracheotomy should be at once performed; a large opening made, the sides of the slit being kept wide apart by silk stitches. Through this opening expulsion is common, and is ordinarily to be expected. A cystoscopic tube with lamp may be employed down the trachea to discover an object at the bifurcation. Suction upon the foreign body may be employed through a rubber tube by a Bigelow evacuator. Search by tracheal forceps should be cautiously attempted through the tracheotomy opening extreme care being exercised not to wound or tear the bronchi. Unfortunately the sensations imparted by the cartilaginous rings and a seed or bean are not dissimilar, and failure to extract is not uncommon. If the object is a metallic one an x-ray representation may prove of great value, provided fixed angles of illustration are employed. If the object cannot be secured through the trachea, an opening into the chest and incision of the bronchi themselves is only justifiable when the Fell-O'Dwyer artificial apparatus is at hand and oxygen is available. Without these accessories, combined with the skill of a cool, cautious operator, the search for a foreign body within the chest walls is attended with such dangers that it is ordinarily unjustifiable. By the means of these helps, however, it may, in selected cases, be advisable in children to saw the sternum longitudinally and forcibly retract its halves so as to reach the root of the lung through the mediastinum. The bronchus may also be reached through a large trap-door flap anteriorly, or it can be approached through a posterior thoracotomy flap. If these large openings are made suddenly, and an artificial respiration apparatus is not at hand, the sudden collapse of the lung is most dangerous and may result in speedy death. Under any circumstances the operation is a formidable one, since even when the bronchus is reached it is not easy to locate the foreign body. Should gangrene of the lung occur, a free incision should be made down to the pleura which should then be stitched to the lung by the use of a long-handled curved needle, so as to shut off the open pleural cavity. A free incision should then be made into the diseased lung-substance, and thorough drainage instituted.

The Treatment of Empyema: JAMES H. DUNN, M.D. The treatment of empyema is still decidedly behind the present state of surgical science. Tardy diagnosis, inefficient drainage, and slovenly after-treatment, are the most frequent causes of failure; retarded convalescence and deformity, though less frequent than formerly, are not seldom encountered. Treatment is too often undertaken by those unfamiliar with surgical methods. Prompt recognition and adequate drainage minimizes ruptures into bronchi, systemic infection, loss of lung expansion and pleural thickening. The degree to which the collapsed lung recovers depends largely upon the length of time during which the lung has been compressed. Pulmonic sclerosis and pleural thickening are causes of difficulty in obliterating cavities. Having early recognized the presence of suppurating pleurisy by the needle, bacterial diagnosis of the variety of infection is desirable. It is further necessary spe-

cially in encysted empyema, to map out the location of the collection that the drainage may be most conveniently placed. In certain benign infections, the chest should be aspirated, and in the others the chest should be more or less freely opened and drained. Operation, without rib resection, even in children, is rarely advisable. The opening should be large enough to allow removal of all clots and debris, to remain open until the cavity will close, and large enough to admit of examination of the cavity. The resection of at least 1 $\frac{1}{2}$ or 2 inches of a rib below and posterior to the effusion is necessary. In case prolonged drainage is anticipated it is often advisable to make the opening larger. In pure pneumococcal pleuritis aspiration should be tried and it not rarely succeeds. A second, or possibly a third, evacuation by the aspirator may be tried before opening the chest. In pure tuberculous pleuritis, opening should be delayed until the advent of mixed infection, where, as a rule they are benefited by free drainage. In large and double effusions gradual evacuation by paracentesis is advisable as a preliminary measure, the rib resection being delayed a few hours. The opening should be placed at the lower and posterior part of the collection. Effusions vary in their location, hence to place the drainage opening at any set place is manifestly absurd. In the majority of cases, the eighth rib, well back, just outside the angle of the scapula is best chosen. Dunn has never seen the incision too far backwards for the best results, but many times too far forwards. Irrigation of the cavity is unnecessary, in many cases objectionable. A careful aseptic occlusion dressing ought to be maintained throughout the treatment, from the first opening to the closure of the cavity. Acute empyemas, promptly recognized, freely and adequately drained, and aseptically treated, as a rule close in from 3 to 12 weeks. Estlander, in 1877, proposed to mobilize the thoracic wall by resecting that portion of the ribs covering the cavity. In practice the cause of failure of most of these cavities to close is to be found rather in the pleura than in the ribs. The walls of these persistent cavities and fistulas become indolent and quite analogous to the edges of certain old indolent ulcers, and removal of the superimposed ribs alone rarely proves entirely successful in their complete closure. Hence this type of thoracoplasty has been superseded by the Schede type of operation, in which the whole chest wall, save the skin, is removed over the cavity. Of late years, cases requiring extensive plastic operations are much less frequent than 10 or 15 years ago, but in 5 cases during the past 6 years I have found it necessary to remove more or less extensive portions of the chest wall and secured complete and prompt closure in such instance, whereas 10 or 15 years ago a much larger number of operations of the Estlander type were observed, in the majority of which sinuses remained as long as the cases were followed. Thus with prompt and efficient treatment of acute empyemas, chronic cavities and fistulas are rare, and these may, with few exceptions, be closed fairly promptly by thoracoplasty. When the general state is very feeble, when amyloid disease is advanced, when the cavity is enormous, failure is probable, but there are few absolute contraindications to a well-timed attempt to close these chronic cavities. Tuberculosis is unfavorable, but by no means an absolute contraindication.

DR. CHARLES A. POWERS, of Denver, was unanimously elected by the Surgical Section to the House of Delegates of the Association for 2 years. Dr. A. D. BEVAN, of Chicago, 1 year.

Discussion.—BERNAYS (St. Louis) reports postmortem experiments in 10 cases, on patients who had died from pulmonary tuberculosis. The attempt to remove the diseased portion of the lung was made, and it was found possible to pull off the diseased area without opening the lower pleural sac, which was shut off by adhesions. In a case of abscess of the lung, he advises opening by Hilton's method, pressing into it a pair of Clow's dressing forceps, opening the blade and withdrawing the forceps. He thinks that these cases may be safely treated in the same way that we would deal with a nephrosis or appendicitis, by draining the abscess cavities. He agrees with Dunn that the treatment of empyema depends upon the character of the organism causing the infection. Even country doctors should feel the necessity for making bacteriologic examination in these cases.

WILLS (Los Angeles) stated that the patient upon whom he operated, draining a tuberculous cavity in the lung, is still alive and well, 3 years after the operation. He has gained 75 pounds, and is able to go about his work, that of a stable man.

KEN (Philadelphia) mentioned some cases in which he had cut down to the chest wall, made an incision, and sutured the lung to the parietal pleura, before pneumothorax could occur. Then, packing gauze into the wound, he waited 3 days, when adhesions were sufficiently formed to permit operation on the lungs. In 1 case, in which he removed a large sarcoma of the chest wall, the lung collapsed, but caused very little trouble. The lung was seized and sutured around the bone to prevent pneumothorax. The patient had a slight infection, but eventually made a good recovery. He mentioned these 2 cases to bring out and emphasize the point that it is possible to bring about adhesion where none exists, and to suture the lung over a large area.

MEANS (Columbus) reported a case in which he has resected the chest wall and found the lung adherent, but on exploration, had been able to find no pus, in spite of the fact that the patient had been expectorating pus.

WILLARD, in closing, stated that firm adhesions may occur in 24 hours if the lung be sutured around a rectangular space, and an opening may be made the following day. In resecting a rib for empyema, Willard never uses bone forceps, but always employs a flat-bladed rongeur, which avoids a splitting of the bone.

FOURTH DAY.

The Indications for Operation in Calculous Nephritis and Urethritis: CHARLES L. LEONARD (Philadelphia). Recent advances in the diagnosis of calculous conditions of the kidneys, indicate that more than half the calculi that originate in the kidneys, pass into the ureters before they occasion sufficient symptoms to make their presence known. This increased frequency of ureteral calculi, and the numerous small calculi passed with but slight symptoms, make it probable that many such calculi remain during life in the urinary tract, without symptoms or without disturbing the function of the kidney. The x-rays have shown the greater frequency of ureteral calculi, but their presence does not indicate operation in all cases. The differentiation between cases demanding immediate operation and those in which conservative, expectant treatment should be followed, is based on the results of the Röntgen method of diagnosis. By this means the position and size of calculi are accurately given. The accuracy of this means of diagnosis, Leonard has demonstrated in 165 cases in which there was confirmation furnished. Negative diagnoses were found to be as accurate as the positive diagnoses. The calculi, both multiple and single, bilateral and unilateral, were found in 45 cases. Contrary to previous belief, over 50% of the calculi were found in the ureter. The employment of instruments to determine the presence of such calculi, is considered unsafe, and there is danger of infection of the ureter. In case small calculi are found in the ureters, an expectant course of treatment is indicated. The precision of the x-ray diagnosis has rendered such conservative treatment safe and rational, where formerly, it would have been bad surgery. The risk involved in delay is less grave than risk of infection in such cases. These small calculi usually pass without operative intervention. By exploratory operations, unless a calculus has been detected, an incision into the substance of the kidney is contraindicated, except for other obvious pathologic lesions.

Acute Cholecystitis and Cholangitis as a Complication of Gallstones: DANIEL N. EISENDRATH (Chicago) reports the case of a girl of 17, who was operated upon for gallstones and purulent cholecystitis. The colon bacillus was found in pure culture. The girl died 3 days after the operation with symptoms of cholemia, and her liver showed evidences of acute hepatitis and nonsuppurative cholangitis, which undoubtedly disturbed the hepatic functions to such an extent as to cause death. The history of the case was given in detail, with the results of microscopic and macroscopic postmortem study. The death of this patient was considered unquestionably due to the condition formerly called cholemia, this name being given because it was thought that the blood contained bile in large amounts. Eisendrath considers it now settled that it is a form of auto-intoxication, due to a lack of functional activity of the liver cells, so that toxic products are retained in the system; hence, the name hepatargy, or liver inactivity, has been proposed, to designate the group of symptoms, chiefly of a nervous character, as in this case. These symptoms may develop gradually or suddenly, resembling greatly the symptoms of uremia, or diabetic coma. They are: delirium, high temperature, muscular twitchings, or even convulsions. They may be present in a lesser degree in some cases and entirely disappear. Usually, their onset precedes death by a few days. Eisendrath believes that whenever gallstones are accompanied by high temperature we should think of the concomitant infection of the intrahepatic bile-ducts, with its resulting pernicious influence upon the liver parenchyma. Such a change may cause sudden death through hepatargy. In order to avoid such a possible complication, an immediate operation is advised in general, as soon as the diagnosis of gallstones is made.

Dissecting Abscess of the Abdominal Wall Producing Deformity Simulating Pott's Disease: JAMES B. BULLITT (Louisville) reported a case of a boy of 16, who had had a typical attack of typhoid fever. During the recovery there was an inability to raise the left leg, and 5 months later he developed a general anteroposterior curvature of the spine, with a lateral deviation of the convexity to the right side. There was fullness in the right loin, causing a suspicion of paranephritic abscess. Under rest in bed, he decidedly improved, but about 6 months after the typhoid fever, the lad was taken with high fever, pain under the left costal border, and abscess, pointed at the umbilicus, ruptured spontaneously, discharging a quantity of thin pus. When seen 6 months later, about a year after the typhoid fever, a sinus was still discharging and the boy persistently refused any operative attempt at relief. The deviation of the spinal column is believed to be due to an effort on the part of the patient to relieve pressure from the abscess in front by assuming this position. Bullitt discussed the literature of these cases in a thorough way and he concludes that abscesses of the abdominal wall, without connection with the abdominal cavity, occur most frequently as a result of typhoid fever; they heal readily after incision and drainage. Larger dissecting abscesses of the abdominal wall communicate at their inception with

some portion of the intestinal tract, and occur most frequently, also, as a sequel to typhoid fever or appendicitis, with adhesion between the parietal peritonum and some viscera, with perforation of the latter. After rupture, such abscesses follow the course of fecal fistula, healing sometimes spontaneously as a result of incision with drainage, only after communication with the intestine has become obliterated. Obliteration sometimes occurs spontaneously, sometimes must be accomplished by operation. A dissecting abscess may produce the symptoms and deformity simulating Pott's diseases. On the other hand, Pott's disease with abscess, appearing after an attack of typhoid fever, may be confounded with abscess resulting from the typhoid process.

Anatomic Treatment of Fractures of the Femoral Neck: C. E. RUTH (Keokuk, Iowa), after study of the anatomy concerned in fractures of the neck of the femur, has adopted the following method of treatment: The thigh is flexed on the abdomen to relax the psoas-iliacus, bringing them above the fracture line and preventing them from being caught between the fragments. This position also relaxes nearly all the external rotators, or changes them into abductors. Vertical traction is then made on the shaft of the femur at right angles to the trunk and moderate eversion is maintained; next abducted to the normal line and make extension in the long axis of the trunk, while an assistant makes traction $\frac{1}{2}$ to $\frac{3}{4}$ as strong as outward, slightly upward and forward from the upper end of the femoral shaft. These manipulations should be made by firm, steady traction, not by jerks, which is to become continuous by Buck's extension with a weight of from 10 to 20 pounds, according to the muscularity of the patient, with elevation of the foot of the bed enough to counteract the tendency of the patient to slide down to the foot. This means an elevation of from 6 to 15 inches. A binder's board or other splint material should now be moulded to the upper inner aspect of the thigh over which a band of adhesive plaster from 4 to 6 inches wide should pass outward, upward, and sufficiently forward, that the weight over the pulley shall overcome the internal pull of all the rotators and abductors, and at the same time raise the lower fragment to its normal level and maintain it there. It must entirely overcome the tendency to external rotation. The weight on this lateral pulley will be from 5 to 15 pounds, according to requirements. The side of the bed corresponding to the injured side of the patient must be raised enough to prevent the individual from being drawn out of position toward the lateral pulley. Most patients so treated will have absolutely no pain whatever, after a spasmodic, muscular action is entirely overcome. Ruth has treated 25 cases of fracture of neck of the femur in this way. In 22 union and useful limbs were obtained in patients from 10 years old to the extreme limits of old age. The shortening was no more than 1 inch, and, after careful measuring, no shortening was discovered in 6 of the patients. The action of various muscles was demonstrated and a femur was shown which was examined postmortem in which the result was extremely perfect.

Discussion.—SMYTHE (Memphis), in treating gallstones, advocates swabbing out the gallbladder with nitrate of silver, and closing it. He has never seen leakage if the gallbladder was not seriously diseased at the time of operation.

MCGOWAN (Los Angeles) inquired whether the x-rays could be depended upon for negative and positive diagnosis in case of renal calculus? He had always regarded such evidence as unconfirmatory. He mentioned a number of cases in which he had seen serious x-ray burns. He inquired if there was any way in which this accident could be prevented?

THOMAS (Pittsburg) mentioned a case in which blood and pus was demonstrated as coming from the right kidney, by means of the Harris segregator. No stone was shown by the x-rays, but a stone was passed some time afterward.

CRANE (Vermont) called attention to the relation between anatomic weight and substance and the x-ray shadow, which they would give. If tissues of like density are in contact, no shadow is produced. He believes that burns arise usually from long exposures at short distance.

DAVIS (Omaha) has examined a number of gallstones which he has removed, and has found the colon bacillus most commonly in them. In 1 case he found the typhoid bacillus. He believes that in most cases the stones form about bacilli which clump together. He believes that operation should be performed in all cases in which the diagnosis of stone has been made. It is always safer to carefully wall off the peritoneal cavity, as in operation for appendicitis, for it is never possible to tell when the bile is infected. He does not believe that the ideal operation of closing the gallbladder, as suggested by Smythe, is a safe procedure.

DUNSMORE (Minneapolis) does not believe that x-rays burns occur when the static machine is used.

RODMAN (Philadelphia) considers the x-ray an extremely valuable means of diagnosis in cases of renal calculus. Mistakes, while possible, are extremely rare, and he has never known of a mistake in diagnosis by this method in his experience at the Medico-Chirurgical Hospital, at Philadelphia. The clinical symptoms are also important in deciding whether operation is necessary or not. Rodman has never seen a serious burn in 3 years' experience in the use of the x-rays.

BLOOMGOOD (Baltimore) suggested that the patient should be examined more carefully when suffering from severe abdominal symptoms. In many cases, no doubt, patients having

symptoms of gallstones, are, in reality, suffering from appendicitis, and probably 1 or more such cases occur in the practice of every surgeon every year. He reported a case that came to the hospital with a history of recurrent cholecystitis. The patient entered during an attack of intense pain, in a collapsed condition. At operation acute hemorrhage was found, the gall passages being normal. At the necropsy, Opie found that at the papilla of Vater, there was a small stone occluding the opening into the intestine completely. The bile had passed down the gall passages and had been forced upward into the pancreas, the pancreatic ducts being stained green from it. Opie thought at once of the regurgitation as the cause of the pancreatitis, and later he was able to produce acute hemorrhagic pancreatitis experimentally, by injecting bile into the gall duct.

PORTER (Fort Wayne) believes that gallstone colic arises only when there is infection as well as stones present, for in many cases gallstones exist for years without producing colic.

MAXWELL (Kookuk) reported a case of a patient suffering from severe, tearing abdominal pain. At operation the gallbladder was found adherent to the stomach, twisted and occluded, and in the gallbladder were over 100 stones. The twists of the stomach had given rise to the symptoms of obstruction.

LEONARD, in closing, stated that he had been successful in making negative as well as positive diagnoses of renal calculus. Cases which had been operated upon by Keen, Weir, Deaver and McGuire, in patients after a negative diagnosis, no stone were found. The x-ray burns occasionally arise, but if carefully used, with an aluminum screen, the danger is slight. By this method we are able to determine accurately and positively the position and size of renal calculi.

EISENDRATH (Chicago) thinks that in most cases infection is the cause of gallstones, rather than the reverse. He believes that the experience of the best operators has conclusively shown that immediate suture in operations upon the gallbladder should be abandoned.

BULLITT, in closing, expressed the belief that gallstones are more common than is generally believed, and intervention for them may soon be as important as for appendicitis. Nothing gives us more valuable information in the diagnosis of renal calculus than the x-rays, and Leonard's work was especially commended. Comparatively few are so skillful that they can always make negative and positive diagnoses with certainty. Bullitt mentioned a case in which in experimenting with a kidney which he had removed for calculous disease, he found a second stone by the use of the x-rays which he had not recognized at the time of the operation.

Section on Obstetrics and Diseases of Women.

[Concluded from page 187.]

THIRD DAY.

Dr. EMIL RIES (Chicago) read a paper describing a **New Operation for Retrodisplacement of the Uterus**. He prefers the vaginal route to the abdominal incision, for these reasons: (1) The vaginal route, exposing only a limited portion of the abdominal cavity, is less liable to lead to infection or so-called shock; (2) the vaginal route, requiring no exposure or handling on intestines or omentum or perital peritoneum to any extent, avoids the postoperative troubles liable to follow such exposure or handling (adhesions with their consequences, loss of water from evaporation with the disagreeable subjective symptoms caused by it); (3) the vaginal route does away with the visible scar and the possibility of ventral hernia; (4) the vaginal route excludes the possibility of long confinement on account of wound-suppurating; (5) operations by the vaginal route are followed by a very short detention of the patient in the hospital; (6) the after-treatment of vaginal operations is extremely simple and the patients are able to resume their work very early. He described a new operation which he had devised and claimed for it the following advantages: (1) a vaginal operation which would allow all necessary operations on the appendages at the same time and through the same incision with that for the treatment of the retrodisplacement; (2) an operation that would preserve the mobility of the uterus so as not to interfere with a possible pregnancy; (3) an operation that would not depend on serous adhesions, as these had proved unreliable; (4) an operation that would not interfere with the physiologic function of the tube. The method of performing this operation was described in detail.

FRANKLIN H. MARTIN (Chicago) read a paper on **The Surgical Treatment of Retroversion of the Uterus**. He considers his operation superior to all others for the following reasons: (a) Because it insures a uniform shortening of the ligaments; (b) it insures a permanent and strong fixation of the ligaments; (c) it accomplishes this result without the necessity of placing sutures of any kind, temporary or permanent, for the purpose of fixation and shortening; (d) this eliminates the possibility of fistula tracks being established, because of the infected deep permanent suture, and obviates the occasional suppurating wound due to the buried absorbable suture. He then presented a tabulated report covering a period of nearly 5

years, and including 61 cases. His method of ventrosuspension of the uterus was also described, and consists literally of suspending the uterus on a strip of peritoneum taken from the side of the wound, as was illustrated in his accompanying photographs. He stated that he had finally adopted this operation exclusively for all cases requiring a ventral suspension of the uterus, for the following reasons: (1) Because of its simplicity and ease of accomplishment; (2) because of the thoroughness of fixation; (3) because it positively does away with any form of permanent buried sutures; (4) because it accomplishes a fixation which allows of a large range of movability; (5) because the fixation does not directly involve the appendages; (6) because experience demonstrates that the point of fixation is not the source of subsequent irritation or pain; (7) because of the possibility of pregnancy occurring and going on to normal confinement after this operation. He presented a tabulated report covering a period of 4 years and including 173 cases, of which the following is a summary: In the 173 cases, representing all cases operated on for ventral fixation by this method in the 4 years, beginning January 1, 1897, to June 1, 1901 (many of the cases including operation for laceration of the perineum, cervix, removal of the appendages and even myomectomy for fibroids), there were 6 deaths, or a primary mortality of 3.5%. In but 13 cases were there no complicating conditions requiring operations other than the laparotomy for the ventral fixation. In these cases there was no death. The appendages were removed for septic lesions as an accompanying operation for the ventral fixation in 114 cases. In 5 cases large ovarian cysts were removed. In 4 cases the appendages were removed for tuberculosis. In 5 cases for parovarian cysts. In 12 cases the appendages were removed and myomectomy was performed for accompanying fibroids of the uterus. In 29 cases the appendages were not removed. In 12 of these 29 cases conservative surgery was necessary on 1 or both ovaries. One case was accompanied by an operation for appendicitis. Of the 173 operations, there were 4 which had an accompanying operation for ectopic pregnancy. Perineorrhaphy was an accompanying operation in 25 of the 173 cases. Curetment of the uterus was performed in 28 of the 173 cases. Trachelorrhaphy was performed in 19 of the series.

Discussion.—Dr. GOFFE (New York), when operating, passes through the abdominal wall. He believes that cases which are uncomplicated should be operated. The danger of hernia should deter us from using the abdominal route. He considers that hernia is apt to follow the Alexander process, and prefers vaginal shortening of the round ligaments, and asserts that hernia after this operation is practically unknown.

HUMISTON (Cleveland) thinks the round ligaments are only gut ropes, and believes that their shortening will materially encroach upon the bladder space and cause irregular micturition. He believes that curetment and the use of pessary are indicated in uncomplicated cases.

Dr. GORDON (Maine) protests against the use of the so-called conservative surgery. He believes that when appendages are removed, the uterus should also be extirpated. It is then a useless gestation sac with the arteries pumping blood into it, producing discomfort, and should be extirpated.

Dr. GOLDSPOHN (Chicago) denounces all uterine fixation methods, such as intrasuspension. He believes that the round ligaments are the only rational structure for sustaining the uterus forward. He employs a method similar to the Alexander operation, and contends that in all his tests they sustained pregnancies better than any other.

Dr. KELLY (Baltimore) said that there was some 70 methods for the treatment of posterior uterine displacement. In 1887 he had described the ventrosuspension operation, and believed that when properly performed, complications would not arise. In analysis of 214 cases, 43 patients became pregnant, and experienced no difficulty in labor. The uterus remained in good position subsequently in the majority of the cases. He has performed the operation in 600 cases without a death, and has estimated recurrence of about 2%.

Obstetrics as a Specialty, Dr. JOSEPH PRICE (Philadelphia), was read by title.

Dr. ZINKE (Cincinnati) read a paper on **The Practice of Obstetrics as It Is and as it Should Be**. He spoke of the difficulty in educating the laity in regard to the necessity for aseptic confinement. Slight preparations are made for parturition, the obstetrician has hard work, poor reward and often unmerited blame. He believes in hospital care of cases of parturition, and argues that the best care can be given in hospitals rather than at home. It is the best and most convenient place for confinement purposes. Maternity hospitals should be so conducted that they would please the humblest as well as the most fastidious. There is no good reason why the smallest village should not erect a hospital for this purpose alone if not for any other.

Dr. W. D. PORTER (Cincinnati) read a paper on **Position of the Woman During Delivery**. It has been his invariable custom to deliver in the following position. The woman lies on her back across the bed, her hips well to the edge and on a Kelly pad so arranged as to carry fluids into a vessel on the floor; the patient's legs are separated or extended, they are supported by the assistance of a couple of suitably placed chairs, or preferably over the knees of the obstetrician, who sits on a chair facing the bed at a convenient distance. She should wear her stockings, her thighs should be enveloped in clean towels

and she should be covered with a sheet. This position should be maintained from the end of the first stage until the termination of labor unless the second stage should be tedious. In that event she can resume her ordinary position in bed, being again brought into the position described before the end of the second stage. This position is not tiresome to either patient or physician and can be maintained for hours without discomfort to either. His reasons for employing it are as follows: (1) There is less liability of infection with fecal bacteria; (2) fewer examinations are necessary; (3) there is better control of the head at the time of delivery, and consequently less danger to the perineum; (4) the woman can be more thoroughly cleansed after labor and clothing and bed are not soiled; (5) there is less danger of infecting the eyes or cord of child and less risk that it may aspirate fluids into its air passages; (6) in managing cases under the unfavorable environments of the lower classes the position is especially valuable to the young physician whose experience is gained rather among these classes.

Dr. JOHN T. MORAN (Washington) read a paper on **The Prophylaxis and Treatment of Puerperal Sepsis**. He discussed the recent developments in bacteriology and pathology. He believes that routine douches before and after labor should be discarded and attention be directed to thorough cleansing and the disinfection of the external genitalia, by the hands of the physician, instruments, dress, etc., and avoid or restrict the internal examinations. He believes that the repeated giving of the intrauterine douches and the use of the curet in streptococcal infection is decidedly harmful. The general treatment will embrace the use of strychnia, nitroglycerin and stimulants strengthening the heart. Antipyretics should not be used as they depress the heart. The use of normal salt solution is a rational measure as it flushes the kidneys, eliminates the toxins and stimulates the heart. The use of antistreptococcal serum has been disappointing, although in cases of pure streptococcal infection it seemed to have a beneficial influence. In conclusion then, the treatment of the sepsis will depend upon the skill and judgment of the physician and the condition of the patient. It would not be justifiable to open the abdomen without some physical reason. The different forms of sepsis should be thoroughly understood, for operation will hardly be required except in pathogenic infection. When the operation is done early many organs will be unnecessarily sacrificed, if performed late, the mortality will be increased. When there is attendant fever with the increased physical sign, the operation is permissible without the later general symptoms, as in systemic infection the surgical measure can but hasten the end.

Dr. HENRY D. FRY (Washington) discussed **Indications and Contraindications for the Use of the Curet in Obstetric Practice**. The indications for its employment to remove retaining products of suspension and blood clots are clear. But when the infection is streptococcal the use of the curet is harmful. Nature throws out a protective zone of inflammatory tissue at the point of infection in these cases. The curet simply breaks down the earthworks, scatters the defenders, and opens the door to entrance of the invaders, and the infection, instead of being localized, is made general. Cases of streptococcal infection invariably get worse after curetage. The use of the curet is uncalled-for in these cases when the infection exists in some laceration of the vulva, vagina, or cervix. In the absence of foul discharge, curetage should be omitted, but the cultures taken, preliminary injection employed. After 24 hours the culture growth will demonstrate the nature of the infection and the physician can be guided as to subsequent treatment. The clinical history of the case presented, as well as the history of the confinement, aid materially in making diagnosis before the bacteriologic test is available.

Dr. WILLIAM H. HUMISTON (Cleveland) reported a **A Case of Streptococcal Infection Following Labor**: He performed drainage of the peritoneal cavity through an incision in the cul-de-sac through the vagina. A gray slough on the outer surface of the cervix was proven by microscopic bacteriologic examination to have been produced by the colon bacilli. The infection of the uterine cavity was a mixed one of staphylococci and colon bacilli, and the infection of the peritoneal cavity reduced by streptococci and colon bacilli. The patient recovered.

Dr. GEORGE J. ENGELMANN (Boston) read an interesting statistic paper on **The Increasing Sterility of American Women**: This investigation is based upon numbers which may seem small to admit of deductions as to conditions existing throughout a great country, but the data are exact and cases are carefully sifted; in addition, many details are corroborated to a decimal by independent observers in far distant points; by Dr. Wilbur in the census of Michigan and Drs. Abbott and Kusznysky in that of Massachusetts, by the careful observations of Dr. Chadwick in Boston, and for the eighteenth century by town records from Massachusetts communities. Certain data are taken from each, as no one investigation covers all the points I have developed, and some have never before been presented, so that no record for comparison exists; all are indirectly corroborated by correlated facts. Whatever may be thought of the results obtained, the data presented certainly suffice to indicate the imperative need for further and more extended investigation in this direction. The sterility of women has increased hand in hand with the much-discussed decrease of fecundity, everywhere to some extent, but in the United States to an excessive degree, precisely as fecundity has diminished more rapidly than in other countries; from a sterility of 2%

in the eighteenth century, and a fecundity of 5 children to the marriage, conditions better than in any other country, and such as led to the Malthusian theory of superfecundation, through the fear of overpopulating the earth's surface. After a lapse of 1 century from first we have passed to last, and the other extreme is now presented: sterility greater and fecundity less than that of the women of any other nation, unless it be of France, who for this reason must yield her proud position of one-time supremacy and retrograde to the rank of a second-class power. Among the laboring class in St. Louis, 21% of all marriages are sterile; 24% among the higher classes; of foreigners, only 17%. Throughout the State of Massachusetts, Americans 20.2%; foreigners, 13.3%; and in the city of Boston 23.7% among the laboring class, American of American parentage the fecundity in the eighteenth century, 5 children to all marriages, at the beginning of the nineteenth century 4.5; is now and was at the end of that century 1.8 to 2.1; 2.1 in Missouri, 1.8 in Michigan, 1.8 in Boston, somewhat more among American born of foreign parentage, much more among foreigners, among the Irish 4.2 in St. Louis, 3.5 in Boston, 5 in Michigan; among Germans 3.4 in St. Louis, 6 in Michigan; and in Massachusetts for all foreigners 4.9 children to the marriage. Fecundity is somewhat less among the native American, also among the higher classes, least of all among college graduates; 1.3 or for a smaller number, 1.6 children to the married couple; in England 1.5, while for the population at large it is there 4.2. I have called attention to the frequency of miscarriage and divorce as concomitants and causes of sterility, mainly to emphasize that barrenness is not altogether due to physical causes, to pelvic disease amenable to local treatment, and that sterility is but too often artificially produced, the result of moral causes or the sequence to intentional miscarriage and the methods which precede it, the prevention of conception, both of which competent investigators have shown to be far too frequent. Concomitant with this apparently artificial sterility is the progress of divorce, in Canada 1 to 13,000 marriages; in France, 1 to 12,500; in all United States, 1 to 185; Massachusetts, 1 to 18.8; Rhode Island, 1 to 8.2 marriages. Miscarriages, too, are correspondingly frequent, and are found in the proportion of 1 to 2.8 labors at term among Americans; 1 to 5.5 is the usually accepted standard; among Americans of American parentage the frequency is somewhat greater, 1 to 2.7; among American-born of foreign parentage somewhat less, both in St. Louis and Boston; among negroes worse, 1 to 2.7. There is an absolute and primary barrenness due to uteroovarian disease, mainly to atresia, gonorrhoea, and to endometritis, with acrid discharge destructive to the spermatozoa; this is, here for the first time, clearly distinguished from relative, or secondary sterility, *i. e.*, conception and miscarriage; this primary sterility is much less frequent, 12% among Americans, 10% to 11% among foreigners, which, of course, means relative sterility for Americans 9% to 12%, foreigners 3% to 6%, showing that among American-born there is a much greater proportion of sterility or childlessness due to abortion; this may be due to disease or traumatism accidental, more often authorities say not; the frequency of relative or secondary sterility clearly indicates that much of the barrenness of women is intentional. All sterility was, in the American colonies, 2%; in parts of Russia it is today 2.8%; in Norway 2.5%, hence primary barrenness cannot, under normal conditions among a people in good moral and physical health, be much over this; in the United States all sterility is 21%, and for primary sterility my records show 9%; 9% of 20% to 23% of the childless; even in absolutely primarily barren marriages sterility is, once in 4 or 5 cases, due to the male, showing that absolute sterility in woman is not common; that sterility is not mainly due to uteroovarian disease is evident from its rapid increase, hand in hand with the astounding progress of gynecologic science, which we have every reason to believe would reduce the number of childless women to a minimum were sterility referable to tangible physical causes.

Sterility is a sad affliction for the innocent sufferer, and for her our best efforts must be exerted; but, if so rarely due to pelvic malformation and disease, why do I present these thoughts to the gynecologic section of a medical society? Not because of their significance for the future of the country; it is for the sake of the individual, because we must seek to stay the progress of this abnormal state—because men and women are in ignorance of the suffering prone to follow wilful and self-inflicted sterility, and it is this subject which claims a prominent chapter in the gynecology of the future—in preventive gynecology.

Dr. W. H. WATHEN (Louisville) discussed **Ectopic Gestation**. The etiology was described and the treatment detailed. Before the sac ruptures the vaginal route for operation is usually preferable, and may be used after rupture where the blood is confined between the layers of the broad ligament, or in Douglas' cul-de-sac, and in intraabdominal rupture where there is but little hemorrhage, and in all other conditions the suprapubic method of operating should be adopted.

FOURTH DAY.

Dr. T. J. BEATTIE (Kansas City, Mo.) read a paper on **Puerperal Eclampsia**. He discussed the various theories as to the etiology of this condition. He believes that its cause is still obscure, and that the consensus of opinion is that it is due

to the apparent toxemia. Many cases present symptoms which give some forewarning of the possibility of its occurrence. The prophylactic treatment is of the greatest importance and examinations of the urine should be made frequently and attention paid to the elimination of the urea. If the attack occurs the chloroform should be administered with chloral and morphia. Bleeding, followed by transfusion with normal salt solution, is commended, and *veratrum viride* is useful when indicated.

Dr. W. J. GILLETTE (Toledo, Ohio) discussed **The Cesarean Section as a Method of Treatment of Placenta Previa**. He reviewed the literature of this operation. Dr. Bernays (St. Louis) was probably the first to perform successfully the cesarean section for placenta previa and thinks that cesarean section if generally adopted for placenta previa will reduce the fearful fetal mortality to at most 10%. When 3 cesarean sections in the hands of 3 men can be done without the loss of the mother or child we certainly have reason for our faith that it can be done without any increased danger to the mother, from that usually most incurred by any of the later methods of treatment and must therefore be considered the correct procedure. A classic section can be adopted where the uterus contracts firmly, where there is no probability of infection, and where the patient is in condition to withstand a shock necessitated by prolonged operation. But on the other hand, where the uterus does not contract firmly, thus rendering hemorrhage probable, and the patient unable to withstand a shock, then the Porro cesarean section is, in his opinion, the only procedure warranted. The only indication for a new operation for this condition is the very high fetal mortality.

Dr. MAHER (Oakland, Cal.) read a paper on **Intrauterine Amputations**, describing a number of cases and discussing the etiology.

The session was concluded by a paper on **Gynecology: its Contributions to Surgery**, by Dr. HENRY O. MARCY (Boston). This paper was an admirable historic review of the progress of this science during the nineteenth century, particularly in America.

Dr. J. H. CORSTENS (Detroit) and Dr. C. L. BONNIFLEUR (Cincinnati) were elected as chairman and secretary of this section.

Section on Diseases of Children.

[Concluded from page 489.]

THIRD DAY.

Diabetes Mellitus in Childhood: A. C. COTTON reported a very interesting case, and called attention to the care with which these cases should be managed. He also pointed out the importance of examining the urine as a part of the routine practice in the diagnosis of the disorders of childhood, so rarely done by the average physician. This perhaps accounts for the seeming rarity of this disorder in young children. That heredity plays a role in the predisposition of diabetes there seems to be little doubt. It seems to the writer that the inclination of many to attribute to the infectious diseases of childhood a causal relation to diabetes, is not based upon careful analysis of the evidence, and that the glycosuria following such diseases is usually of the transient class. The advanced case of diabetes presents a picture of extreme inanition, emaciation, muscular weakness, dry skin and hair, brittle nails, extreme irritability, and extreme sensitiveness to cold, while the urinary symptoms are always present. Furunculosis and other skin lesions rarely appear in children. No routine treatment is applicable to even the majority of cases. At the present time the regulation of the diet seems to be the most important therapeutic measure. The death certificate follows hard upon the diagnosis, and the rate of mortality is very high. Elimination is most important in these little patients, while they should be protected from mental strain, shocks, frights, trauma, and exposure to inclement weather. The importance of an early diagnosis is evident, since success in treatment bears an inverse ratio to the previous continuance of the disease. Too much stress cannot be laid upon the importance of always protecting the child from any sudden lowering of the temperature.

Discussion.—Dr. C. F. WAHRER emphasized the view that medical treatment had little or no influence on the progress of diabetes nor could much more be expected from the diet. Both may have some effect in improving things and holding the disease in check but not in curing it. He could not recall any patient under 10 years of age who had recovered. Why should we take away from the patient things that he can eat and insist upon him eating things that it takes a strong adult stomach to digest? We should not commit ourselves to a routine treatment that may do more harm than good.

Albuminuria in Infancy and Childhood: JOHN R. RATHMELL said that diseases of the kidney in infancy and childhood are chiefly hyperemias and nephritis following the contagious diseases, especially scarlet fever. Physiologic albuminuria may occur at any period of infancy or childhood. It is most common between the ages of 5 and 15 years, and rarely persists. While albumin in the urine does not necessarily indicate serious organic disturbance in the kidney, yet its presence, however slight, commands the utmost watchfulness and care. Albumin is found in the urine after a rich meal,

heavy muscular exertion, intense emotion and cold bathing. Even when every other constituent of the urine is normal and functional albuminuria can be differentiated, yet these cases require the most careful consideration, for sooner or later, it may be after months or years have passed, grave lesions may show themselves and we wake up to the fact that insidious degeneration has been going on in the meantime. It is very important, therefore, to decide whether the albuminuria was simply functional or due to organic change. The prominent symptoms are albumin, high specific gravity and edema. These symptoms are especially found in interstitial and chronic parenchymatous, active hyperemia, catarrhal nephritis, parenchymatous degeneration, passive hyperemia, and acute nephritis. In acute nephritis the amount of albumin depends upon the extent of involvement of the glomeruli, and the amount of casts depends upon the extent of tubules affected. To meet the symptoms of edema and ascites and treat them, requires some thought concerning the condition of the patient. When threatening uremia exists, diaphoretics, diuretics and cathartics are indicated. Podophyllin compound, jalap powder and other watery purges may be used. Hot baths and hot packs should be used to cause profuse sweating where ascites is extreme, tapping is of value. For stimulation, teaspoonful doses of infusion of digitalis every 4 hours for a child of 5 years old can be given.

Discussion on Gonorrhoea in Boys: Dr. EDWIN ROSENTHAL. Gonorrhoea is seen so frequently that I begin to look for it as an epidemic. When the gonococcus is present, we can positively determine the existence of the disease and often trace the guilt of the crime when it occurs in the young child. The overcrowding in tenement districts is responsible for perhaps the most of it in the poor.

Dr. CLIFTON SCOTT did not think that it was confined to tenement houses. There is a great need for education even among men and women of the better classes. When people come to understand that there are not only vicious men but also vicious women, these questions will be looked at in a different light than they are now. For the dissemination of gonorrhoea in young boys, servant girls and maids, who force connection with the boy in absence of his parents and give him his first lesson in vice, are largely responsible. Formerly it was not thought unsafe when sleeping accommodations were limited by reason of visitors or for other causes, to allow the young boy of 10 or 12 years of age to sleep with the maid. Often the result was that the innocent boy had been infected with this vicious disease.

Dr. C. F. WAHRER referred to the fact that it was not such an unusual matter for children under the age of puberty to indulge in sexual gratifications. A case came under his notice in which a boy of 13 was invited by one of his companions to meet a certain girl of 16 years of age at a barn where he was shown how by his companion and was then given his first lesson. When the matter was traced up, the girl confessed with unblushing effrontery that she had been engaged at this sort of thing for a long time and spoke of the special enjoyment it was to instruct the new subject.

Dr. A. C. COTTON referred to the astonishing ignorance of the laity, even well-informed, people on this subject. The number of alleged assaults upon little girls is remarkable in number, and it is astonishing how many cases of gonorrhoea occur in small children. One source of this in the cases of the little girls is when some infected man, while he does not lacerate or cause an injury to the little child, seems to get a peculiar gratification on the contact in rubbing his organ against the little one's thighs. The girl, of course, develops gonorrhoea. I have seen so many cases that I believe that sort of thing is not so rare. Copulation among children before the age of puberty oftentimes occurs. In my dispensary service there was a string of 18 or 20 little girls whom we found on investigation had come from the same neighborhood. They were of a variety of nationalities. On tracing the matter up it was found that a boy of 10, with complete ignorance of what he was doing, had been infecting these 10 or 20 little girls. Mothers and fathers, especially the latter, with an old gleet not uncommonly infect the innocent child by allowing them to use the same chamber that they have previously used themselves.

Dr. Cook thinks that the time has arrived when the public should be educated on these matters and when they should all know the life history of the gonococcus outside of the human body. Prophylaxis and a thorough knowledge of the dangers of the disease should be taught thoroughly to every patient who comes for treatment. Many persons spread the disease innocently, laboring under the delusion that they are cured themselves, when, as a matter of fact, latent germs exist within their own bodies.

Physical Culture in Children: Objects to be Obtained: J. MADISON TAYLOR said that it should be clearly understood at the outset what is meant by the term physical culture. Two objects are aimed at, first to raise the general bodily efficiency of the child, as found in the schools, by aiding the natural spontaneous processes of growth and development, both mental and physical; and second to assist in improving the conditions of those who are found to be below par in any direction and bring them up to the standard for their age and conditions, so that they may progress in the same degree as ordinary individuals. It is essential that all school children should have the benefit of skilled medical supervision during their growth.

With all the ordinary opportunities for spontaneous development that are enjoyed by the young, nevertheless, it is plain that often many faults of attitude are acquired involving impairment of the full activity of the vital organs. Children cannot be trusted to properly grow up unless directed and unless beginning faults of attitude are corrected they will remain and probably grow worse unless promptly and accurately corrected. Many of these are due to original errors of construction, some are hereditary, and some are acquired by extended imitation or the conditions of environments. If these are allowed to go on the result will be postural errors or interference with symmetric growth. Defects in the organs of special sense, notably the eye, ear, and nasopharynx may be enumerated as some of the causes and must be dealt with by the specialist. Relatively local disorders are capable of producing great functional disorder when the physique is a little below par, whereas if the general mechanism of the body is good they cause very little mischief. It is not commonly known that many defects in the ocular or hearing apparatus are remediable by specialized movements of the head and upper parts of the body. In many cases they have been practically cured by physical culture alone. This statement seems extravagant, but it can be proven by the very men who had given the adverse opinions. It needs no proof to establish the fact that the heart and the lungs, and the very important lymphatic mechanism of the thorax can certainly be assumed to be in far better functional efficiency if the shape and mobility of the thorax is normal. Unless the spinal column be maintained in a healthy condition of straightness, and the bones and ligaments of the ribs and shoulders and the soft tissues controlling them retain their normal flexibility the lungs must inevitably suffer and the heart likewise fail of its normal activity. These organs should be perfectly free from external pressure, and from no other cause than mechanical pressure serious conditions of a most disabling sort oftentimes arise. The first main object of physical culture for children, therefore, is to teach them to assume right normal attitudes. Physical culture teachers are usually neither physicians nor physiologists and often not good observers. Their methods, therefore, are too often empirical or prejudiced and their knowledge of the subject not sufficiently thorough. In the study of the chest and shoulders one error was long taught as a truth, and may still be of value if properly carried out, and that is to throw the shoulders back, and the chest out, the head up and the chin in. A simple rule which can involve little error is to let the shoulders alone, free from tension, but keep the back straight and hold the chest as far up as possible and keep the abdomen held in. Then the arms and shoulders are free from constraint and can be moved in any direction. Almost the most important factor is the position of the pelvis which should be maintained as nearly as possible at a level. Then the action of the thigh bone at its junction with the pelvis is so easy that the slight forward leaning of the body as in stepping forward, allows the leg which is raised to swing forward with almost no effort. A child or even an adult trained in this particular can walk at a much higher rate of speed and maintain this for a longer distance than a very much stronger person who fails to observe the condition. The subject of breathing is one about which many fallacies are taught. The diaphragm is a muscle of unrecognized importance and is capable of high training and development, just as are the muscles of the arms and legs. The object in right breathing is to obtain the fullest degree of elasticity of the thorax, and the greatest degree of freedom. Unless the largest measure of freedom is allowed, stiffness and contractions in the tissues in certain localities, such as about the hips, the upper part of the chest, and the back of the neck may result. Nine-tenths of the ordinary movements of life are flexions. Little more than one-tenth involve definite extensions. We often see in children even 5 or 6 years of age the commoner forms of adult anamorphosis. These stooping shoulders, sunken chests, drooping or protruding heads, half bent knees are chiefly due to lowered muscular tones. Asymmetries arise, lateral pulls or twists in back or neck or legs, showing that degenerative changes have begun. Another group indicate occupation warpings, lowered right shoulder, tilted pelvis, pigeon toes, exaggerated lumbar or dorsal curves, clawed hand, etc. These defects arise principally from lack of extensor tone. Extensor power may gradually lessen or become almost lost from disuse, and yet flexor power remain. The assumption is that in the motor areas of the brain there are 2 sets of cells, 1 for extension and 1 for flexion. The development of flexor activities may not be accompanied by the development of extensor activities, and thus asymmetry results. Normal development involves the idea of the acquirement of symmetrical activities. The teacher needs to know the basic principles and to be able to adjust his methods to the exigencies encountered.

Speech as a Factor in the Diagnosis and Prognosis of Backwardness in Children: G. HUDSON MAKEN thought this subject very important, and it is very necessary that there should be a definite and uniform nomenclature in its discussion and classification. After defining the backward child, and pointing out some of the difficulties in arriving at a correct diagnosis and prognosis, the author enters into speech as an aid in backward children in formulating conclusions with reference to their exact mental condition. Speech is a tool of the mind. Children are dependent upon good speech and expression for the normal development of their mental faculties. It is not

possible to determine at a glance always the backwardness of a child. The child must be carefully watched and a careful analysis of its psychologic processes noted. The condition of backwardness is not always due to a central lesion, but it may be the result of arrested cerebral development due to some abnormality in the structure of peripheral organs. A common cause may lie in some structural abnormality of the peripheral organs of speech. The speech centers and the centers for ideation are so closely related to each other that any impairment of one generally results in a corresponding impairment of the other. The best method of arriving at an approximately correct prognosis in cases of backward children is to apply the speech test, or in other words to ascertain by careful study and experiment to what extent the faculty of speech may be improved. It will usually be found that those who are susceptible to training in what may be called the refinements of speech are the ones that give promise of the best results and that the possibilities for general improvement will be proportional to the capacity for speech development.

The Pubescent Schoolgirl: WM. EDGAR DARNALL dwelt on the great importance of the period of puberty. The girl at puberty is very susceptible to mental, moral and physical influences, and her environments and tendencies should be studied with the utmost care and discretion. This time may be the starting point for perfected womanhood on the one hand if properly managed, or for a physical wreck on the other if neglected. The average schoolgirl under the modern high pressure system of education is straining every energy to keep up with her duties and using all her vital force in mental effort. This system is largely responsible for the nervous irritability and dyspepsia that have become such prominent characteristics of our people. During the period from 9 to 15 years of age the body is developing so rapidly that brain weight is actually lost by the lessening of the blood-supply which goes to nourish the rapidly growing organs. The child brain is easily fatigued. What is crammed into the tired brain is soon lost because it makes no impression. Memory is demoralized, and the very end for which one is striving is thus defeated. The physiologic processes of the girl make even greater demands upon her than the boy's on him during this period. In addition to performing the same work at school she is also expected to acquire the accomplishments such as music and painting at an early age. Too much time must be given to practice or books when she ought to be out in the open air. Then come the exacting examinations. After this is a period of 4 years at the high school, 4 years of endless antagonism between brain growth and body growth, 4 years, perhaps, the most important of her whole life, when the menstrual period is just beginning or is struggling to assert itself under difficulties. These 4 years are very needful for the perfect development of the sexual organs, and the woman's whole future health and happiness may depend upon the result. Hysteria, crossness, and irritability, neurasthenia and sexual incompetency may be the result of this strain. Painful menstruation is the bane of the existence of the school girl. From 66% to 75% probably have some history of painful menstruation. The fact of the pains being increased with hours or intensity of study, with worry and emotion; and being diminished or ceasing entirely without treatment of any kind during vacation time is a fitting commentary on the underlying causes. The nervous or mental element is a more prominent factor than we take it to be, and shows the importance of general management and the elimination of all injurious conditions of worry and debility, mental and physical. A large percentage of the neurotic class of women have arrested development of the sexual organs. The most common defect is a failure in the development of the uterine cervix, which retains its infantile characteristics. It is usually anteflexed and less patulous than normal. The tubes and the ovaries may share in the lack of development. The girl's life should be carefully watched during the oncoming of puberty, and her studies restricted if necessary. In some cases she should be taken from school altogether for a year. Especial attention should be paid to a regular evacuation of the bowels and bladder. All stimulants and excitements, such as late hours, children's parties, and other forms of excitement, should be forbidden. Sleep is nature's upbuilder, and plenty of this should be had by the growing child. Proper diet should be supplied and the habit of eating between meals prohibited. Undue excitement, mental worry, or anything that may divert the vital forces from the great work they are performing in the development of the perfect woman should be jealously guarded from the pubescent girl, for this short period is of unmeasured importance to her future happiness. Teachers must learn that health is more important than knowledge; schools must realize the futility of the forcing process and guard the health of their girls by diminishing the studies at this time rather than increasing them, and it must be remembered always that a sound mind depends upon a sound body. It is only thus that we may hope to diminish the pitiable army of neurotics and sexual incompetents among the womanhood of the land who so largely fill up the hospitals, and who are to be the mothers of the men of our country.

Gonorrhoea in Boys: A. L. WOLBARST said that the frequency of this disease in young boys has of late attracted much attention. The author has seen 22 cases ranging in ages from 18 months to 12 years. In order to be accurate the secretions were in every case stained by the Bram method and the presence of the gonococcus demonstrated. The history of such cases has

been generally attributed to infected water closets, soiled linen, etc., but a study of the prevailing social conditions leads to the conclusion that where children are crowded together, especially in the tenement districts, they are alive to the enjoyments of sexual gratification at an extremely early age. The dark closets and cellars and the roofs afford excellent opportunities first for experiment, then for enjoyment, and it is not at all uncommon to find that boys and girls who have not yet reached the age of puberty indulge in sexual gratification. Some of these cases, it is true, were infected by sleeping with those who had gonorrhoea. The period of incubation and the general characteristics of the disease in children do not differ especially from the disease in adults. The discharge is usually profuse and the pain out of proportion to the clinical picture presented. This hypersensitiveness, however, is often coincident with contracted prepuce or meatus, which prevents free drainage of the urethra. The author makes a plea for circumcision. Every case of gonorrhoeal urethritis offers a most eloquent plea for the circumcision of all male infants, when the possibility of a future gonorrhoeal infection is thought of. Complications occur in young boys similar to those of adults after the disease has lasted several days. Posterior urethritis, prostatitis and epididymitis have occurred in this series, and one patient was unable to pass his urine. The disease lasted from 4 to 6 weeks, but the prognosis as to complete recovery seems better in children. Prophylaxis consists in the education of the people to the dangers of the disease, and care that those suffering from it do not sleep with them, or come in contact with the discharges in any way. Stringent laws should be passed for the protection of children. Cleanliness is a primary requisite in treatment, and if thoroughly carried out will prevent many of the complications. The prepuce and glands must be frequently bathed with mild antiseptic solutions. Injections of protargol are given for anterior urethritis. Irrigations of $\frac{1}{1000}$ of permanganate of potassium or of Thiersch's solution may be employed in posterior urethritis and should be given through a very fine catheter. Alkaline mixtures containing hyoscyamus oil of wintergreen in milk or water will be found valuable. Complications should receive appropriate treatment when they arise. Ten percent guaiacol ointment is recommended for epididymitis. Gonorrhoea bags must be used to collect the discharges and to prevent the possibility of conveying the discharges to the eyes.

Some Suggestions Regarding a Department of School Hygiene: LEIGH K. BAKER. Those nations which have exercised a powerful and elevating influence have been those which have exercised a care for the health of their citizens. In a democracy, self-preservation demands an educated citizenship. An elemental condition of useful citizenship is a fair degree of physical health. It is both the interest and the duty of the State to insist that the physical basis in the educational structure be adequately and properly laid. It is strikingly true of the children of the cities that the desired improvement in health has not been attained. The dark noisome alleys and tenements contain millions of the miserable offspring of ignorant foreigners, poorly born, poorly housed, and fed, with crooked spines and misshapen skulls, with pathologic eyes or ears, and little in their environments to produce self-supporting, self-respecting citizens. The question resolves itself, Shall we put sufficient money into the school system to produce self-supporting citizens; or shall we later, on account of half-supporting them and paying insufficient attention to the health of the children, spend larger sums for the construction of hospitals, dispensaries, police stations, reform schools, etc. Physicians, who of all classes of men are forced to carry this burden of indignity perhaps more than any other, should combine to place the right kind of men on school boards. The author outlines a systematic plan of organization with reference to the composition of the school board, the superintendent and teachers, and points out the dangers of allowing political influences to enter. The head of the department of school hygiene must be a medical man, who is at the same time a school sanitarian. Regular inspection of school children should be made, and plenty of assistance should be available to do it.

Diagnosis of the Backward Child: A. W. WILMARTH: The term backwardness is so vague that it is very difficult to formulate any definition that will exactly describe the backward child. There is really no sharp line of distinction between the normal and the so-called backward child. No standard of mental activity has been fixed or can be fixed. A child is not necessarily dull or backward because he cannot follow the curriculum formulated in the schools. However excellent this may be for the average child, there are many boys who have been classified as dull ones who have turned out to be most successful men afterward. What they may lack in memorizing, they perhaps make up in reasoning and acuteness of judgment. The estimate of mental strength must be formed from the power of attention, the strength of memory, the efficiency in the method of reasoning which comes to us all instinctively in our early days, and which is known as "common sense." On the other hand, abnormally slow perception, lack of power to fix the attention, distorted judgment feeble memory, or a decided lack of moral sense are mental symptoms which would tend to place the subject in the backward class. If the cultivation of these powers does not yield in a reasonable time to the different methods, they indicate not only a backward child, but a feeble mind. The lack of articulate speech is perhaps the most significant physical symptom indicative of lack of mental growth. Gait and posture are of

some value when taken in connection with other symptoms. In the backward child observations would tend to show that the sense of touch is less acute, and sensibility to pain is less acute, which would tend to indicate a lack of tone in the general nervous system. The family history may generally give some clue, as the individual is the sum total of his ancestral traits. The lack of moral sense is so radical a defect that a child will persistently do evil and not good, in spite of all efforts to lead him into right paths and right methods of action and thought that one is forced to regard it as a perversion of mental development. The first thing in the development of the child's brain is the awakening of the power of attention. Without this all attempts at education are futile. Next comes memory and inquisitiveness, and on this the child's probable capacity for acquiring information can be gauged. The will power later exhibits itself, then the reasoning power, and the value of ideas, and respect for the rights of others. A child may have a weak memory and make a poor showing in school, and yet have acute reasoning powers and the ability to make good use of what he does learn. Such a child should not be classed as backward. Education, however, will not completely remove in a few years weaknesses which may have been generations in developing.

A Plea for the Backward Child: C. F. WAHRER. The line between a normal and an abnormal child is a little hazy, and many a child a little backward in his studies, has been condemned as a dunce or even as a defective by the hasty observer, and the fallacy is due to contrast with the very bright or so-called forward child. If the child is unusually observant, has a good memory and power of expression it is called bright or even precocious and in comparison all other children seem more or less dull. The very bright child is taken as a standard of comparison instead of the medium child. There is often nothing the matter with the child who is considered slow. His powers are latent, and may be really developing in a direction different from the course expected. The mistake may be made of rating high the child with good memory but of ephemeral mental development, and giving a low estimate for the duller slow pupil whose powers are latent, and when made manifest show the strong and unwavering intellect of a perfectly balanced mind. Instances were cited of Shakespeare, Milton, Sir Walter Scott, Edison, Peter Cooper and many others who were proclaimed stupid and dull and hopeless dunces during their early school days. The ordinary "tests" and curriculums of the schools are not calculated to develop the mind, but only to show what can be accomplished with a good memory. Where are the bright boys and girls who were such splendid reciters and stood at the head of the classes, furnishing the valedictorians and salutariorians? Did they become President, Judge, Bishop or eminent man of science? No; they did not. It was the steady light of the persevering man working out his own evolutions and developing its own processes of reasoning. It is thus not how early but how well a given person develops and how effective are the results of his development.

Some Considerations Regarding the Hygiene of Early School Life: J. STORER. Children work too much, too soon and badly; that is to say, under unfavorable hygienic surroundings. We are reminded of the long list of studies, the rushing through of courses, the long duration of hours and the useless studies, the method of teaching unscientific, and its disregard of the laws of physiology and purely in favor of psychology, the evil of home tasks which rob the children of their short periods of recreation. The fact that mental and physical abnormalities exist in school children must be realized, and also that these abnormalities are always aggravated, if not, indeed, produced by pedantic and pseudo educational methods of teaching. It is eminently proper for the physician to interfere in matters relating to school hygiene. The protests of medical men may be summarized as follows: There is no evidence by which educational values may be determined except through the study of material manifestations transmitted through the nervous system. Education produces nothing new in the child. It simply unfolds and brings into intelligible activity the latent forces in the nervous system. One of the most important prerequisites for good education is good nutrition. Vigorous intellectual activity is possible only through the medium of brain-cells that are well nourished and physiologically active. All methods, therefore, which ignore the physical development are faulty and open to criticism. There is such a variability in individuals that it becomes absurd to attempt to lay out a uniform system of training and education applicable to all alike. The early discovery of the dull and the backward and the defective child and their segregation for special training is one of the problems of public importance in school life. The child is an exceedingly immature and delicate animal, undergoing important developmental changes. His delicate tissues and plastic nerve cells are easily warped and injured by long continued mental and physical efforts, and for this reason children are often injured by injudicious school work. Cases of this sort are of common occurrence. These abnormal consequences can and must be prevented, and the child's intellectual development must be allowed to proceed without detriment or hindrance.

Discussion.—Dr. Work thought that the cry that came up from all parts of the country proved that there was something radically wrong with the school system, and it was not confined to any one locality. The classification of scholars should be according to their intellect, and schools should be selected for

children which were fitted to their needs. He was particularly impressed with some of the facts brought out in Dr. Darnall's paper with regard to the close fitting and often unhygienic dress of the girl. The 2 important factors in all dress are equal pressure and equal warmth. Another most important factor is the food of the child, which often is badly and carelessly prepared. Regular habits should be taught the child with regard to baths, elimination, eating, etc. Every child should be taught what the organs of the body are, and for what purpose they are intended, and how they should be taken care of, and how they may be injured. If a child goes to school without a proper evacuation of the bowels or bladder, he cannot study properly. His intellect is dull and clouded. If a child does not have plenty of water to drink his mind will be more or less affected from the lack of it. The greatest trouble in most of the schools is not so much with the school or with the child. It is because we have not got trained mothers who understand these things themselves to teach the child at home. The duty of the profession is to educate the mothers of the community how to take care of the health of their school children.

Dr. A. W. WILMARTH referred to the importance of special training for the backward child and the work that might be done by schools set apart especially for this purpose. Such a school has been provided in Philadelphia and in a few other localities.

Dr. LEARNED thought that the highest ideals of development might be reached by plenty of outdoor exercise and good air and plenty of sleep. It is a mistake to start the child to school so early, and begin to burden its little mind, pushing it always to an extreme and keeping it on a tension. The child would learn faster and more thoroughly, and really make more progress in the long run if he were not started to school until he were 8 or 9 years of age, at least. The child's brain is fatigued and stunted by overwork when he is started so early.

Prevention of Tuberculosis in Babes Born of Tuberculous Parents: CLIFTON SCOTT. Two cases were reported, one in which a mother known to be tuberculous was confined. The child was immediately removed and placed with its aunt, fed on modified milk. When the infant was 5 months old the mother died. The child has continued to live, is now 3 years old and the picture of health and vigor, is well developed and has no symptoms of infection or hereditary taint. The second case of tuberculosis occurred in a woman of 20 just married. She claimed perfect health during pregnancy, but it was afterwards found she was suffering from tuberculosis in its incipient form. The child was not seen for 3 weeks after it was born. The mother, in the meantime, had been up and going about the city as usual, had taken part in literary entertainments, etc. When she was again seen her temperature was 103°, pulse 120, and she was ordered to bed. After microscopic and clinical examinations and consultation her case was diagnosed tuberculosis. The child in the meantime had been nursed. The mother's condition progressed rapidly to the end, and she died within 16 weeks after confinement. The child had nursed 5 weeks. It was, after this time, put on modified milk. It began, however, to exhibit loss of weight, pallor, and rales could be detected in the lung. It passed through a well marked history of acute tuberculosis, and died 1 week after the mother. As evidence that the second child suffered from hereditary tuberculosis, he cited that in the first the child was not allowed to nurse its mother; in the second it was. It is more reasonable to suppose that the second child did not inherit tuberculosis, but was infected with it from the mother through the milk or possibly from kisses, caresses, or other modes of contact. Infection of tuberculosis in fetal life through the membranes of the placenta cannot positively be denied, but its occurrence is certainly very infrequent, I think. The author thinks it is highly important that during the last 2 or 3 months of pregnancy the lungs of every pregnant woman should be examined, as well as other organs, and that by this means perhaps many cases of tuberculosis hitherto unsuspected will be found, and preventive measures may at least be taken to protect the child when it is born. The mother's milk must be prohibited and all contact with the mother. People should be educated to the importance of the case, and if so instructed, children born to tuberculous parents may, in a great many cases, be saved.

Discussion.—Dr. JOHNSTON thought that something could be learned from veterinarians who watch the milk coming from the tuberculous cows. Calves of such cows have been found not to be infected congenitally. They do not inherit tuberculosis, and if fed on other and pure milk they develop into strong and healthy cows, and there is no question that a mother can infect her offspring with the disease.

Dr. J. NOER stated that milk from tuberculous cows was not necessarily infective unless there was a local lesion on the udders.

Dr. I. A. ANT protested against the idea that there were such a limited number of cases of congenital tuberculosis. He thought the number of congenital cases must far exceed the origin of the disease in any other way. When such a number of children less than a year, and even less than a week old, have died of a widespread tuberculosis and who have been under the best possible conditions of hygiene, it seems reasonable to suppose that these cases have been of congenital origin. To prove the contention, however, the bacillus must be demonstrated in the placenta and the endometrium.

The officers elected for the ensuing year were: Chairman,

H. M. McClannahan (Omaha, Neb.) and Frank X. Walls (Chicago). The section chose as their 2 delegates Drs. A. C. Cotton and Samuel W. Kelley.

A committee consisting of Drs. Victor C. Vaughan, Charles Donglass and John C. Cook were appointed to investigate certain charges against Dr. Edwin Rosenthal, who it was claimed had used his official position for advertising certain products. The report of the Committee is as follows:

MR. CHAIRMAN AND MEMBERS OF THE SECTION:

Gentlemen.—Your Committee appointed for the purpose of deciding whether or not Dr. Edwin Rosenthal, Chairman of this Section in 1900, used his official position for the purpose of advertising the product of a certain drug firm, begs leave to submit the following brief statement of the facts presented in the case and the findings determined upon.

Dr. Rosenthal's address, as Chairman of this Section in 1900, contained a statement of the results obtained by the antitoxin treatment of diphtheria. In this statement he reported 325 cases treated with the antitoxin of one manufacturer, and less than 900 cases treated with the products of all other manufacturers, and the results seemed to show the superiority of the product of the firm that furnished the lowest number of cases. This firm has used Dr. Rosenthal's address widely for advertising purposes. Dr. Rosenthal assures us that this use of his paper was not only without his consent, but that the firm have continued this use of his address after receiving a protest from him. Your Committee offers the following findings which are respectfully submitted to the Section:

1. That the conclusions stated in Dr. Rosenthal's paper, being founded upon cases so unequal in numbers, are wholly without value in showing the relative merits of the products of the different manufacturers.

2. That Dr. Rosenthal, as Chairman of this Section, did use his official position to advertise a certain firm of manufacturers of antitoxin. Whether this improper use of his official position was intentional or unintentional, we cannot decide from the evidence before us.

3. That this Section will look with disfavor upon any firm of manufacturing chemists which uses for advertising purposes any paper, parts of papers, or statements written, or verbally made by any member of this section in its proceedings.

Respectfully submitted,

VICTOR VAUGHAN,
CHAS. DOUGLASS,
JOHN C. COOK.

Section on Materia Medica, Pharmacy and Therapeutics.

[Concluded from page 422.]

THIRD DAY.

Gastric Disorders: This subject was dealt with in a series of papers at the morning session. Dr. BOARDMAN REED (Philadelphia) read the first paper, which was entitled **The Influence of Certain Common Remedies upon Gastric Functions**. The conclusion at which he had arrived after a number of experiments and the careful watching of cases was that organs that were acting normally were likely to be injured by drug stimulation. He had found that hydrochloric acid and pepsin, when given separately, both tended to impair the digestion, whereas when given together they had the opposite effect. Perfectly normal stomachs were probably in a minority, especially among persons employed in trades. In the case of such persons the digestion might be injured by a simple bitter tonic, even when used only a short time. More care should be exercised in the indiscriminate taking of drugs, even those that were supposed to be harmless.

Dr. GUSTAV FÜTTERER (Chicago) followed with a contribution on the **Treatment of Gastric Ulcer**. He differed from those who looked on the prognosis of ulcer as very favorable. The immediate prognosis might be very good indeed, but not so the remote. Ulceration of the stomach was frequently followed by carcinoma. There was a time when he thought that carcinoma would not originate from small ulcers, but some cases he had seen convinced him that he was mistaken, and he did not differentiate any more, but made the same remote diagnosis. The treatment of such cases was promising and satisfactory in this respect, that it permitted them to pursue thoroughly rational methods. He was in the habit of giving the juice of beef properly prepared. Beyond that all he looked to was the rest cure and control of the hemoglobin percentage. It was not safe, however, to conclude that the disappearance of the symptoms meant that the danger of carcinoma had been avoided. It might be forming all the time. In cases where there was obstruction of the pylorus he was in favor of an early gastroenterostomy.

A paper on the **Treatment of Gastric Hyperesthesia** was read by Dr. CHARLES C. STOCKTON (Buffalo). He advised a bland diet, commencing with milk and going on to farinaceous foods, eggs, etc. It might be gradually increased as the patient improved. Electricity was of service, and hydrotherapy of great value, though it was necessary to guard against overdoing the use of cold water. The treatment should always be rational and suitable to the conditions. The contents of the stomach should be examined, frequently, and care should be taken not to allow the stomach to be kept too long on one diet. It was a mistake to regard hyperesthesia as a disease of the stomach; it was a derangement of the organism of which the stomach was the index.

Discussion.—Dr. J. B. HERRICK (Chicago) referred to the complications that might arise from gastric ulcers, notably hemorrhages, peritonitis, and the development of carcinoma, as well as the mechanical interruption that frequently resulted in certain cases. He was acquainted with the character of the work that Dr. Fütterer was doing in connection with this matter, and he thought it deserving of all praise. Dr. Fütterer had laid more emphasis than ever on the condition of the blood as a factor in the production of ulcer, and in this respect the experimental work fitted in with clinical results, both tending to show that cases in which the blood was deficient were most likely to acquire carcinoma. The best treatment that could be advised was one that would prevent the formation of ulcers. In other words, they must do away with the causes of their production. For a patient thus affected there was practically only one thing to recommend, namely, the giving of rest to the stomach. The experience of physicians would seem to show that the more nearly this rest could be absolute the better would be the results. He put his patients to bed, and fed them by the rectum for weeks if necessary. He stopped for the time all giving of food by the mouth, even water. In regard to diet, he relied more on milk than on beef juice, and when the patient was commencing to get better, he added a little iron. Only when the hemoglobin became normal did he allow the patient to sit up and take ordinary food. He agreed with Dr. Fütterer as to the wisdom of early operations in cases where there were obstructions of the kind referred to, his reason for so doing being that in these cases they had always to fear the formation of carcinoma.

Dr. W. W. TOMPKINS (Charlestown, W. Va.) said that in these gastric disorders it was very difficult at times to distinguish between ulcer, catarrh and carcinoma. For this among other reasons he objected to turning over these cases to the surgeon, who in his opinion did too much cutting at present.

Dr. FÜTTERER, discussing Dr. Reed's paper, expressed the opinion that the facts he had ascertained would be of great use in carrying these experiments further.

Dr. OSBORNE observed in regard to the subject discussed by Dr. Stockton that they could not be too careful in guarding against the common mistake of treating cases of hyperesthesia as dyspepsia. By prescribing too rigid a diet they were in danger of causing denutrition.

Dr. JOHNSTON (Clinton, Iowa) said he found that in cases where disorders of the stomach were accompanied by pain mild anodynes were of considerable use.

Dr. MARY MCCOY (Duluth) called attention to the proper preparation of patients' food. This was one of the prime factors in the treatment of disorders of the stomach, as well as of many other complaints. The best way to treat a patient with gastric ulcer was never to let them have it. A study of the compatibility of foods was also necessary.

Dr. MARY WHEATSTONE (Minneapolis) said she was glad to see that some of the best medical colleges were beginning to require students to take courses in the preparation of foods for the sick.

Dr. THOMAS McCRAE (Baltimore) agreed with what had been said as to the necessity of looking after the general nutrition of patients suffering from hyperesthesia.

After some remarks from Dr. DORA G. WILSON (Kansas City) the authors of the papers replied. Dr. REED remarked that the term "dyspepsia" had been much abused, and it might be well to abolish it altogether. Dr. Fütterer stated that he had tried many of the beef juice extracts on the market, but he preferred one made directly from the meat. Dr. Stockton, in emphasizing the advisableness of operations in certain cases, said they were comparatively safe and did not involve much suffering. Fermentation in the stomach, he added, though thought to be very common, in reality was extremely rare. What was supposed to be fermentation was disturbed mobility.

Organotherapy: The last session of the congress was devoted to a symposium on this subject. Dr. CHARLES T. MCCLINTOCK (Detroit) was to have opened it with a paper on the **Mode of Manufacture of Serums and Organ Extracts**, but he was not present. The author of the second contribution on the program, Dr. S. SOLIS-COHEN (Philadelphia) was likewise absent, but an abstract was read of his paper, which dealt with the Theory and Practice of Organotherapy.

Dr. SYDNEY KUH (Chicago) then read a paper on **Akromegaly Treated with Pituitary Body**. The subjective symptoms were relieved in 2 out of 3 cases in which the author gave the extract in powdered form, and they got worse when the medicine was stopped. A considerable number of similar cases were recorded in the literature on the subject.

Dr. JOHN M. DODSON (Chicago) discussed the **Treatment of Graves' Disease with Thymus Extract**. In 1 case a man who had suffered from bronchitis and pneumonia was found to have symptoms of Graves' disease, and after fruitless experimenting with a number of drugs, he was placed on thyroid tablets, more for diagnostic purposes than anything else. The result was to aggravate his symptoms. He was then put on thymus extract, and his condition immediately began to improve, and had gone on improving since. The patient had tried the effect of suspending the use of the drug, but he said that he could not live without it. The literature on the subject showed that the extract had not been much used, and those

who had used it had obtained very different results, but he thought it was deserving of further trial.

The papers were discussed by Dr. OSBORNE (New Haven), Dr. BOARDMAN REED and Dr. FRANK WOODBURY (Philadelphia), Dr. SHELLEY (Atchinson, Kan.), and the chairman, the comments being generally of a commendatory character.

The Pharmacology of the Suprarenal Gland and a Method of Assaying Its Products were described in a paper by Dr. E. M. HOUGHTON (Detroit). After giving credit to Addison and Brown-Sequard for their work in connection with the functions and utility of the glands, the author proceeded to speak of the partially successful efforts of Abel, Fürth, and others, to discover the active principle of the suprarenal gland, but said it had been left to Takamine to complete the solution of the problem. He exhibited diagrams for the purpose of showing the pharmacologic action of the various preparations obtained from the gland, with special reference to their influence on blood-pressure. He mentioned that adrenalin, as the active principle had been named by its discoverer was 600, 800, or perhaps 1,000 times as strong as the aqueous solution of the suprarenal gland. Experiments were still in progress he added, which it was hoped would result in throwing light on many points that were still unsettled as to the properties of the blood, the matter of dosage, and other things.

Dr. JOKICHI TAKAMINE (New York), the discoverer of the active principles of the suprarenal gland, was then introduced, and read a paper describing the experiments he had made which had resulted thus happily. He began by discussing the therapeutic uses of the suprarenal capsule and the early modes by which it was administered. Thereafter he reviewed the efforts of different investigators to isolate the active principle, making special mention of Abel's substance, to which the name of epinephrin had been given, and Fürth's which was known as suprarenin. Though both these investigators had made advances, neither, he maintained, had obtained the real active principle in a sufficiently clear form. He gave full credit to these and other predecessors for what they had done, but adduced evidence to show that none of the products they had obtained could be regarded as the genuine active principle. In adrenalin for the first time had the active principle of the suprarenal gland been isolated in a free, basic, crystalline form. The speaker then proceeded to describe the physical and chemical properties of adrenalin, the mode of its preparation, its physiologic activity, and the therapeutic uses to which it was being put, with highly satisfactory results.

Dr. VICTOR C. VAUGHAN (Ann Arbor) expressed his great gratification at the most excellent and scientific work which was exhibited in both papers. They showed that pharmacology was certainly becoming a science. Dr. Takamine was to be congratulated on the fact that he had carried to a successful termination the efforts to solve a problem which had for so long a time engaged the attention of some of the most eminent men in this country and Europe. As to the utility of the extracts of certain glands, there could be no question. The thyroid gland had been of great service, almost marvelous results having been attained by its use in the treatment of cretinism and other diseases. The same was true of extracts of the suprarenal gland, and altogether he did not think it was safe for them to predict what might or might not lie in the future of organotherapy. Certainly if any one had predicted 15 years ago any of the wonderful results that had been obtained already, he would have been put down as crazy. These achievements had, of course, led to a good deal of very thorough study of those glands which furnished internal secretions, but there was still much room for experiment, both on the chemical side of the matter and in regard to the physiologic effects and the therapeutic uses of the products. He had used both the thyroid extract and adrenalin in many cases, and in not a few instances he had obtained extraordinary results. In long standing hemorrhages he had used adrenalin with particularly good results. Of course the quack was always ready to take advantage of any success made in medicine, and probably there was no other field in which the quack of the United States had reaped so rich a harvest as in the use of goat lymph, scalled, and other preparations of a similar kind. But this was all the more reason why organotherapy should be thoroughly investigated and placed on a scientific basis.

Dr. HEINRICH STERN inquired as to the dosage and how long the drug could be used. Dr. TAKAMINE had said it did not accumulate. Perhaps Dr. Vaughan could tell them how long he had given it to a patient.

Dr. BOARDMAN REED observed that Dr. Takamine had said that adrenalin was nonpoisonous. It was of importance to have this fact established. He was himself suspicious in regard to all these extracts which had such powerful properties. He did not see how they could avoid having toxic effects if given in large quantities.

Dr. OSBORNE said that while they got good results with the suprarenal extract in the nostrils and some other organs, it did not do well in the stomach. He would like to know how adrenalin acted in this respect.

Dr. VAUGHAN, being appealed to to answer the questions, said he was unable to do so positively and fully, but he had prescribed adrenalin tablets for one patient, 1 grain 3 times a day. The man was suffering from hemorrhage of the bowels, and he continued taking them for 3 months without any apparent untoward effects. Thereafter the man moved

away, and only the other day happening to think of the matter he wrote to him suggesting that he had better not take any more tablets. He agreed with those who thought that such a powerful drug could not be taken with impunity for a long time unless it was eliminated somehow, and it was a question whether it was eliminated or not.

Dr. DONSON remarked that some of the most powerful drugs had no effect in the way of producing tissue changes. As examples he mentioned nitroglycerin and arsenic.

Dr. HOUGHTON and Dr. TAKAMINE, in replying on the discussion, gave such information as they possessed as to the points raised, but said that there were many questions which they could not answer until the experiments now in progress were further advanced.

Other papers on serumtherapy and organotherapy, which stood on the program in the names of Dr. JOSEPH McFARLAND and Dr. J. C. WILSON (Philadelphia) and Dr. E. A. DESCHWEINITZ (Washington), were not read on account of the absence of the authors.

A paper by Dr. B. T. WHITMORE (New York), entitled *America's Contribution to Medical Science* was at the author's request, read by title.

New Office Bearers: Chairman, Dr. George F. Butler (Alma, Mich.); secretary, Dr. C. S. N. Hallberg.

Section on Cutaneous Medicine and Surgery.

[Concluded from page 495.]

THIRD DAY.

Rhinoscleroma.—By invitation C. W. ALLEN gave notes on 2 cases of this very rare disease. Both cases have been previously reported, and show the long and chronic nature of the disease. One case is in a widow, aged 64, a native of Hungary, and has been under observation for 11 years. The lesion first appeared 16 years ago as a small nodule between vermilion border of upper lip and nose. Diagnosis was made from clinical appearance as bacteriologic findings were negative and patient refused until recently to allow excision. Retrogressive changes are well marked in this case. Second case is also in a foreigner, 49 years of age. Growth started 19 years ago, and the course was slow until 6 years ago, when it was aggravated by injury. She has been under treatment 6 weeks; the uvula is absent, and the nasopharynx shut off with glistening bands of cicatricial tissue. Bacteriologic examination reveals numerous bacilli resembling Friedländer's pneumonia bacillus.

Dermatocycoses in their Relation to Allen's Iodid Test: JACOB SOBEL (New York City); **Squamous Erythroderma:** AUGUSTUS RAVOGLI (Cincinnati, Ohio), and **Phototherapy in Cutaneous Medicine:** WILLIAM S. GOTTHEIL (New York City), were read by title.

Lichen Hypertrophicans: D. LIEBERTHAL. The pathologic part of this paper was given on the second day. Clinical characteristics were described and differential diagnosis carefully elaborated. Notes on 2 cases were given, from which the following conclusions were drawn: (1) The absence of typical elementary lesions does not justify the exclusion of hypertrophic lesions from the class lichen planus; (2) elementary lesions will be found at one time or another during course of affection; (3) this (verruccous) manifestation of the process is due to circulatory derangements; (4) for cases in which elementary lesions are also present and especially extensive in distribution the prospect of treatment seems better than for those which present the verrucous growths only; (5) in some cases only repeated surgical interference will remove the affection and arsenic is more likely to prove serviceable at periods when elementary typical lesions are also present.

Notes on Recent Cases of Extragenital Chancres: L. D. BULKLEY gave notes on series of 21 cases of extragenital chancre as follows: lip, 9; finger, 5; anus, 2; hand, 1; hard palate, 1; tonsil, 1; nose, 1, and eyelid, 1. Sixteen of these cases were in males, and only 5 in females. That there are other sources of infection from syphilis aside from venery is a fact not well enough recognized by physicians and laity. In these cases diagnosis is often delayed or wrongly made and specific treatment not instituted.

Clinical Features of Blastomycetic Dermatitis as Observed in 3 Cases: A. W. BRAYTON. Read by title.

Miscellaneous Business: The chair, on motion, appointed Corlett, Anthony and Montgomery, of San Francisco, to act as nominating committee to nominate 2 members to the House of Delegates. Committee nominated W. L. Baum and C. W. Allen as delegates. Secretary instructed to cast favorable ballot.

Section on Nervous and Mental Diseases.

[Concluded from page 496.]

THIRD DAY.

The paper of Dr. FRANK R. FRYE (St. Louis, Mo.) was read by title.

Dr. J. G. BILLER (Cherokee, Iowa) then read a paper entitled **Treatment of Neurasthenia**. There is no ready made, hand-me-down treatment for neurasthenia; the principal causes of the disorder are toxemia, overwork, emotionalism, etc. The first consideration in its treatment is, to my mind, a very careful examination of the patient to discover all possible organic disorders of the body, and be sure that nothing in this line is overlooked. Next, learn accurately the habits of life of the patient; the complete confidence of the patient in his doctor is absolutely necessary to success. I do not take cases when there is any doubt in my mind as to my patient's confidence in me. Positive reassurance that the condition is a curable one, and this repeatedly is of great importance, because the physician must be his support. Feeding with good, substantial, nutritious food is of great importance, and the starvation by rule or exclusively liquid diets should not be used for any considerable length of time. The concentrated foods and condensed liquid preparations, which are supposed to contain large quantities of nutrition in teaspoonful doses, are not to be depended upon. Delicate stomachs in these conditions are not so frequent as is generally supposed. Fresh air, rest and sleep, are all important.

Discussion.—Dr. PATRICK (Chicago) very highly commended the writer's methods.

Dr. McBRIDE emphasized the importance of studying the mentality of the patient; also of prescribing exercise definitely as to when, where, and how much. It should not be on the sidewalk or pavements, or floors, but upon the ground. Hills should be carefully avoided.

Dr. PUNTON (Missouri) raised the point that many cases of this class occur among the poor people who have not the means to carry out the course of treatment suggested by this discussion, and suggests that the State should provide for the means of care of this class of people.

Dr. ROGGS (St. Paul) commended the common sense methods of the essayist; he believes that faith in the doctor is of great importance, but that it may be inspired by results even when it did not exist at first. Travel is like a two-edged sword and should be prescribed with care in this class of cases.

Dr. MOYER (Chicago) spoke of the different results of treatment in different parts of the country and suggested that climatology be made a part of this study; give these patients always a large dose of the doctor.

Dr. PEARCE (Philadelphia) urged the use of horseback exercise; it is not too severe, and the patient cannot think continuously of himself while putting it in practice.

Dr. TOMLINSON (Minnesota) quoted in this connection the sentiment of Sidney Smith: "that the Lord made food, while the devil made the cook," hence good food is frequently spoiled in preparation. He also emphasized the importance of elimination of all impurities from the system so far as possible.

Dr. BILLER in closing emphasized the importance of trifling things in the care of these cases; he also urged the use of good beefsteak and plenty of it, instead of "straw biscuits," or other fanciful articles of food.

Dr. MOYER (Chicago) read a paper entitled **The Psychoses of Chorea**. He pointed out the necessity of distinguishing between cases due to infection and those which are dependent upon gross structural changes in the nervous system. He gave a detailed report of a case occurring in a girl 15 years of age, without neurotic heredity. He is inclined to the view of Regis, rather than that of Spitzka, as to the nature of this class of cases. The older the child the more liability there is of mental disturbance. Those cases which occur late in life have very unfavorable prognosis; the literature upon this subject is very meager and very unsatisfactory. This paper was discussed by Drs. RIGGS, CARPENTER, MAYER, PUNTON, and MOYER in closing.

Dr. AUGUSTUS A. ESINER (Philadelphia) then presented a paper entitled **Three Cases of Paralysis of the Serratus Magnus and the Trapezius Alar Scapula**. He gave a detailed and comprehensive review of the anatomy of the shoulder in this connection, and pointed out the importance of the scapula as a point of attachment for the muscles that move the shoulder and the upper extremity; also the complexity and association in the movements of these muscles. Their innervation is principally from the brachial plexus. He reviewed in detail the causes and symptoms of paralysis of the serratus magnus and the trapezius muscles, and reported in detail 3 cases of this class, showing pictures illustrative of the condition.

Dr. PEARCE pointed out the necessity for physicians to be cautious in the use of the Trendelenberg position, because of its proneness to produce pressure neuritis from the hanging position of the arms.

A paper entitled **Mirror Writing and Inverted Vision** Dr. ALBERT E. HALE and Dr. SYDNEY KUII (Chicago) was presented by the latter gentleman; they gave a detailed review of the theories advanced by various writers upon the production of this phenomenon, and showed specimens produced by 2 children within their experience.

Dr. SWEENEY (St. Paul) discussed the paper at considerable length, and referred to a case published by him in the *St. Paul Medical Journal* within the past year.

Drs. DEWEY and GASSER also took part in the discussion. Dr. JOHN PUNTON (Kansas City, Mo.), then presented a paper entitled **Fear as an Element of Nervous Diseases and Its Treatment**. He stated that fear as a cause of disease has

been greatly underestimated. Morbid fear is a very important element. The imperative idea is very different from the fixed ideas of the insane. The power of resistance varies greatly in individuals, and in some these ideas may lead to impulsive acts. The treatment consists in isolation, upbuilding, and the teaching of self-confidence and self-reliance.

Dr. W. A. JONES (Minneapolis) read a paper entitled **Ten Cases of Multiple Neuritis**. He gave a detailed account of 10 cases occurring within his own experience within a few months. The 2 last cases of the series were of the apoplectic type, 1 proving fatal within a few hours, and the other at the end of 3 days. No postmortem examination was permitted, but he believed these 2 to be of the fulminating type of multiple neuritis. Many of the cases suggest, in the manner of onset, the Landry type. In view of the occurrence of so many cases at a time when influenza, pneumonia and other infectious conditions were very prevalent, he draws the conclusion that they were the direct result of these infections.

Dr. PATRICK spoke of the close relationship between multiple neuritis, nuclear disease, Landry's type and other diseases difficult of definition. The neurone has added practically nothing to our knowledge of mental diseases, yet it may be well in our discussion of these diseases to talk the neurone theory, because it aids us in our conception of them. Multiple neuritis is really a misnomer, because it is due to an infection. The theory advanced by Dr. JONES that his cases were due to the infection from influenza, etc., is tenable.

Dr. MOYER emphasized the difficulty of distinguishing between the peripheral lesion and the nuclear lesion.

Dr. EDWARD MAYER (Pittsburg, Pa.) read a paper entitled **A Case of Localized Amnesia, with Remarks Thereon**. He describes the case of a man who was in a railroad wreck 17 years ago, and in February of the present year he became unconscious, and when he awoke, after 24 hours, found that the period dating from the accident (12 years) had been obliterated. Memory of events and things within this period was entirely gone; he did not remember his age; he did not recognize his wife and child, but declared that he was 24 years of age (the age at which the accident occurred) and that he was unmarried. Upon inquiry, it was found that he had been subject to periods of depression during those 12 years, and that on 2 or 3 occasions he had suddenly disappeared for a short time, once going to his mother's home, whence he wrote to his wife, she having had no previous knowledge that his mother was living. It was only by constant reiteration of the truth, the presentation of pictures of himself taken at various periods, and the manner of his family toward him, that his reason was appealed to and he became convinced of the truth of their statements, although the period of 12 years remained a blank in his mind. Some weeks later he suddenly disappeared, and has not since been heard from.

This paper was discussed and similar cases related by Drs. CROTHERS, MCBRIDE, RIGGS, MOYER, JONES and PEARCE.

Dr. MAYER in closing thought that some of the cases related were of the type of precursive epilepsy or somnambulism.

Dr. T. B. CROTHERS (Hartford, Conn.) then read a paper entitled **Dementia Following Inebriety**. Traumatism and wounds are often followed by alcoholism. Extreme grief or joy may also be the cause of the individual resorting to the use of drugs or alcoholics. Physical drain upon the system, as hemorrhage, acute fevers and sunstrokes often act in the same manner. Spirit drinking is not only an active cause, but is really an early stage of dementia. Even the use of strong tea and coffee in early life may act as a predisposing cause of a subsequent use of stronger stimulant and the resulting development of dementia. Dementia more frequently occurs among steady drinkers than those who drink periodically. The early treatment of these cases is often successful, but later not much can be hoped for; they should be taken from the hands of quacks and receive regular treatment by both the family physician and the specialist.

Dr. DREW (Massachusetts) heartily supported the teaching of the writer, and believes that no man can be a steady user of alcoholics without becoming changed; his inhibitory powers are lessened and he may be properly called a dement. In 77 cases of insane criminals admitted to the hospitals of Massachusetts in 1 year, 65 had intemperate fathers and in 13 cases both father and mother were intemperate.

Dr. CROTHERS in closing said that in the years to come this subject will be discussed with keener interest for the reason that every year we are coming closer and closer to face the great fact of these conditions.

The paper of Dr. JAMES G. KIERNAN (Chicago) on the **Problem of Heredity** was read by title.

Dr. ARTHUR C. McDUGAN (Kalamazoo, Mich.) then read his paper entitled **The Importance of Heredity as a Cause of Insanity**: He said insanity is not a disease, but a defect. Nearly every person that is admitted to an asylum for the insane presents the stigmas of degeneration. This may also be seen in most cases among the relatives of the patient who bring him to the hospital. In a large majority of cases the relative will stoutly deny the existence of the hereditary tendency in their family. Heredity is the cause of insanity in 90% if not 95% of all cases. Treatment, therefore, in order to be effectual must be begun before the birth of the individual. Vigorous promulgation of the truth should therefore be provided for in all communities. Careful observation upon several hundred cases

admitted to the hospital for the insane at Kalamazoo, Mich., during the past 6 years has established this belief. These premises being admitted legislative control of the production of offspring among this class of people should be everywhere advocated and urged.

Discussion.—Dr. MAYER (Pittsburg) entered a vigorous protest against the high percentage of cases in which the writer claims heredity as a cause. He believes it to be extreme pessimism and that the view leads us backward rather than forward in this matter.

Dr. DEWEY (Wisconsin) spoke warmly in favor of the educational methods recommended by the writer to overcome hereditary tendency.

Dr. CROTHERS favored the essayist's estimate of the hereditary tendency. From 60% to 70% of all cases of insanity are traceable to the faults of the parents.

Dr. DREW (Massachusetts) recommends the hospital methods applied to all parts of the body of the patients in our State institutions, and beyond that the education of the masses against the reproduction of this class of individuals.

Dr. PEARCE (Philadelphia) advocated that the physiologic chemist should take the place of the present pathologist in our State institutions.

Dr. TOMLINSON (Minnesota) believes that the discrepancy between the institution man and the neurologist has been the tendency to mistake morphology for pathology. The conception of heredity has been befogged by the view of what it is. If we take the view that instead of a transmission of confirmation it is simply a limited potentiality of the individual, it gives us a clearer conception.

In closing Dr. McDUGAN suggested that he would place the percentage higher than stated in his paper rather than lower; also that this view need not cause us to go backward, but rather to face the fact as it is and meeting the truth go forward to better things.

Dr. LEO M. CRAFTS (Minneapolis) then read a paper entitled **Persistent Brachial Neuralgia from Hypodermic Injections: Incipient Lateral Sclerosis with Recovery: Severe Burn and Paralysis of the Arm from an Electric Current of High Voltage**.

A case of **Amyotrophic Lateral Sclerosis** in a young man accompanied by wasting in the muscles of the left hand especially the thenar eminence and the interossei muscles, weakened grasp and tremor. There were no fibrillary twitchings and no reaction of degeneration. Treated for 6 months with galvanic current applied 3 times a week, 30 to 50 minutes to a sitting; recovery has taken place which seems complete and permanent, 1 year having elapsed since the treatment was discontinued. A case of brachial neuralgia as the result of the use of the hypodermic syringe at the wrist was very persistent and painful. This also yielded to the galvanic current applied with large electrodes and for long sitting; he infers that in order to get appreciable results from the use of electricity these 2 points are essential; viz.: the large electrode, and a long continued application from 30 to 60 minutes. A young man in operating a street car took hold of a part which was charged with the motor current and for a space of 1 minute was subject to a current of 500 volts passing through his body by way of the left hand. The result was severe burning of the flesh and a complete paralysis of all parts supplied by the brachial plexus. At the present writing, 1½ years after the injury, the arm remains useless. The writers not being present, the papers of JOHN E. PURDON (Turlock, Cal.), GEO. F. BUTLER (Aina, Mich.), HERMAN GASSER (Platteville, Wis.), SAMUEL AYERS (Pittsburg, Pa.), HALDOR SNEVE (St. Paul, Minn.), and DOUGLAS GRAHAM (Boston, Mass.), were read by title.

Section on Ophthalmology.

[Concluded from page 498]

THIRD DAY.

The Nominating Committee presented the names of Drs. Lippincott, Risley, Jackson, Würdemann, De Schweinitz, and Wood, 2 of whom were to be chosen by ballot as delegates to the general convention for 1 year. Drs. Lippincott and Würdemann were unanimously chosen.

Economic Limitations of the Visual Acuity in the Various Trades and Professions: Dr. IL. V. WÜRDEMANN (Milwaukee) said that to properly study this question, a division into 2 great classes should be made; namely, skilled labor and unskilled labor. It is evident that a man who does the work of a farmer or laborer can get along with a much reduced acuity of vision, 50% or even less being sufficient to allow him to properly perform his duties. But a professional man, a skilled mechanic, or a clerk, needs considerably more visual acuity, 75% enabling him to satisfactorily and comfortably do his work. This grade of visual acuity need not obtain in each eye individually, but be the acuity of both combined. An employe of the marine service or railway train service is required by most roads to have at least 20/30 vision with both eyes.

Further Report on the Visual and Aural Qualifications of Transportation Employes: Dr. FRANK ALLPORT'S

(Chicago) paper was supplementary to the one read before the section one year ago. He had received replies from many railroads which had heretofore failed to report. The original report with the appendix was passed around for inspection.

The report of the committee appointed 3 years ago, to look up the question of the visual and aural qualifications of transportation employes, of which Dr. Allport was chairman, was received and resolution which they had drawn up adopted. The incoming chairman was authorized to present the resolutions to the general meeting.

Discussion.—Dr. TAYLOR (Wilkesbarre, Pa.) thought it a great injustice to disqualify a man from train service who had 20/20 vision in one eye and poor vision in the other. Dr. C. F. CLARK reduces his own vision to that of the man examined, tests himself and then uses his own judgment in passing him. Dr. YOUNG (Burlington, Ill.) had gone out on an engine in all kinds of climatic conditions with the purpose of familiarizing himself with conditions as they are actually met with. He urged that 20/20 in one eye and 20/40 or 20/50 in the other should be sufficient and was safe. He could see no great harm in wearing correcting lenses of low degree. Dr. WILLIAMS (Boston) spoke of some roads allowing plane lenses worn in spectacles as a protection in storms and in sandy countries. Without exception the doctors discussing the subject believe in a high standard for new men but differed somewhat as to concessions to old employes.

Mule's Operation. With Cases: Dr. FRANK TODD (Minneapolis, Minn.) gave a history of the origin of the operation. The operation is indicated in injury to eye with loss of sight, anterior staphyloma, glaucoma, loss of cornea through suppurative conditions and panophthalmitis. The contraindications are malignant growths, sympathetic disease, extreme laceration of sclera, so glass ball cannot be easily retained and extreme ptosis bulbi. The glass ball is preferred to the gold, silver or aluminum, as it is less irritating. The prosthesis is inserted in about 2 weeks. Most failures recorded are due to the use of too large a ball, not thoroughly cleansing the cavity before inserting the ball, and failure to put in a sufficient number of sutures in the sclera. Several cases were shown to the members.

Discussion.—Dr. FRANK ALLPORT thought that the failures were due to anxiety to fit the glass ball too closely in socket. He makes it a rule to use a small ball and has plenty of slack sclera. A most important factor is the stitches, of which he puts in as many as possible. He uses a nonabsorbable suture. Before closing sac he swabs it with 95% solution of carbolic acid, neutralizes with alcohol and dries it with iodoform gauze. Dr. BLACK believes that the modified Snellen eye which has been so satisfactory will displace Mule's operation.

Report of 2 Cases of Orbital Surgery: Dr. ADELIN PORTMAN (Washington). The first was a case in which an enucleation had been done some months before, the stump allowing almost no movement of the shell (prosthesis). The conjunctiva was raised, the cut ends of the muscles found, and the ball was placed in the socket. The vertical muscles were now brought together, followed by returning the horizontal muscles, the conjunctiva last of all. Convalescence was uneventful. Ultimate result, movement equaled $\frac{1}{2}$. Case 2 was the result of a burn which caused the entire cornea to slough away and contents of the globe to escape. To complicate matters there was an old cicatricial trachoma. The lids would not close, and a most unsightly hole resulted. Grafts from the lip were removed and placed upon the denuded orbital surface, under proper antiseptic precautions, then the shell was introduced to retain grafts in the proper place. There was an uneventful recovery. The lids closed nicely, and the cosmetic result was good.

Enucleation in 2 Minutes with Demonstration: Dr. A. F. MITCHELL (Vicksburg Miss.). This operation is performed by first passing a strong suture through sclera, then incising the conjunctiva at the insertion of external rectus, the lower blade of a curved scissors was now passed under the tendon and rapid and single cut made through tendon, subconjunctival tissue, and conjunctiva. This procedure is repeated on the superior rectus, then inferior rectus, now grasp the suture and make tension on eyeball and cut nerve, then internal rectus and overlying tissue. No demonstration was made, as the patient did not materialize.

The Newer Pathology of the Retina, with Special Reference to the Changes Produced in the Ganglion Cells by Certain Toxic Agents: Dr. H. FRIEDENWALD (Baltimore, Md.). New stains reveal different intimate nerve elements which act differently to different stains. In regard to quinin, the pathologic changes in the retina and nerve were minutely detailed, the conclusion being that quinin intoxication causes blindness by acting on the retina and not on the nerve. Amaurosis produced by methyl alcohol depends upon the lesion of the retina and secondary changes in the nerve. The same is true of ethyl alcohol and Jamaica ginger. There is a general ganglion cell degeneration.

A Case of Blindness due to Drinking Bay Rum Compared with Reported Cases due to Methyl Alcohol and Jamaica Ginger: Dr. H. MOULTON (Fort Smith, Ark.). This paper first compared the similarity of the symptoms and the ophthalmoscopic appearances produced by methyl alcohol and Jamaica ginger. Unless coma was produced the first day no symptoms occurred the first day, but on the second or third

day, dizziness, retching and gastrointestinal symptoms appeared, with loss of vision in from 12 to 24 hours. Ophthalmoscopic examination shows edema of retina and nerves. The case described was that of a man who drank bay rum and next day had an uneasy sensation about the eyes, vomited and felt very sick generally for 2 days. Vision was much poorer at dusk, and finally total blindness ensued. A slight lateral nystagmus also developed. Atrophy became complete.

Discussion.—Dr. RAY (Louisville, Ky.) said clinically the effect of wood alcohol is first upon the nerve. In a case under his observation blindness occurred the second day. There was edema of optic nerve and retina. Blindness was complete for 3 or 4 weeks, when vision cleared up from the periphery and attained vision of 20/30. Later blindness became total and optic atrophy complete. All pathologic changes were in the nerve and not in the retina. Dr. Woods (Baltimore) described cases of blindness from Jamaica ginger, which on inquiry was found to contain 95% of methyl alcohol. Dr. Wood (Chicago) thought these cases were idiosyncrasies. Frequently several parties had partaken of the liquor and only 1 was affected.

Complete Recovery from Double Neuroretinitis, Clinically Resembling Albuminuric Retinitis, in a Case of Prolonged Hematuria with Symptoms of Bright's Disease: Dr. C. A. VEASEY (Philadelphia, Pa.) The patient 8 months previous to examination began to pass bloody urine, lost flesh, had vertigo, tinnitus aurium, pain in back and constant headache. Two weeks previous to the examination of the eyes, her vision began to blur. Ophthalmoscopic examination reveals a clear medium, full vessels, arteries and disc covered with an exude, hemorrhage in retina and, what appeared to be a stellate albuminuric deposit. Medical treatment was instituted and recovery was very slow. In 9 months there was not a vestige of disease to be found in the fundus and vision was 6.6 in each eye. The probable cause was an acute inflammation of the kidneys.

The Value of Excision of the Superior Cervical Ganglion of the Sympathetic in Certain Eye Diseases: Dr. GEO. SUKER (Toledo, O.) The operation was done for the various kinds of glaucoma and Basedow's disease. In every case that had been operated upon there had been some benefit. The immediate effect is reduction of tension, removes pain and sometimes improves vision. The operation was described and according to writer, is not difficult. Several cases were enumerated with the results which was uniformly good.

Discussion.—Dr. BLACK (Denver, Col.,) thought it a good operation and has its field of usefulness, in fact, should he have glaucoma he would prefer to have this operation before trying an iridectomy.

FOURTH DAY.

Herpes Zoster Ophthalmicus with Brief Report of 5 Cases: Dr. W. C. BANE (Denver, Col.) said that herpes zoster ophthalmicus being a neurotic affection is limited to the course of the nerves, the seat of the disease lying in the Gasserian ganglion. The symptoms are an intense pain and sensation of burning over the course of the nerve, followed by an eruption over the course of the nerve (forehead, eyelids and nose) which leaves a scar upon healing. The cornea may have varying numbers of small ulcers. The disease is frequently confounded with erysipelas but if this is borne in mind a correct diagnosis can usually be made. The most distinctive features of difference being that erysipelas usually involves both sides of the face and the rash is diffuse while in herpes zoster ophthalmicus it is limited to one side of the face and the eruption is over the course of the nerves. Three of the 5 cases reported in this paper were originally diagnosed as erysipelas, and 1 case was treated through its entire course for that affection. Visual acuity is usually diminished.

Discussion.—Dr. JACKSON reported a case in which the pain existed for 2 weeks before the eruption appeared. He had found no remedies which would cut short the disease. Dr. STANKEY thought that a uric acid diathesis caused an irritation of the Gasserian ganglion and nerves. Dr. RISLEY reported that in his 4 cases the rheumatic and gouty diathesis had been marked.

The Corneal Lesions of Acquired Syphilis: Dr. WM. WILDER (Chicago, Ill.). The manifestation of acquired syphilis in the cornea as compared with congenital syphilis is infrequent. The lesion is a somewhat dense, deep-seated infiltration with little or no vascularity, and no tendency to ulcerate. Several cases were reported in which the history was perfectly traced. The usual constitutional treatment was instituted, and atropia, hot applications and protective glasses as local treatment. Occasionally treatment showed no visible improvement for 2 or 3 weeks, then a rapid clearing up of the opacity from the periphery would take place. It was pointed out that the lesion affected always one eye only while in inherited syphilis it involves both eyes.

Discussion.—Dr. RISLEY called attention to the greater frequency of this affection in negroes and the difficulty in excluding inherited specific disease in this race.

Lacrimal Stenosis in Infants and its Treatment: Dr. DUNBAR ROY (Atlanta, Ga.) said that in looking over the literature, he found that no specific mention was made as to the treatment of infants, so conclusion was natural that the same treatment was necessary which applied to adults, a conclusion to which the writer could not reconcile himself. Stenosis is

usually due to injury, congenital malformation of some portion of the lacrimal passages, spasmodic contraction, or catarrhal inflammation. The treatment should almost without exception be nonoperative. One case of epiphora was reported, which immediately disappeared after circumcision.

Metamorphosis Various, with a Report of 3 Cases: WILLIAM H. DUDLEY (Easton, Pa.) said that in the examination of these cases absolutely no pathologic conditions existed. The visual acuity was normal; media clear; retina, macula and nerve normal in every respect. The ophthalmometer showed corneal curvature regular, skiascopy negative. A chart was exhibited which showed the variations of shape of several given objects or drawings. The change took place sometimes as rapidly as 3 in a second, but with dim or colored light the change was only once a second, the rapidity of change being due to light stimulus. These cases were under observation for from 3 to 5 years, with no change. The cause of this condition is usually a macular disease.

Injuries of the Choroid: E. O. SISSON (Keokuk, Iowa) described the case of a boy who was struck on the eye with a stone thrown by a motorman. The anterior chamber was filled with blood, so no ophthalmoscopic examination was made. Treatment for absorption was instituted, but patient was lost sight of until 1 year later, when he returned, saying that he had been blind in the eye since the injury. Ophthalmoscopic examination revealed a large choroidal rupture on the nasal side of the papilla. The medico-legal question brought up was whether the blindness was caused by the rupture of the choroid or a spinal injury, which was received when a child. As sight had been good before the ocular injury, the spinal lesion was easily eliminated as the cause of blindness.

Section on Laryngology and Otolgy.

[Concluded from page 499.]

SECOND DAY.

Asthma as a Result of Nasal Conditions: D. J. II. FANELL (Chicago). The amount of deviation of septum cannot always be known. Large numbers of asthmatic cases due to some irritation in nasal cavity, either by some alteration in lumen and consequent difficulty in breathing and formation of mucus on the mucous membrane from some lesion or malformation. A polyp and spur in nasal cavity showed complete relief after removal of offending bodies. A broken bone, middle turbinate enlarged, will be complete relief after removal of all asthmatic conditions.

Discussion.—Dr. JAEH (New York) stated that asthma was due to a blood condition, a pathologic lesion of the blood, producing 3 distinct types. The oxygen is not taken up by the blood, and engorgement takes place, producing a toxic leukocytosis, then a gradual enlargement of the laryngeal glands, the obstruction always appearing first in the larynx—almost a complete closure—suddenly there is a breaking down of the glands. The mucus is squeezed out and expectorated in worm-like particles. We have the anemic variety which comes on at night, which is due to lack of sunlight.

The Effect Which the So-called Catarrhal Disease of the Nose and Throat May Have Upon the General Health: Dr. C. M. COBB (Massachusetts) cited several cases where nose conditions were relieved and the general health improved. He believes bacterial diseases are more readily induced in these abnormal conditions of the nasal passages.

Discussion.—Dr. CASSELLBERRY is led to believe from his experience that the nasal affections are a secondary matter and by improving the general health the nasal conditions will be relieved.

Empyema of the Frontal Sinus: E. FLETCHER INGALS (Chicago). This is a rare affection, is an acute disease, pain over frontal sinus relieved by discharge of pus through the nose. The pain lasts but a few hours. Obstruction to outlet, pain and swelling over eyebrows, frontal sinus is small, the turbinated cavity extending up. There are also bony defects, actual communication is rare, it is filled by mucus membrane. Defects are often congenital. Septic meningitis followed rupture in some cases where the wall is very thin. These cases cannot occur before 7 years, as there is no frontal sinus previous to that year. It is a very difficult matter to pass a probe into the frontal sinus, very often it is passed into the maxillary. Sometimes discharges take place in antrum of Highmore, where hyperplasia extends up, lateral focus will interfere with discharge. These abscesses are often caused by acute infectious diseases, chronic cases by polyps and other obstructions, after an operation on the inferior turbinate. The pus will be discharged drop by drop. To define the area the transillumination method is used, but cannot be relied on, where there is an unusually dense wall, or absence of sinus, and in cases where there is no pus, and yet no light is seen. It is not diagnostic.

Anomalies of the Frontal Sinus and their Bearing on Chronic Sinusitis: RAYMOND W. PAYNE (California) cited several cases in which there was an opening in the septum, in which there was no frontal sinus on 1 side, 1 case no septum, another in which only 1 side was sinus found.

Carcinoma of the Nasopharynx: CHEVALIER JACKSON (Pittsburg) believes in the early and complete extirpation of the offending growth. The age does not indicate any particular tendency, although 57% of cases were in men. Symptoms first show by pain, fetor and hemorrhage. These tumors have a tendency to extend downward.

Sarcoma of Nasal Passage with Report of Case: DUNBAR ROY (Georgia) said there is a greater frequency around the turbinals, not as malignant as in other parts of the body. Cause, disturbance of the embryonic tissue. Has been carried by instruments. Symptom, closure of nasal cavity, gradual difficulty in breathing, pain on deglutition, death within 7 months. Treatment, ligation of both external carotids.

Discussion.—Dr. FREER does not believe malignant growths can arise from benign growths. It is characteristic of benign growths to retain their character; this change is purely a hypothesis.

Dr. MACKENZIE. The textbooks are faulty, will have to be rewritten; objects to removal of small pieces for diagnostic purposes. Danger of infection, hemorrhage, and a stimulation of growth. It should be resorted to only as a last measure. The diagnosis should be made without resorting to this dangerous method. Often means beginning of the end.

THIRD DAY.

Dr. E. B. DENCH (New York) read a paper on **The Diagnosis and Treatment of Mastoiditis**, calling attention to swelling over the mastoid and tenderness and pain over and in the mastoid region, increase of temperature, a full pulse, drowsiness and frontal headache. Paracentesis of the membrana tympani while giving relief in a number of cases is not always to be relied on; in fact, the author desires to be emphatic in espousing the radical method. The first important point is through antiseptic preparations, and should be made to open into the cranial cavity and arrangements made to control hemorrhage. The author considers an opening into the mastoid cells as justifiable; even though the symptoms are not marked, an exploratory operation can be done with no greater risk than an exploratory incision of the abdomen.

Discussion.—Dr. SICERMAN (Cleveland) does not believe the radical operation to be advisable in the larger number of cases. Many a death has been caused by a hasty operation. There is an intimate connection of the circulation of the mastoid and the meningeal membranes that should not be lost sight of. The paracentesis of the membrana tympani will give entire relief, and is devoid of danger. The use of the 1 to 5,000 solution of bichlorid is dangerous. The mastoid swollen and tender does not indicate operation, leeches and hot application. There is danger of fatal hemorrhage and death from infection in opening the mastoid cells. I am opposed to it, except in cerebral involvement; you open up an avenue of infection and it takes a long time to heal.

Dr. COBR (Lynn, Mass.) said that in a large number of cases pus will have to be removed by artificial means. Where drainage is good, there is no necessity of opening mastoid cells.

Dr. COTT: In exploratory operation it is as favorable as abdominal exploratory operation. There is a very small percentage of deaths. The operation should be as radical as the disease is severe. Every cell involved should be opened; if not a small pocket is left, and a second operation will be necessary. An incision should be done early.

Dr. FRENCH (Illinois): I take the point that I will decide the operation, if I consider it necessary to operate, and will not consult with patients. A patient with severe pain or without pain or a small amount of pus escaping from meatus are the proper cases that require operation. Most are too long delayed, and meningitis results.

Dr. BAKER (Bay City) has observed more procrastination in these matters than in any surgical operation in other parts of the body. If you do not operate you do not do your duty. We should educate the profession as the surgeon has instructed the people in appendicitis. The physician knows less about this than any special subject, and there is none in which there is greater danger to life.

Dr. DENCH does not believe pus in the mastoid cells will be absorbed. In every case we do have serum and that is absorbed. It is absolutely important to carry your spoon down to and scrape the hard bone. You must evacuate every cell containing pus by sharp spoon.

Dr. HIRAM WOODS, JR. (Baltimore), read a paper on **Mastoiditis after Subsidence and without Recurrence of Tympanic Disease**. He cited a case of inflammation of the tympanum in which the local inflammatory symptoms had disappeared. Twelve days later mastoiditis developed and pus was found in the mastoid cells. He thinks the mastoiditis was present from the first and tympanitis, showing first, was cured. The more severe disease was dormant. He suggests exploratory operation in all cases. Cold he considers a dangerous remedy, as the symptoms are masked; it increases the trouble from hemorrhage, and a sufficient degree of cold cannot be secured to kill all germ formation.

Discussion.—Dr. DENCH (New York) believes in the use of cold, and has seen cases aborted in this manner.

Dr. HOLLANDER called attention to the method of sewing up the wound after a radical operation for mastoiditis and allowing the cavity to fill up with blood.

Report of a Case of Unusual and Interesting Tertiary Manifestations, by G. HUDSON MAKUEN (Philadelphia). A school boy contracted syphilis at a boarding school. He was treated by the local physician. On returning home he said nothing about the trouble and was treated for malaria. After being under the care of several physicians, none of whom secured any history of syphilis, he was brought to Dr. Makuen for a chronic throat difficulty, a small ulcerated point was found on the soft palate and a sear on the frenum of the penis. The boy finally acknowledged that he had contracted syphilis at school. There were no other manifestations of the disease.

Section on Hygiene and Sanitary Science.

[Concluded from page 500.]

THIRD DAY.

Tuberculosis in the Middle States and Its Curability: Dr. JOHN A. ROBISON (Chicago) said the mass of information concerning the climatology of these States and the factors which might cause or cure tuberculosis is very meager. Therefore, he arbitrarily selected the following States for consideration: Michigan, Ohio, Indiana, Illinois, and other western, northwestern, and a few southern and middle States. The altitude of the Mississippi Valley varies from 400 feet to mountain tops of 3,000 feet. Michigan has a varying climate, but the climate is healthful, and the deathrate is low in the northern portion of the State. The annual mean temperature of Ohio is from 50° to 54°, and the interior of the State is 1,200 feet above the sea level. In Indiana the State has few hills; the highest elevation is 540 feet on the Ohio river, and the deathrate is usually low. The climate of Illinois is healthful, although in the lower portion, along the river bottoms, malaria prevails. The highest altitude is 1,150 feet above the Gulf of Mexico. Illinois stands fifth in the list of mortality from tuberculosis, which must be due to the fact that Chicago furnishes so large a number of cases as to increase the State's deathrate. Kentucky affords a climate which is generally delightful, the mean average being 57° F. The State has a splendid record for healthfulness. Some of its mountains are 3,000 feet in altitude, i. e., of the summits of the Cumberland mountains. Wisconsin; the climate in winter is bracing in the northern portion of the State, and as a whole the climate is healthy and invigorating. There are elevations from 600 to 1,500 feet above the sea. Minnesota's salubrity of climate is well known—its purity of air and dryness of the winters. Its lakes are numerous, and the surface of the State is an undulating plane, with an average elevation of 1,000 feet above the sea. It stands low in the group of States having a large number of deaths from this disease. Iowa is the healthiest State in the Union. The highest point of elevation in the State is 1,650 feet. Missouri has a most rigorous climate. The winters are extremely severe, and the summers hot, but the State is healthful. Elevations range from 500 to 1,000 feet in height. North Dakota has a dry and salubrious climate. The winters are cold and there are heavy snow-falls, while the summers are hot and dry, and tuberculosis is almost unknown in the State. The altitude varies from 670 feet to 1,900 feet. South Dakota has a milder climate, and the climate is healthy. Some of the peaks of the Black Hills reach 7,000 feet above the sea, while the altitude at Huron is 753 feet, Yankton 1,222, and Deadwood, 4,600 feet. Nebraska has an altitude as high as 2,841 feet. Kansas has pure atmosphere, and affords a chance for continuous outdoor life; an elevation of 750 feet up to 3,800 feet on the western border. At Wichita it is 1,363 feet, Atchison 1540, Garden City 3,000 feet. Crowded cities favor the development and spread of tuberculosis. The greatest mortality from tuberculosis in the States is: Ohio stands third, Illinois fifth, Tennessee sixth, Missouri seventh, Kentucky eighth, Indiana ninth, Michigan thirteenth, Wisconsin eighteenth, Texas nineteenth, Iowa twentieth, Minnesota twenty-first, and Mississippi twenty-fourth. The average deathrate from tuberculosis during the year 1890 throughout the United States was 268.81 per 100,000.

The establishing of sanatoriums was dwelt upon, and the fact that the legislators of the United State were interested, shows that the sentiment is growing in favor of these State institutions.

The second paper was on **Tuberculosis Sanatoriums:** Dr. C. P. AMBLER (Asheville, N. C.). Among the poor class of people, because they cannot see the disease at first, they take it as a visitation of Divine Providence. The State pays more attention to tuberculosis in cattle than to the care of her poor class of citizens who have tuberculosis.

Tuberculosis of Animals in Some of its Relations to Human Tuberculosis: D. E. SALMON, D.V.M. (Washington, D. C.) referred to the great medical problem of the twentieth century, frequency of tuberculosis in animals, and spoke of the increase of the disease on account of use of meat and milk from tuberculous animals. He pointed out the infectiousness of meat from animals with generalized tuberculosis, and the infectiousness of milk, and discussed animal and human tuberculosis and the communication of disease from animals to man. He laid special stress on the importance of sanitary measures.

The paper dwelt largely upon the statistics of tuberculous lesions which occur in animals, of swine, cattle, rabbits, guinea-pigs, sheep, goats, etc., throughout the United States as well as in foreign countries, as shown at experimental stations of various agricultural colleges. Generalized tuberculosis is not rare in the cow, and a larger percentage of tuberculous cows give milk containing tubercular bacilli than is usually admitted; hence a larger proportion of milk is infected than we have heretofore been led to suppose. He showed that while tuberculosis in human beings was decreasing, yet tuberculosis in the bovine was increasing, and yet this is a milk drinking age. Therefore it seems that tuberculosis in man is more frequently contracted by inhaling the air, than by drinking milk. In *Tuberculosis mesenterica*, occurring in children, however, it appeared that milk ingestion played an important role. He believed that animal tuberculosis can be transmitted to man.

The Experience of Syracuse, N. Y., with the Compulsory Tuberculin Test of all Dairies Furnishing Milk to the City: B. S. MOORE (Syracuse, N. Y.) said municipal abattoirs were established first in France in 1810. He favored the tuberculin test to ascertain the existence of the disease in cattle. In certain dairies tested it was found that about 5.5% of the herds contained bovine tuberculosis, while in other dairies the test proved that as low as $\frac{1}{2}$ of 1% only were found tubercular. The laity look to us to suppress the disease pulmonary tuberculosis.

The Climatology of Arizona With Reference to the Treatment of Pulmonary Tuberculosis: R. W. CRAIG (Phoenix, Arizona) referred to the altitude of the highest place, Flagstaff, 7,000 feet, to that of Yuma, which practically is on a sea level, and eulogized the State as a land of sunshine for the open-air or outdoor treatment of the disease, and that spontaneous cures do occur, due to this outdoor existence. Specific treatment, as creasote, ichthyol, guaiacol, etc., in his belief, has hurried more to a fatal termination than it has resulted in curing them. He gave the following summary as regards treatment: Pure and abundant air, day and night; pure food and plenty of it; absolute avoidance of fatigue.

Tuberculosis of State Institutions: H. M. BRACKEN (Minneapolis, Minn.) dwelt upon tuberculosis in hospitals for the insane, in the feeble-minded institutions, in prisons, and in other State institutions. In prisons, the disease, he thought, was a simple matter to be placed under control. In the Minnesota State prison, at Stillwater, there is not a tuberculous patient confined in a cell at the present time. The importance of isolation was recommended, especially in the feeble-minded children institutions.

Discussion.—HENRY D. HOLTON (Brattleboro, Vt.) said the trend of opinion is the outdoor treatment and diet of the individual. He inquired of Dr. Salmon what was the percentage of infection due to eating meat. Dr. SALMON said that this question was yet to be ascertained, both from eating meat and drinking milk. More danger from the later, as it is generally admitted. Dr. HOLTON spoke of the State Cattle Commission in Vermont, and when cattle are slaughtered owners are paid by the State, by their having been found to have the disease ascertained by the tuberculin test.

M. H. REYNOLDS (St. Anthony's Park, Minn.) said many cases in cattle are mild and latent, as where they look sleek and fat and they are kept up under artificial conditions, the disease is not easily discovered. He thinks there is an unusual cry in exaggerating that the human does contract the disease from cattle, and yet we must not belittle the idea. Sweeping measures are hopelessly impracticable; to slaughter cattle that are tuberculous or found so after they were tested. Dairymen replace them with other cows which may also be diseased, although unsuspected, as were those who were found to be so by the tuberculin test.

NORMAN BRIDGE (Los Angeles, Cal.) commended all the papers. We should encourage dairymen to have their dairies free from tuberculosis, but the dairymen must be reimbursed in some way, either by the increase in price of milk, or reimbursement by the State when their cows are slaughtered. Health Departments of cities should inspect dairies as to their hygienic conditions and to see that the milk supply is not diluted and that proper amount of cream is in the milk. An increase of sanatoriums by the State is an important step and agitation along this direction should be done to take care of the indigent classes, as this is a reform, and even though few at first can be cared for it is some benefit accomplished by the State in this direction. Dr. BRACKEN thought sanatorium was preferable to sanitarium as a general term since the latter term is employed by quacks. He strongly favored the tuberculin test, but this will not furnish us with a nontubercular milk supply, as we cannot get around to test the herds at frequent intervals of every few months. Dr. B. S. MOORE (Syracuse, N. Y.) said we have jurisdiction beyond the city confines, tuberculin is not now in the experimental state and he hoped that the use of it will become universal instead of exceptional as seems to be now done. Dr. SALMON said that to exclude cattle from other countries we must get the influence and support of the medical profession. The last paper was read by Dr. C. L. MINOR, (Asheville, N. C.) on **The Relation of Sputum to the Spread of Tuberculosis.**

The section elected HENRY D. HOLTON and ERNEST WENDE as delegates to the House of Delegates of the Association for next year.

ORIGINAL ARTICLES

THE TREATMENT OF ABDOMINAL AORTIC ANEURYSM BY A PRELIMINARY EXPLORATORY CELIOTOMY AND PERITONEAL EXCLUSION OF THE SAC, FOLLOWED AT A LATER SITTING BY WIRING AND ELECTROLYSIS, WITH THE REPORT OF 2 HITHERTO UNPUBLISHED CASES.¹

BY

RUDOLPH MATAS, M.D.,

of New Orleans, La.

In view of the undoubted improvements that have been made in recent years in the technic of wiring and electrolysis (Moore-Corradi method) as applied to the cure of aortic aneurysm—more especially since the writings of D. D. Stewart and his followers in this country have given a new impetus to this mode of treatment—it is a matter of great importance to determine by actual clinical experience to what extent this purely technical progress has contributed to prolong life or improve the chances of recovery in this usually hopeless class of sufferers. It is evident that a true estimate of the value of the method can only be obtained by a careful study of the reported cases, and as the number of instances in which the more recent suggestions have been applied is still relatively small, especially in the abdominal phases of this disease, and have thus far been inadequate to permit us to arrive at definite conclusions as to the actual value or even the special indications of the method, I have been led to contribute the following recent observation in which the Moore-Corradi method, modified to meet the special exigencies of abdominal aneurysm, was faithfully and yet unsuccessfully applied. In addition to this personal observation I avail myself of the opportunity—thanks to the courtesy of the operator, Dr. F. W. Parham, of this city—to add to this report another unpublished case of abdominal aneurysm, treated by wiring alone (Moore method), which presents several features of exceptional interest.

CASE I. (Personal observation).—*Spontaneous (idiopathic) aneurysm of the abdominal aorta (upper celiac region) in a young subject, treated by various methods, including laparotomy and peritoneal isolation of the sac, secondary wiring and electrolysis (Moore-Corradi method); death 54 days after exploratory laparotomy and 19 days after wiring.*—A. H., aged 23, a native of New Orleans, nearly 6 feet in height and thin; father and mother (both of German origin) living and in robust health; father of distinctly gouty diathesis; mother also rheumatic; 2 brothers and 1 sister, all in excellent health. The patient is a telegraph operator and clerk in a broker's office; unmarried. His history is remarkably good from every point of view—very quiet, frugal, temperate and industrious; he never indulged in alcoholic drinks or tobacco and had an exemplary reputation. His previous history is absolutely negative as to syphilis or other infectious diseases that might account for his present trouble. There is no history of trauma or of indirect violence that would furnish a clue to the causation of the present trouble except, possibly, that he may have "strained" himself while "punching a bag" in a gymnasium, though he himself never noticed any evil effects from the very moderate exercise that he took in this way.

Until February, 1900, he felt perfectly well. After this date he began to suffer periodically with vague pains in the epigastrium, which radiated to the left hypochondrium and back. He could not account for this pain, as he did not suffer from indigestion and his appetite was not impaired until later, when the pains increased in frequency and severity and sedatives were required to allay them. About 3 weeks before my first examination (about May 28, 1900), he first noticed a pulsation in the epigastrium, which became progressively more perceptible and vigorous every day. Dr. Moore, who was called to attend him about this time, made the diagnosis of aortic abdominal aneurysm, and prescribed sedatives to relieve the pain, which now kept the patient constantly in bed and entirely incapacitated

him for his business. When I saw him, in the last week of May, 1900, I found him in bed, looking very pale and emaciated, his whole expression indicating great distress and physical suffering. He was lying on his left side in his favorite attitude, curled on himself, with his limbs flexed and with his hands clasping the sides of his chest and epigastric region. As he turned on his back to speak to me he complained of the pain caused by the movement, and I noticed a prominent bulging mass pulsating vigorously in the epigastric region, where it was limited to the left half and extended under the left costal arch. On deep palpation the pulsating mass could be felt springing apparently from the depths of the abdomen near the vertebral column, its lower boundary limited by a line drawn across the tenth costal cartilages and sloping gradually upward so as to fill the entire epigastrium somewhat in a conical shape, the apex of the cone projecting to the left of the median line. A distinct thrill could be felt superficially, and on auscultation a loud, harsh systolic murmur could be heard with every beat of the pulse. The diagnosis of abdominal aneurysm probably involving the celiac axis and extending in the upper or subdiaphragmatic portion of the abdominal aorta was then established. Apart from the aneurysm, a careful examination of all the organs failed to reveal any abnormality. The heart and arteries were normal, the urine normal, and, in fact, the patient had no disease except in his abdominal aorta. The gravity of the case as explained by the attending physician, Dr. Moore, was then reaffirmed and the relatives were informed of the scant prospect of permanent relief. It was suggested, however, that the prognosis would be more exactly determined by an exploratory operation, which would possibly permit the application of various therapeutic measures that had been found valuable and even curative in similar cases.

This suggestion, in spite of its uncertainties, was immediately accepted by the patient and his parents, who at once transferred him to the Touro Infirmary. He was admitted to the Infirmary on June 1, and on the fourth day after his admission an exploratory laparotomy was performed under chloroform. A 4 inch incision was made in the median line to the left of the most prominent part of the tumor. Upon opening the cavity the first organ that made its appearance was the pancreas, which was stretched over the highest point of the convexity of the tumor, and was in immediate contact with the abdominal wall. The splenic vein and artery, both of unusually large size, were seen stretched immediately above the pancreas, directly in the path of a trocar or needle had this been used to explore the tumor or to wire it without previous laparotomy. The stomach was displaced downward, and the cardiac end and lesser curvature were stretched in a curved line immediately below and to the left of the dome of the tumor, leaving the pancreas, splenic vessels, and third portion of the duodenum on a more superficial plane. A careful palpation of the tumor with the hand introduced through the wound demonstrated that the aneurysmal sac was connected with the abdominal aorta, and involved its immediate subdiaphragmatic portion, extending down in an ovoid shape to a point approximating the superior mesenteric vessels. Palpation of the tumor gave the impression that it was as large as a fetal head at term. It pulsated vigorously all over its surface, but in the right half of the sac there were some thick (probably fibrinous) deposits. The aneurysm in the course of its rapid development had displaced the posterior peritoneum upward and forward, carrying with it the pancreas, splenic vessels, and duodenum, which now rested upon its surface and in immediate contact with the abdominal wall. Having in view the trial of the Moore-Corradi-Stewart method of treatment, I decided to suture the peritoneal envelope of the tumor to the anterior parietal peritoneum, thus excluding the general cavity and favoring all subsequent treatment by establishing a direct extraperitoneal route to the aneurysm. This point of the program was carried out by partially detaching and displacing the pancreas and splenic vessels upward and thus clearing a space between them and the duodenum and stomach and suturing these organs in place, thus leaving a small interspace the size of a dollar, which represented the free peritoneal surface of the aneurysm. The parietal peritoneum in the wound was then sutured to the periphery of the exposed areas, and the abdominal wound was closed by (catgut) sutures in layers, leaving the center of the incision open where the surface of the aneurysm was exposed. A gauze pack was left *in situ*, and the patient was sent to bed in good condition.

The patient recovered from the effects of the exploratory laparotomy without incident worthy of special mention. The wound healed *per primam*, leaving a round surface the size of a silver quarter in the center of the incision, which healed completely by granulation in 2 weeks. In this way a direct and safe route to the center of the aneurysm had been created. Five days after the operation the patient was put on the Valsalva-Tuffnell treatment, and an ice-cap was kept constantly over the aneurysmal region. On June 9 he was given, in addition, 3 minims of Norwood's tincture of veratrum viride every 6 hours. Codein was given to relieve the pain, which had become less severe, but still persisted in keeping the patient awake at night. On June 13, 12 ounces of sterile gelatin, in normal salt-solution, 10% (Lancereaux's treatment) was injected under the skin in the left subscapular region. The patient suffered considerably from pain at the site of the injection, and the temperature rose quickly to 105° F., but this finally subsided to normal and did not return. The patient, however, was so much disturbed by

¹ Condensed from complete paper which is published with appendix containing report of published cases in Transactions of the Southern Surgical and Gynecological Association, for the meeting held in November, 1900.

this treatment that he begged me not to repeat the injection. The gelatin solution should have been made 3 or 5%, and the intense reaction was evidently due to the excessive concentration of the solution. The severe reaction caused by this strong gelatin solution is worthy of notice.

Up to July 5 (1 month under observation and treatment after exploratory laparotomy) no marked improvement was noticed. The pulsation in the aneurysm was not so marked, the swelling was less prominent and the pains were less severe, but all this was easily accounted for by the great rest, the constant application of the ice-bag over the aneurysm, diet and arterial sedatives which diminished arterial tension and slowed the circulation. In reality the patient was growing worse; he was weaker; and inability to rest at night, with codein and even morphin, was evidence enough that the aneurysmal process was going on.

Therefore, on July 5 (1 month after laparotomy) the abdominal cicatrix was cocainized with a Schleich No. 1 solution, and the aneurysm was needled on the Macewen plan. A long, sterile, steel hat-pin was used for this purpose, and its point was made to rub gently over the posterior and lateral walls of the sac. Two aseptic needles were introduced and left *in situ* for 1½ hours, after which they were removed and the punctures closed with collodium and cotton. No noticeable local change followed this procedure, and in view of the patient's progressive decline we decided to give him the benefit of wiring, combined with electrolysis (Moore-Corradi method). After considerable experimentation with various kinds of wire in artificial aneurysms (bladders, rubber balloons and bottles) on the part of my able assistants, Drs. Urban Maes and John Smyth, it was finally decided to use drawn silver wire. This wire was especially made by a manufacturing jeweler, and formed a perfect coil after passing through a 4-inch straight needle. This wire, when drawn, corresponded in size to the No. 00 Hartmann combination spool wire such as is used for banjo strings, and is about No. 28 gauge and 0.0085 inch in diameter. A 4-inch pointed anula (caliber of a No. 2 Dieulafoy aspirating needle) was insulated (by a professional electrician) by coating with shellac and was tried with the wire, which fed through it without trouble.

On July 9, after anesthetizing the cicatrix with Schleich No. 1 solution, the insulated needle was introduced directly into the center of the cicatrix. No blood appeared until the needle had penetrated 2½ inches, when it began to flow freely, but ceased promptly as soon as the wiring was begun. At 11.55 a. m. the wire was introduced, with the patient in good condition. Pulse 90, good quality. At 12.10 p. m. 10 feet had been introduced and much more could have been used, but we stopped at 10 feet in accordance with our program. The positive pole of a galvanic battery (dry chlorid of silver cells) was attached to the wire and the negative was connected with a large flat metal electrode applied to the lumbar region. Seventy-five milliampères were gradually reached, the patient feeling the negative pole burning slightly. A large wet absorbent cotton pad was applied under the electrode on the back. At 12.13 there was slight pain, and an ice-cap was applied to the abdomen over the tumor. At 12.25 the current was increased to 125 milliampères; pulse unchanged. From this time the needle of the meter began to oscillate and registered 102 milliampères with the same number of cells, apparently indicating little increase in resistance. As the patient was very comfortable at this time, the current was very gradually increased to 200 milliampères. After this the current fluctuated considerably, registering at

1.26 p. m. 200 milliampères.
1.45 " 210 "

At this time the current was discontinued and a new wet flat electrode applied to back; pulse 82. At 1.50 p. m. current gradually brought up to 200 milliampères, and fluctuated as follows:

2.13 p. m. 150 milliampères.
3.00 " 120 "
3.20 " 85 "
3.40 " 80 "
3.50 " 90 "
4.24 " 120 "
4.30 " 120 "

The electrolytic sitting, which had lasted 4 hours and 20 minutes, was discontinued at 4.30 p. m., with the meter pointing to 120 milliampères.¹

At the end of the sitting the patient was very cheerful and apparently as strong as at the beginning of the operation. He complained only of some burning in the back at the seat of the large electrode. His pulse was 82, respiration and temperature normal. He took fluid nourishment several times in small quantities during the procedure. The wire was cut close to the skin while the abdomen was being pressed down, so that when the pressure was removed it completely disappeared from view. The opening was sealed with cotton and collodium.

At the close of the sitting there was evidence that a decided impression had been produced upon the tumor; the pulsation was markedly less vigorous; there was a tendency to epigastric retraction rather than fullness, and the tumor was much firmer,

¹ I desire especially to thank my faithful assistants, Drs. Maes, Smyth and Clark, who carefully observed the patient with me throughout this long electrolytic sitting.

harder to the touch. Auscultation showed that the bruit was much fainter and could only be heard over a space 2 inches in diameter just to the left of the line of the cicatrix.

On returning to his room the patient slept from the effects of a hypodermic of morphin given while on the operating-table. He was very hopeful, complained less and the tumor in the epigastrium gave evidences of undoubted improvement, becoming more markedly retracted every day, but the improvement was only transitory; after 3 days the patient began to complain again of severe pains in the back and left upper lumbar region. The temperature ranged from 98° to 100° F.; the pulse, 96 to 100. He found relief only in morphin, and he took practically little or no nourishment. The emaciation became still more marked, and finally complete discouragement took possession of the patient. In the meantime it was evident that coagulation had taken place in the most prominent part of the tumor, as the murmur and pulsation had greatly diminished anteriorly. The aneurysm had retracted, however, only in one direction; it was evidently subdued only in one place (anteriorly) to become more aggressive in another. The constantly increasing pain and perceptible bulging in the left hypochondriac and lumbar regions pointed to the posterior surface of the tumor, to the left of the vertebral column, as the chief seat of mischief. About this time the patient manifested a desire to return home, and he was taken to his residence July 17, 8 days after wiring. From this time on to the end he was seen by his attending physician, Dr. Moore, and was only heard from occasionally. He suffered greatly and grew constantly weaker, paler and thinner, finally expiring in the midst of a convulsive tremor on July 23, 19 days after the introduction of the wire and the application of electrolysis. During the last days of his life he had to have a quarter of a grain of morphin every 3 hours to secure any rest at all.

No autopsy could be obtained, but the family allowed a small exploratory incision. This was done by Dr. Maes, who found that the sac had retracted from the abdominal wall and was very firm to the touch. On opening the sac the wire was found firmly imbedded in organized and laminated clot, which filled the sac with the exception of a small area where the sac was adherent to the abdominal cicatrix. The wire was gradually withdrawn and its course definitely and clearly mapped out with the finger. It was found to occupy nearly two-thirds of the sac below an opening, 1 inch in diameter, which communicated with a diverticulum of huge size which filled the left hypochondriac region. The sac containing the wire was fusiform in shape, about 1 inch in diameter, evidently very much contracted and in process of obliteration. The aorta, however, practically emptied itself into a vast pouch, apparently of recent formation and with very thin walls, which had ruptured on the night of July 27. The wire after removal showed no marked signs of corrosion, except staining, and formed a small bunch which weighed exactly 24 grains (10 feet).

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The lessons to be gathered from this case are numerous and instructive, notwithstanding the unfortunate termination and the fact that we were denied the opportunity of making a complete and satisfactory examination of the aneurysm and abdominal cavity and thus studying its exact anatomic characteristics and relations. Before proceeding with the conclusions which refer to the value of the method it will be well to note, first, the unusually early age of the patient (23 years, the youngest in the series of 15 cases of abdominal aneurysm treated by this method); secondly, the absence of any antecedents—syphilis, alcohol, or trauma—that would favor the development of arterial disease; thirdly, the comparative acuteness of the aneurysmal process, which ran its course in less than 6 months, if we count from the date of the first symptoms to the date of death. Then, as bearing upon this particular mode of treatment, the high celiac or subdiaphragmatic position of the tumor, and the fact that it was a sacular aneurysm, though this could not be absolutely determined by the physical signs before death. In regard to the treatment it is worthy of note that, notwithstanding the most rigorous dietary, absolute rest, constant application of ice over the tumor, and the use of arterial sedatives, the tumor progressed uninterruptedly in its onward march. It is well to observe the very high reaction and decided local disturbance produced by the large administration of strong gelatinous saline solutions; in this case fully 1 pint of a 10% solution was injected by hypodermoclysis, causing a rise in temperature to 105°. It is evident that large injections, especially of such exceedingly concentrated solutions, should not be tried, but that Lancereaux's rule to inject small quantities (6 to 8 ounces) of 2% to 3% solutions continu-

ously and at regular intervals should be followed. In my personal experience with this method, which I have tried systematically for thoracic aneurysm in 3 cases, the results have been invariably negative; nevertheless, in view of the relative benignity of this treatment and the success obtained by others, I would be in favor of trying those injections systematically in all cases as an adjuvant to other treatment.

As to the procedure itself, we must notice the long electrolytic sitting (the longest thus far recorded, 4 hours and 20 minutes) and the high milliamperage of the current. I must confess that I am somewhat at a loss to account for the remarkable resistance and lack of complaint of the patient with so strong a current as 210 milliamperes; and were it not that the canula had been very carefully insulated and the milliamperemeter was tested and found perfectly reliable, I would be inclined to doubt that so strong a current had ever been passed into the aneurysm.¹

The most important fact to be noticed, however, is that the passage of this strong current for so long a time did have a very positive and prompt effect in favoring the coagulation of the blood in the sac, and, as the necropsy showed, that part of the sac which had been invaded by the wire had been completely consolidated with firm and adherent clot and was practically cured. What, then, caused the failure of the method? Death was caused ultimately by rupture of the sac, or, rather, by a diverticulum of the sac which had evidently developed after the introduction of the wire and after the rapid formation of a large coagulum in the main cavity of the tumor. We must presume that in this instance the aneurysm was formed by a multilocular sac, and that only a part of the sac was filled with clot, while another section which had not been reached by the wire remained uncoagulated and had continued to receive the whole force of the aortic current. Under the strain of this increased intraaneurysmal pressure the sac yielded rapidly at this point and formed a diverticulum or secondary sac which ruptured finally into an undefined, extraaneurysmal space in the left hypochondrium. Here, then, is a danger which no amount of intelligence or foresight on the part of the operator can possibly eliminate, and which must remain a serious menace to the patient even when all the other conditions for success have been otherwise fulfilled.

Another point to which we would direct attention was the adoption of a plan of operation in 2 sittings, with 4 weeks' interval between them, the advantages of which do not appear to have been considered by previous operators, who have invariably explored the tumor, and, after wiring and applying electrolysis, have closed the abdomen. By operating in 2 sittings there are at least 2 distinct advantages to be gained. In the first place, by the exclusion of the general peritoneal cavity through systematically suturing the parietal peritoneum to the edges of the wound to the retroperitoneal covering of the surface of the tumor, adhesions are produced between the aneurysm and the abdominal wall over a well circumscribed area. When this is done as a preliminary procedure it undoubtedly diminishes the dangers of peritoneal contamination and shock which are likely to occur during a long electrolytic sitting. The wiring of the aneurysm is then accomplished at a later date, when the wire can be inserted and electrolysis applied under simple local anesthesia. In this way the electrolytic current can be applied for an indefinite period with deliberation, and under the same simple conditions in which it is applied in thoracic aneurysms.

¹ That currents stronger than 70 milliamperes are liable to cauterize and do harm is shown very clearly in Dr. Hunner's recent paper (Johns Hopkins Hospital Bulletin, November, 1900) and by the sloughing of the skin of the back at the place where the negative electrode was kept in contact with the skin in one of Dr. Finney's cases. In this case a current of 70 milliamperes was kept up for 1 hour. In our patient the only observable local effect on the skin was to produce a marked erythema which passed away without leaving any trace.

Dr. Parham was the first to resort to the open method of observing an abdominal aneurysm by simply walling off the sac with gauze. He did this, however, (as will be shown in the report of his case which is to follow), after wiring had been done, and chiefly with the view of controlling hemorrhage from the point of puncture and better to observe the subsequent course of the aneurysm. I regard this suggestion as a distinct advance in technic.

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In submitting the report of this case it is not the writer's purpose to discuss the purely technical features of the method adopted,² it being his chief object to consider this subject in the light of clinical results as observed in the treatment of the abdominal type of the disease. While the Moore-Corradi method has found its largest field of application in the treatment of thoracic aneurysms probably because these are more frequent than the abdominal (175 thoracic to 59 abdominal, Crisp; 83 to 9, Lebert), and because in advanced thoracic aneurysm the subcutaneous character of the tumor favors this mode of attack even at the hands of physicians not especially skilled in surgical manipulations, it is nevertheless true that abdominal aneurysms, as a class, are better adapted to test the real value of the method. With the advance of abdominal surgery, abdominal and intraperitoneal exploration has been made comparatively safe, and in this way the character of the aneurysm its mode of origin, approximate site, and other important topographic relations and anatomic characteristics are more easily determined than with the thoracic aneurysm, which can only be studied at a distance and chiefly by physical signs. Limiting our inquiry, therefore, to the abdominal aortic aneurysms, let us bear in mind first the essential principles which underlie the therapeutic and curative action of the wiring and electrolytic process as applied to the condition. The Moore-Corradi method aims fundamentally at arresting the circulation of the sac by inducing a coagulation of its contents. It aims at the production of a firm, resistant, adherent clot which shall fill the sac and coagulate its orifice of communication with the vessel of supply. The formation of this plug is essential to block the orifice of the sac and arrest the circulation. At the present moment, in view of the experimental evidence which has accumulated on the subject, no one will deny that the modification first proposed and practically applied by Corradi (1881), to the effect that the mechanical action of a wire in favoring the deposition of fibrin would be very much intensified by passing through it a galvanic current of definite strength, which would act upon the blood in virtue of its electrolytic qualities, is a distinct advance on Moore's simple method of wiring (1864). The influences that are therefore brought to bear in inducing coagulation of the aneurysmal contents by the combined method are threefold—mechanic, biologic (tissue or cellular reactions), and chemic, the last being probably the most important feature in inducing the prompt precipitation of fibrin through the decomposing power of the electrolytic current.

Without attempting to trace the various historic stages which have marked the gradual evolution of the technic from 1864 to the present time, suffice it to say that under favorable conditions these three agencies—mechanic, biologic, and chemic—amply suffice to bring about the desired results, viz., prompt coagulation of

² This aspect of the question is very fully and ably presented by Dr. Guy L. Hunner, of Baltimore, in his masterly essay published in the Johns Hopkins Hospital Bulletin of November, 1900, vol. xi, No. 116. This contribution, which is the most comprehensive and instructive that has recently appeared on the subject, reached me after this paper had been written, and the bibliographic research had been completed. In the revision of this article, after it had been sent to the Secretary of the Association, I have been able to strengthen my original conclusions by reference to many suggestions made by Dr. Hunner, and also by availing myself of the most instructive and carefully reported cases operated upon by Drs. Halsted and Finney in the Johns Hopkins Hospital, which have been abstracted and added to the supplement appended to this paper.

blood, with the formation of a firm, adherent clot. As a result of the modifications brought about by the combined efforts of surgeons and physicians who have labored to perfect both the surgical and the mechanic-electric phases of the technic, the essential features of the method resolve themselves as follows:

1. A thorough exploration of the tumor, made safe by aseptic celiotomy, which permits a recognition of the approximate anatomic seat and relations of the tumor and furnishes important information as to its anatomic characteristics—an advantage that is denied in thoracic aneurysms.

2. The safe exposure and even permanent isolation of the point of attack in the most accessible part of the tumor by the formation of adhesions between the sac and the abdominal wall—a point which we believe has been shown to greater advantage in the 2 cases that are reported in this paper, though the methods adopted by Dr. Parham and myself were different and we were guided by different purposes—is worthy of adoption in all cases, as it diminishes shock and the liability to peritoneal contamination.

3. The introduction at a second sitting (when adhesions have formed and the sac has become practically extraperitoneal) of a highly drawn fine snarled silver wire, which should not exceed a No. 28 gauge (0.0085 of an inch) in diameter. The wire may be of gold, as suggested by Stewart, or of silver blended with copper alloy, as suggested by Hunner; but it is evident from our experience and that of others that sterling silver will meet all the indications.

4. The wire should be fed or carried into the aneurysmal sac through a fine and carefully insulated trocar or canula (shellac, celluloid, or rubber being used as the insulating agents, shellac being most convenient), the caliber of the canula not exceeding a No 2 Dieulafoy aspirating needle.

5. The wire should be always tested before its application, to determine the following points: (a) That it will coil after feeding through the canula; (b) that it will coil in large, irregular loops, in order that its distribution over the largest possible surface may be insured; (c) that it will not form a short continuous spiral with such spring and force as to exercise injurious pressure upon the aneurysmal walls, or, after finding its way into the aorta through a large orifice, spring, as it were, into the heart itself. Furthermore, it is important that the quantity of wire used should be adjusted to the size of the aneurysm, in order that the retraction of its walls after coagulation may not be interfered with (as happened so disastrously in several instances) owing to the resistance offered by the wire itself. As a rule, 10 feet of silver wire, highly drawn and snarled, will suffice for the average aneurysm, though larger quantities (15 and 20 feet) are advised according to the size and approximate capacity of the aneurysm. Practically it may be said that 10 feet are amply sufficient, as is proved by the fact that in the 3 recorded cases in which a permanent cure has been obtained (Morse, Langton, Noble) the maximum length of the wire was 10 feet.

6. As to the electrolytic current, this should be furnished by a galvanic battery (the portable dry chlorid of silver appears to have been most generally used in this country), with the positive pole attached to the wire and the negative electrode, well covered with a wet cloth, to the back. A milliampèremeter should be connected with the circuit to indicate the strength of the current, which, according to the most authorized opinion, should not exceed 70 milliampères, for fear of caustic effects. The intensity of the current and the duration of its application will vary within wide limits, according to the condition of the patient and the effect upon the tumor. By following the plan adopted in our case the sitting was prolonged 4 hours and 20 minutes without any appreciable bad effects. Without a previous celiotomy and the preliminary formation of adhesions, which made the sac prac-

tically extraperitoneal and rendered general anesthesia unnecessary, so long a sitting would have been impossible without great risk of peritoneal contamination and shock.

7. The coincident administration of gelatin (3% gelatin dissolved in decinormal saline solution, .7% salt) in 6 or 8 ounce doses by hypodermoclysis, as suggested by Lancereaux, may prove beneficial as an adjuvant to rest, diet, and other general measures of treatment.

So much, then, for the technic of the method. Now as to the indications. Is the Moore-Corradi method applicable to all forms of abdominal aneurysm, or are there special anatomic conditions which are decidedly more favorable than others for its successful application? Thus far we have been able to collect the records of 15 published cases of abdominal aneurysm, treated either by wiring alone or by the combined methods, since the distinguished Professor Loreta first introduced Moore's method in abdominal surgery in 1885; and after investigating these records carefully we notice that in no instance did the operators specially attempt to define the conditions which they regarded as particularly favorable to the application of the method. In every instance it appeared to be taken for granted that, as other nonsurgical modes of treatment had failed and the patients were hopelessly drifting toward certain death, they were justified in resorting to this expedient with the hope that it would determine a cure by process of coagulation. In 3 only (Morse, Noble, Langton) out of 15 abdominal aneurysms has this hope been realized and the courage of the patient and of the operator has been rewarded by a permanent cure.

In 2, or possibly 3 other instances (Loreta, Pringle-Morris and Finney's case No. II.) wiring alone and wiring with electrolysis has been followed by a decidedly favorable impression upon the tumor, though the beneficial effect on the patient was, with the still doubtful exception of Finney's case, only temporary. Loreta's patient died in 92 days from rupture of the aorta below the aneurysm, which had been cured; and in Pringle-Morris' case the tumor was undergoing coagulation when the patient succumbed, on the fifth day, from traumatic delirium and exhaustion. In Finney's case the patient's subjective sensations improved, but the aneurysm was practically unchanged 1 month after the operation. If we class these cases as improved, either in a local or general sense, we would be justified in stating that in 5 out of 15 cases (33.3%) a favorable impression was produced by this treatment, in 3 of which only (or 20%) the cure was permanent. In the remaining 10 cases the aneurysmal condition was either not improved or was aggravated by the procedure, thus in 66.6%, the method failed to improve the local condition or to prolong life.

In view of these facts, it is evident that there must be a certain comparatively small percentage of cases of abdominal aortic aneurysm that come to us for treatment which are favorable to this method, and another, a much larger group, which is not amenable to this procedure and in which it is contraindicated.

It may be argued that in some of these fatal cases a better technic might have avoided some of the bad results or that in some of these patients the disease was so far advanced that the cases were hopeless when the treatment was applied. Granting that this may be true in a few instances, we believe the bad results were in the main attributable to inherent dangers of the method itself apart from all questions of technic.

It is evident after a careful consideration of the anatomic and pathologic conditions which obtain in abdominal aneurysm that there are many fallacies and unavoidable sources of danger in abdominal aneurysm which distinctly preclude the possible success of the method in a large proportion of the cases, no matter how perfectly the technic may be carried out. The important question that at once presents itself is, Can these favorable

and unfavorable conditions be clearly differentiated by the means of investigation now at our command? A moment's reflection upon the clinical conditions that exist at the time when the majority of these patients seek relief will convince us that, notwithstanding all the advantages of an exploratory laparotomy, many of the essential points in the diagnosis, such as the exact origin of the aneurysm, the part of the aorta in which the aneurysmal orifice is situated, the size of the orifice, the relation of important visceral branches to the sac, the condition of the walls of the sac, etc., must remain unknown. In other words, with all the improvements that have been made in the technic and the exact knowledge obtained of the capabilities of the method when applied experimentally *in vitro*, we really know nothing positively of what this procedure will accomplish on the living subject except, perhaps, the empiric and gross fact that the method has been instrumental in saving the lives of 3 out of 15 recorded cases of abdominal aneurysm.

Notwithstanding this discouraging conclusion we must recognize that in so intractable a condition as abdominal aneurysm, even so small a percentage of recoveries must not be disregarded; but, while still clinging to the method, it is also evident that it is not universally applicable and that it is much less justifiable in some cases than in others. Under these circumstances some effort should be made to define the indications for or against this operation in this class of cases.

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[To be concluded.]

THE SOCALLED TRAUMATIC NEUROSIS.

BY

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In presenting the subject of so-called traumatic neurosis, I recognize that an immense amount has been written upon this topic and that there are widely varying opinions. I shall not enter into the controversies of the last few years, except in so far as they serve as an introduction to the views that shall be presented in this paper. I will also not burden you with long accounts of clinical cases, but will present a paper which is in the nature of conclusions, based upon a study of over 700 examinations of cases presenting nervous troubles, attributed by the individuals affected, to a trauma.

Traumatic neurosis is any deviation from the normal in the nervous system, caused by violence. Thus a fracture of the humerus involving the musculospiral nerve, is, strictly speaking, a traumatic neurosis. Of late there has been an increasing tendency to restrict the term neurosis to those conditions of the nervous system, not accompanied by appreciable alterations in the central nervous system, of which the symptoms are largely subjective and do not ordinarily present the sensory and motor phenomena associated with organic changes. Hence, the term traumatic neurosis is by common consent, largely restricted to cases of a functional character.

The term spinal concussion, as used by Erichsen nearly 40 years ago, has served as a foundation for an extraordinary superstructure that has maintained itself decade after decade in spite of the advances in our knowledge of neural pathology. Volumes could be filled with the description of the distinctions, and the controversies arising therefrom, that were made between a spinal concussion and *the* spinal concussion, the former referring to the immediate effects of a traumatism upon the spinal cord, and the latter to a more or less prolonged departure from the general health which Erichsen attributed to a "molecular vibration" in the cord.

Those who recognized the inherent difficulty in the use of such a term as spinal concussion, expressing as it did two different ideas in pathology, sought to substitute another term. Clevenger proposed "Erichsen's disease," while Oppenheim used the term, "traumatic neurosis," as applied to a more or less functional disturbance of the nervous system following trauma. Other writers substituted for the term spinal concussion, railway brain, and others less euphonious and still more obscure.

An unfortunate element in many of these cases is the accompanying litigation. Railway surgeons contend that traumatic neurosis is simply the subjective conception of the patient, injured in a railway accident, and brought into court for the purpose of obtaining money from an already impoverished corporation. On the other hand, the attending physician invokes that appalling entity, spinal concussion, with its molecular perturbations, making a condition which would render the person sick, sore, and disabled so long as he lived. The physicians in the defence of these cases devised new terms, among which were litigation symptoms, to characterize the subjective statements which the patient made, and which were said to disappear entirely under the revulsive action of a greenback plaster!

All such controversies are quite valueless in advancing knowledge on the subject, and it is the purpose of this paper to endeavor to indicate a few landmarks which may serve as guides in the study of a very obscure subject.

To arrive at a correct appreciation of these cases, one should at once dismiss the ideas of traumatic neurosis, of Erichsen's disease, or of spinal concussion, particularly if these are held with the view that there is a certain functional trouble of the nervous system due to accident or violence, which can be recognized as such in the absence of a statement that the patient has sustained an injury. In the description of Erichsen's disease, something like 30 symptoms, running all the way from tremor and increased reflexes to uneasiness in the neck-muscles, or pain in the back are included. Some of these patients are clearly hysteric; others have a neurasthenic character; some are distinctly hypochondriac; and, even a fourth group might be made, having the so-called "litigation" symptoms. If the symptomatology of Erichsen's disease is obscure, what shall be said of the pathology and prognosis, the latter especially being important in a litigated case? No one can tell the outcome of a case of Erichsen's disease, as the symptoms may vary from slight functional alteration to those which involve structural changes in the nervous system. The diagnosis, at best, whether we use the term traumatic neurosis, Erichsen's disease, or spinal concussion, is devoid of limitation; it does not define symptoms nor pathologic changes, nor does it lead to a prognosis. Hence, unless it can be clearly shown that there is a definite symptom-grouping that with average constancy results from injury, those terms should all be abandoned. In the examination of a case, we should view the symptoms as a medical problem and endeavor to make a prognosis upon the same lines that we do in disease and changes of the nervous system not caused by traumatism.

That traumatism may cause disturbance in the central nervous system scarcely admits of question; also that it may be organic or functional, though the latter is by far the more frequent. The organic disturbances of the nervous system may include any of the systematized or general degenerations of the brain and cord. In some cases there have been well defined spastic paraplegias. We are not sure that tabes can be caused by traumatism, but we are confident that with the predisposing factor of syphilis, traumatism may act as an exciting cause. The grosser lesions, such as fracture, hemorrhage from ruptured bloodvessels and pressure from the consequent hematoma, call for no extended description.

The functional group, by far the most important,

is the one which has caused all the controversy, and has led to the effort to substitute various names for an actual study of the nervous conditions. That grave functional disturbance of the nervous system may result from accident or injury, is, to my mind, an absolute fact, and this, in the absence of fracture of the skull or dislocation of the spinal column. When, however, we discover these symptoms, we find that they naturally fall into certain groups—hysterie, neurasthenic, and hypochondriac. This is not to say that every patient will present a pure type of one or other of these affections, but there are often mixed cases in which the hysterie or neurasthenic element is more pronounced. So far as my experience goes, neurasthenia was by far most common where a previous history of nervous weakness or a marked hereditary element was absent. Those cases which had a previous history of an hereditary or acquired nervous weakness most frequently presented the hysterie type. A small number were clearly hypochondriacs, presenting the typic manifestations of that psychosis, oftentimes with no other symptoms. I shall leave out of consideration the so-called litigation-symptoms, which, after all, are mere cases of feigning, and as a group have never merited the attention bestowed upon them. The confusion that has arisen regarding this subject is largely owing to the terms which have been employed. If we can divest ourselves of the idea that it is a terrible malady which no one understands, which is liable to rest as an incubus upon the patient all his life, without definite symptomatology, pathology, or prognosis, and come to the study of this functional group with the knowledge that the symptoms naturally divide themselves into 3 groups, the neurasthenic, hysterie, and hypochondriac, then we shall have cleared the ground of an immense amount of debris.

To those who have followed my argument so far it will be apparent that I accept the view that traumatism is a not infrequent cause of functional disturbance of the nervous system, but that I do not recognize a special form as the result of such cause. You may well ask what is the value of such a contention? It is, simply, that we bring to the study of these cases something tangible. The symptomatology of neurasthenia, its prognosis and treatment, has been well differentiated of late years. The same is true of hysteria and hypochondria. You may ask, what is the difference between a traumatic hysteria or traumatic neurasthenia, and traumatic neurosis? A traumatic neurosis may mean anything from a grave involvement of the nervous system, to forms so trivial as to be scarcely worth noticing; while in traumatic neurasthenia or traumatic hysteria, we are dealing with clearly marked divisions of the functional nervous diseases whose prognosis and treatment are well understood.

There is no difference between neurasthenia caused by traumatism and that due to auto-intoxication, or that following acute fevers. The essential feature of neurasthenia is that of undue fatigue upon slight exertion. To be sure, this symptom is one upon which the patient lays little stress; he significantly calls attention to the pain in the back or head or the peculiar sensations from which he suffers. What the patient describes as a pain, is usually a distress or discomfort that is oftentimes harder to bear than acute pain.

Hysteria, without the elements of heredity or previous well-marked signs of disorder, is rare. Here we have the characteristic anesthesia, narrowing of the field of vision, the almost characteristic inversion of color perception, sudden attacks of amblyopia and the peculiar mental state of the patient to guide us to a diagnosis.

In hypochondria we deal with a real psychosis in which the subjective condition of the patient's health is the matter upon which he has delusions, or, at least, morbid introspections. A hypochondriac is never a malingerer, but his statements regarding his physical condition are the developments of a perverted mental

state, just as are the delusions of poisoning or of persecution in melancholia and paranoia.

In the diagnosis of spinal concussion, too much importance has been attached to pain over the vertebrae. In some way this symptom has come to be associated with an intangible change in the spinal cord or alteration in its circulation. There is no evidence in support of such a view. In all organic diseases of the spinal cord, even including myelitis and tumor, we find that pain over the vertebral spines, either on pressure or spontaneously, is exceptional, and yet this symptom has largely served as a foundation for the various traumatic neuroses. A moment's thought will convince one that the innervation of the skin over the spinal column is not different from that of other parts of the body. It is supplied by mixed nerves, and these are, in every sense, quite as peripheral as are the nerves of the extremities or other parts distant from the column. There is no more reason to believe that tenderness over one of the dorsal vertebrae is indicative of disease of the spinal cord than is pain along one of the intercostal nerves, or, in the termination of the ulnar. These spinal pains, in the majority of cases, are fatigue symptoms of neurasthenia. Next to the heart muscle and the muscles of respiration, the erector spinae are the most constantly used muscles in the body, and naturally they are the first subject to fatigue. Except when the body is lying prone on a perfectly flat surface, these muscles are always in action.

Another point in reference to spinal pain which I think has never received the attention it deserves, is the fact that contusions and sprains of the articulations of the spine are a significant source of pain. When one thinks of the damage that may be done to a kneejoint by a simple concussion—the accumulation of fluid and the formation of adhesions in the synovial sac, together with the long train of symptoms which may result from it—we must conclude that a similar process is easily set up in the more than 50 articulations composing the spinal column, each lined with a synovial membrane, and in which adhesions and pathologic changes cannot be demonstrated clinically because of the smallness of the articulations and their deep situation.

To sum up a very brief paper, I suggest the following points for discussion: That concussion neurosis in all its various appellations, is an unfortunate and misleading term; that clearer understanding of functional nervous troubles renders such a term unnecessary; that pain and tenderness of the spine is rarely an evidence of change in the cord, but is usually due to fatigue of the spinal muscles, or sprains and concussions of the column; that most of the symptoms of spinal concussion, as the term is commonly used, are cerebral in origin, and that a correct diagnosis and prognosis may usually be reached by analyzing all such cases after the same manner that we do functional nervous troubles having their origin in non-traumatic causes.

University of Königsberg.—With the opening of the spring semester, Professor Garre, who has for some years been director of the Surgical Clinic of Rostock University, will take the chair in surgery left vacant by Professor V. Eiselsberg, who has been called to Vienna.

Benefit of Good Water and Sanitation.—To the artesian water supply and the sanitary sewage system of Montgomery, Ala., is attributed the decrease in the percentage of mortality. Comparing the rate of April, 1901, with that of April, 1881, it is found to be 20% less than at that time. This great improvement is due to the institution of these two great health promoters.

Alfred Fripp, assistant surgeon to Guy's Hospital, who recently received the C.B. in recognition of his services as Senior Surgeon to the Imperial Yeomanry Hospital, South Africa, has been invested by the king with the Insignia of the Royal Victorian Order, third class (C.V.O.). Mr. Fripp, who was Surgeon-in-Ordinary to the king when Prince of Wales, was recently appointed Honorary Surgeon-in-Ordinary to the king.

RESECTION OF SUPERIOR SYMPATHETIC CERVICAL GANGLION FOR NONINFLAMMATORY GLAUCOMA.¹

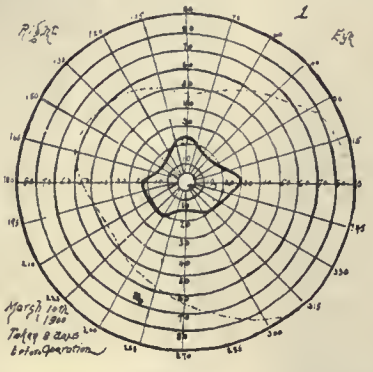
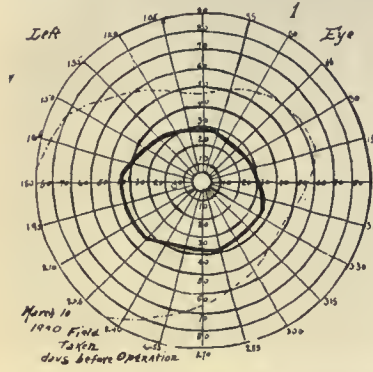
BY
JOSEPH MULLEN, M.D.,
of Houston, Texas.

Panas, of Paris, is opposed to this operation and reports a case in which vision is rapidly declining 3 months after the removal of the ganglion. It is claimed that removal of the superior cervical ganglion alone is

as well as a slight sinking of the eyeball and pupillary contraction. Lowered intraocular tension may be tardy. The pathologic state of the ganglion is that of sclerosis and is supposedly dependent upon pressure and inhibited nutrition.

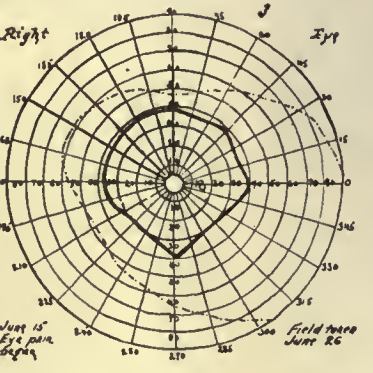
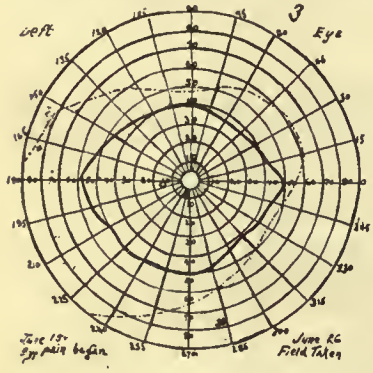
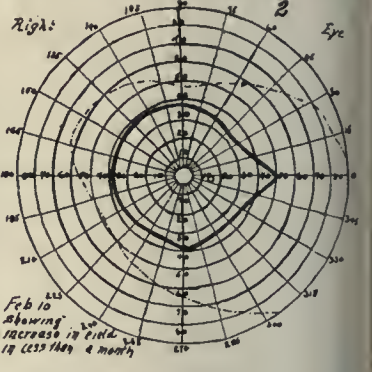
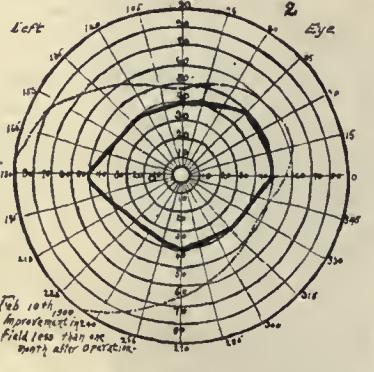
There are 2 ways of performing the operation. First, reaching the ganglion by the posterior triangle, and second, by penetrating the anterior triangle. A line drawn across either triangle on a level with the fourth cervical vertebra will run almost directly across the superior ganglion. Jennesco prefers the anterior or pre-mastoid route. The posterior or mastoid is less difficult to perform and by far less dangerous. The patient on whom sympathetomy was performed is a female aged 48.

Family history good and health excellent. Twenty-three years ago she had a bilateral iridectomy performed for acute glaucoma. The symptoms then, as she recalled them, were: pain in both eyes and temples, associated with diminished vision. There had been a gradual decrease in vision since that time, as well as increased and more persistent pains in the eyes, temples and occiput. By February 8, 1899, the pain in the eyes, temples and occiput had become intense, confining her to bed for 5 days at a time. Tension, +2 in both eyes. Vision in right eye, counted fingers at 5 feet; vision in left eye, 2/10. Operative coloboma of both irides, and deep glaucomatous cups were present. Eserin sulphate and the usual medicinal treatment was tried for some time without any improvement of vision or amelioration of pain. On March 18, 1900, resection of the superior cervical sympathetic ganglion was performed. The mastoid or postcervical route was chosen and the ganglion removed in its entirety. The spinal accessory nerve was not severed. The ganglion was found to be sclerosed. Pinching of the ganglion with forceps before its removal produced increased lacerimation.



sufficient in glaucoma, because all of the sympathetic fibers go to the eye from this ganglion. It is held by Jennesco that excision of the superior ganglion destroys all of the vasoconstrictor fibers of the eye, relaxing the arteries, lowering the blood-pressure and diminishing extravasation; also the nerve fibers which excite secretion, thereby modifying the volume of aqueous humor, and likewise the fibers which dilate the iris, permitting the pupil to contract, and enlarging the iris-angle so the obstacle to the outflow of aqueous is removed. Destruction also occurs in the fibers which supply the unstriped muscles of Tenon's capsule reducing pressure on the efferent veins and thereby enhancing the normal ocular circulation. In other words it is believed that removal of the superior ganglion completely breaks up the connection between the eye and the brain center, and it is claimed this is the starting point of the glaucoma. The immediate effects of excision are relief from pain, contraction of the pupil, increased lacerimation and sweating of the same side of the face. There is also conjunctival injection and oftentimes immediate reduction of intraocular tension. In my case

Immediately after removal the tears ran copiously from the right eye. The cheek was slightly suffused. The coloboma prevented any observation of myosis. The opposite eye was in no way affected. The deep cervical muscles were sutured with gut and the integument with silk. Primary union took place throughout. Pain ceased several days after the operation, and tension immediately fell to normal, after excision in both eyes. The tension and pain returned, however, June 26, 1900, about 3 months after the operation of excision.



periodical formication and flushing occurred and continued several weeks. Ptosis may occur as a remote effect,

Immediately after removal the tears ran copiously from the right eye. The cheek was slightly suffused. The coloboma prevented any observation of myosis. The opposite eye was in no way affected. The deep cervical muscles were sutured with gut and the integument with silk. Primary union took place throughout. Pain ceased several days after the operation, and tension immediately fell to normal, after excision in both eyes. The tension and pain returned, however, June 26, 1900, about 3 months after the operation of excision.

Chart No. 1 shows the field of both eyes 5 days before operation.

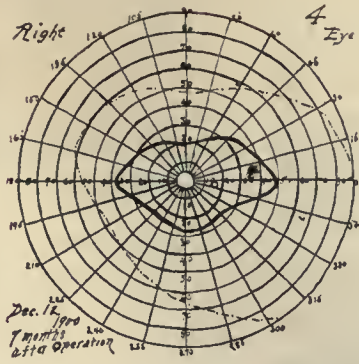
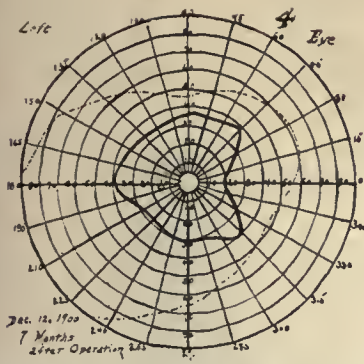
Chart No. 2 shows improvement in field 1 month after operation.

Chart No. 3 was taken June 25, since which time the pains in both eyes, the temples and occiput have steadily increased, and at the present time have reached their former frequency and severity.

An examination, December 12, 1900, shows the condition of the vision to be as follows: Right eye, 1/200; left eye, 2/200. Perimeter charts (No. 4) show a decrease in both fields.

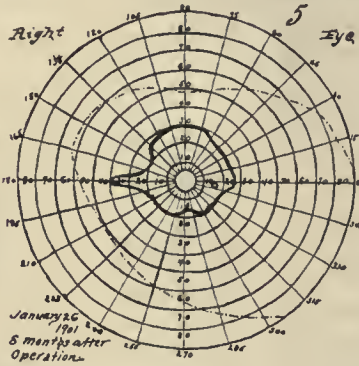
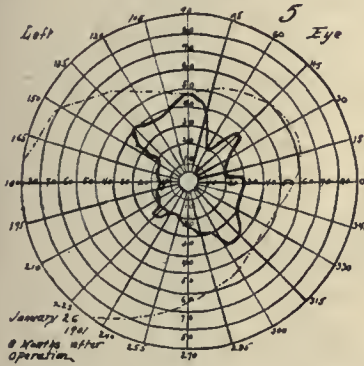
No microscopic examination of the excised ganglion was made, but a macroscopic investigation showed it to be sclerotic. My case is very similar, at the present

¹ Read at Third Pan-American Medical Congress, Havana, Cuba, February 5, 1901.



time, to the one reported by Panas, and, like his, has declining vision, so that I, too, desire to put my case on

the next step was to infect melted agar from which plates were made. The method of making plates was as follows:



record as proving that sympathectomy in glaucoma does not always produce permanent curative results.

A petri dish was sterilized and half a tube of melted agar poured upon the bottom dish. With a sterilized glass brush (made sterile by passing directly through the Bunsen flame) the degree marks were thoroughly brushed upon the agar spread in the dish. The lid was lifted carefully and quickly, and as quickly replaced. In the remaining half of the melted agar in the tube, the thermometer was rotated for a few minutes, then withdrawn, the tube agitated, and its contents poured into the dish containing the first part of the agar, and the lid replaced. The plate was then allowed to set.

Inoculations were also made in bouillon by rotating the thermometer in the medium which was then set aside for 24 or 36 hours, and when cloudiness appeared, plates of agar were made. The results obtained by this method were used only for the purpose of establishing the character of the organisms present, being controls to the agar plates made as already described.

THE BACTERIOLOGIC EXAMINATION OF CLINICAL THERMOMETERS.

BY

RANDLE C. ROSENBERGER, M.D.

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[From the Laboratories of the Jefferson Medical College Hospital, Philadelphia.]

I have been impressed with the fact that while surgeons, obstetricians, and many specialists recognize the necessity of guarding against infection by the sterilization of instruments used in operations as well as instruments of precision, the general practitioner not infrequently entirely neglects such precautions, especially in the use of tongue-depressors and thermometers. Upon inquiry many of the general practitioners have been found to make an attempt to limit infection by thermometers, resorting to some antiseptic or germicide kept in the thermometer case. While admitting the possible efficacy of such a method, its routine use in the careless manner commonly adopted is probably more dangerous than no attempt at disinfection, because an inefficient and unreliable method offers a sense of security not at all justified.

One physician whose thermometer I examined used a 1% solution of formalin, with which he saturated a small pledget of cotton kept in the thermometer case. Another practitioner applied carbolic acid in a similar manner. Upon the examination, however, of these containers and the enclosed cotton neither formalin nor carbolic acid could be detected by odor and the bacteriologic findings demonstrated their inefficiency. It is unnecessary to say that the customary habit of simply

rinsing a thermometer in water and wiping the instrument on a towel or handkerchief affords no protection.

A series of experiments have been made for the purpose of determining so far as possible in a small number of cases the probabilities of infection by means of a thermometer.

The method pursued was (1) to obtain the diagnosis of the case in which the thermometer was last used; (2) the time that had elapsed since the instrument was used; (3) how the thermometer was cleansed after using.

Technic of Examination.—Having obtained the information indicated in the foregoing, the next step was to infect melted agar from which plates were made. The method of making plates was as follows:

A petri dish was sterilized and half a tube of melted agar poured upon the bottom dish. With a sterilized glass brush (made sterile by passing directly through the Bunsen flame) the degree marks were thoroughly brushed upon the agar spread in the dish. The lid was lifted carefully and quickly, and as quickly replaced. In the remaining half of the melted agar in the tube, the thermometer was rotated for a few minutes, then withdrawn, the tube agitated, and its contents poured into the dish containing the first part of the agar, and the lid replaced. The plate was then allowed to set.

Inoculations were also made in bouillon by rotating the thermometer in the medium which was then set aside for 24 or 36 hours, and when cloudiness appeared, plates of agar were made. The results obtained by this method were used only for the purpose of establishing the character of the organisms present, being controls to the agar plates made as already described.

The next procedure was to observe how many colonies developed in the agar plates and what bacteria were present. The following is a detailed list of some of the examinations made and the results:

A thermometer used in a case of bronchopneumonia in a child was washed in cold water, dried with a handkerchief, and examined 2 hours later. In 48 hours, 46 colonies had developed; 17 of these were *Staphylococcus pyogenes albus*; 2 colonies were *Staphylococcus pyogenes aureus*; the remaining were sarcinae and yeasts.

A thermometer used in a case of diphtheria was washed with cold water, dried with a handkerchief, and examined 48 hours later. The plate yielded 12 colonies; 7 of these were *Staphylococci* (*pyogenes albus* and *aureus*), and the remainder were sarcinae.

A thermometer used in a case of tuberculosis (pulmonary) was cleansed as were the foregoing, and examined 48 hours later. The plate developed 1 colony of the *Staphylococcus pyogenes albus* and 2 colonies composed of sarcinae. The physician from whom the thermometer was obtained used carbolic acid in the thermometer case.

From a thermometer that had not been used for 42 days, and where the physician had forgotten the diagnosis of the case in which the instrument was last applied, there developed 6 colonies. Of these, 2 were *Staphylococci*, 1 was evidently a member of the colon group, and 3 were sarcinae.

A thermometer used in a case of rheumatism and immediately washed in a 5% solution of carbolic acid was examined 72 hours later, and yielded at the end of 48 hours' cultivation, 12 colonies; 3 were *Staphylococcus pyogenes albus*; 5 sarcinae; 1 *Bacillus subtilis*, and 3 of a chromogenic (pink) diplococcus.

A thermometer used in a case of pulmonary tuber-

culosis was washed in cold water, dried with a handkerchief, and examined 56 days later. In 48 hours 15 colonies developed; 4 of these were Staphylococci; 6 were sarcinae; 3 Bacillus subtilis; 2 chromogenic (pink) diplococcus.

A thermometer used during the puerperium was washed with cold water, dried with a handkerchief, and examined 24 hours after the last time it was used. Plates contained 2 colonies of the Staphylococcus; 4 Bacillus subtilis; 6 of the sarcinae, and 4 of the chromogenic (pink) diplococcus.

A thermometer was obtained from a physician who had used the instrument in a case of diphtheria, washed it in water, and later took his own temperature, again cleansing the instrument as in the first instance. I examined the thermometer 24 hours later. The cultures yielded 24 colonies; 6 of Staphylococcus pyogenes albus; 1 of a bacillus which I was inclined to regard as the pseudodiphtheria bacillus, and 17 colonies of sarcinae.

Without going further into the details of the examination in various cases, the following tables are submitted:

Table I is the result of the examination of thermometers used in the mouth, and Table II of thermometers used in the axilla.

TABLE I.

Cases.	Length of time after using.	No. of Colonies.	Bacteria found.
Bronchopneumonia	56 days	46	Staphylococci, 19 colonies Sarcinae, 27 "
Diphtheria	48 hrs.	12	Staphylococci, 7 " Sarcinae, 5 "
Tuberculosis	48 hrs.	3	Staphylococci, 1 " Sarcinae, 2 "
Rheumatism	72 hrs.	12	Staphylococci, 3 " Sarcinae, 5 " Diplococcus (pink), 3 col. B. subtilis, 1 colony
Tuberculosis	46 days	15	Staphylococci, 4 " Sarcinae, 6 " B. subtilis, 3 "
Puerperium	24 hrs.	16	Diplococcus (pink), 2 col. Staphylococci, 2 colonies Sarcinae, 6 " Diplococcus (pink), 4 col. B. subtilis, 4 colonies
Diphtheria	48 hrs.	24	Staphylococci, 6 " Pseudodiphtheria bacillus, 1 colony Sarcinae, 17 colonies
Not given	42 days	6	Staphylococci, 2 " Sarcinae, 3 " B. coli communis, 1 col.

An examination of the results yielded by this investigation would satisfy the most skeptical that thermometers can readily transmit the bacterial flora found in the oral cavity. The writer is aware that for the satisfactory completion of this inquiry it would have been necessary to examine the secretions in the mouths of the patients upon whom the thermometers were used, and to have satisfied himself as to the character of the bacteria that they contained. There is another source of danger into which the inquiry did not extend, infectivity of thermometer cases, but as the case would only be a carrier, the essential danger, if any exist, must be in the thermometer. In order to determine how readily thermometers could be disinfected the writer made 9 experiments, using the following technic:—

Immediately after removal from the mouth the thermometer was washed in water, immersed in corrosive sublimate for 2 minutes, removed from the antiseptic, dried in the air, and replaced in the case. Later the instruments were examined, using the same technic as detailed above.

TABLE II.

Cases.	Length of time after using.	No. of Colonies.	Bacteria found.
Chronic indigestion	24 hrs.	4	Staphylococci, 3 colonies Sarcinae lutea, 1 "
Chronic indigestion	3 hrs.	14	Staphylococci, 10 " Yeast fungi, 3 " B. subtilis, 1 "
Chronic indigestion	12 hrs.	12	Staphylococci, 11 " Yeast fungi, 1 "
Chronic interstitial nephritis	24 hrs.	6	Staphylococci, 2 " B. subtilis, 4 "
Gout	48 hrs.	4	B. subtilis, 4 "
Measles	24 hrs.	20	Staphylococci, 11 " B. subtilis, 5 " Unidentified bacilli, 4 "
Measles	48 hrs.	6	Staphylococci, 5 " B. subtilis, 1 "
Measles	8 hrs.	26	Staphylococci, 22 " Sarcinae lutea, 4 "
Scarlet fever	12 hrs.	24	Staphylococci, 18 " Sarcinae lutea, 4 " B. subtilis, 2 "
Scarlet fever	24 hrs.	18	Staphylococci, 12 " Sarcinae lutea, 4 " B. subtilis, 2 "
Tuberculosis	36 hrs.	6	Staphylococci, 4 " Sarcinae lutea, 2 "
Tuberculosis	24 hrs.	16	Staphylococci, 6 " B. subtilis, 4 " Sarcinae lutea, 6 "
Tuberculosis	72 hrs.	2	Staphylococci, 2 "
Tuberculosis	48 hrs.	6	Staphylococci, 4 " Sarcinae lutea, 2 "
Tuberculosis	8 hrs.	22	Staphylococci, 12 " B. subtilis, 8 " Sarcinae, 2 "
Diphtheria	24 hrs.	4	Streptococci, 1 " B. subtilis, 3 "
Bronchitis	72 hrs.	6	Staphylococci, 4 " B. subtilis, 2 "
Bronchitis	24 hrs.	12	Staphylococci, 8 " Yeast fungi, 4 "
Bronchitis	12 hrs.	28	Staphylococci, 12 " Sarcinae lutea, 10 " B. subtilis, 6 "

The results of these experiments are given in Table III.

TABLE III.

Cases.	Length of time after using.	Result.
Rheumatism	1 hour	Sterile
Chronic interstitial nephritis	2 hours	"
Croupous pneumonia	1 hour	"
Enteric fever	3 hours	"
Bronchitis	2 hours	"
Chronic indigestion	1 hour	"
Influenza	2 hours	"
Influenza	2 hours	"
Acute parenchymatous nephritis	1 hour	"

CONCLUSIONS.

1. It is possible for the thermometer to be laden with the usual flora of the oral cavity.
2. Such bacteria may retain their capability of growth for an indefinite time, at least 2 months, as shown by the above experiments.
3. Many pathogenic bacteria possess similar capabilities, and it is not unreasonable to assume, although the above experiments are not conclusive upon this point, that transmission of bacterial disease by the thermometer is possible.
4. Thermometers are easily disinfected.
5. Where possible each patient should be possessed of a thermometer, as much his own property, and as sacred to his own use as his toothbrush.
6. Where for reasons of economy or otherwise it is impossible to carry out the recommendations expressed

in conclusion 5, the thermometer should be disinfected before and after using.

7. The custom now prevalent in the hospitals of keeping thermometers in disinfecting solutions is to be commended.

ATYPICAL PNEUMONIA AND PULMONARY TUBERCULOSIS.

BY

W. H. BERGTOLD, M.D.,

of Denver, Colo.

Current medical science and effort can aspire to nothing higher than the endeavor to lessen and eradicate tuberculosis; there are many factors in this aim, as the profession works at it today, worthy of our unceasing attention. Everything done to enlighten the public as to methods insuring better personal and communal hygiene, and tending to make clear the dangers of tuberculosis, is to be encouraged and assisted. On our side we must not forget to remind each other that as we desire the public's cooperation in such an all-important matter, we owe to it our best endeavors to strengthen our efforts and perfect the methods used in hastening suppression of the disease.

One of the chief aims in the struggle against tuberculosis is to make an *early diagnosis*; *ceteris paribus*, the sooner a case of tuberculosis is detected the better are the patient's chances of recovery, and the earlier can he be taught to conduct himself so as to be of the least danger to himself and the community. It is therefore one of the first duties of the medical man to improve constantly every method and to systematize all knowledge leading to an early diagnosis of pulmonary tuberculosis; and it follows that anything bearing on the early diagnosis of this disease, or leading to a suspicion of its presence, is timely and important.

A certain symptom-complex gradually impresses us as a given disease, to which we apply a name. No two cases of any disease have ever been exactly alike, and we do not expect any given cases of the same malady to agree with other in all details; often the conventional limits of a disease-picture are not fully realized, and we say that such a case is not typical, or that we are dealing with one of two diseases, similar superficially, but essentially different. It is of great moment, at times, to be positive as to which one of two diseases is present, not only because of treatment, but also upon account of the needs of prognosis and quarantine. Thus, while it makes a great deal of difference in the treatment and general management whether a given case be streptococcus or diphtheric angina, it also makes an important difference, both as regards treatment and prognosis, whether a case be true croupous pneumonia or acute pneumonic tuberculosis.

Croupous pneumonia, of all acute diseases, in a large proportion of the cases, follows closely a pretty clear type; but is at times subject to variations, having unusual onset, course, and termination, though these forms are certainly in the minority.

Is there any reason why we should be more than usually watchful of an atypical case of what seems croupous pneumonia? Any cursory study of a considerable number of histories covering cases of pulmonary tuberculosis would lead us to answer in the affirmative. By atypical pneumonia I mean an inflammation of the lungs simulating croupous pneumonia but lacking one or more of the latter's cardinal features, and especially showing anomalies of duration, temperature curve and termination. Many cases of tuberculosis have croupous pneumonia as a terminal infection; on the other hand there is plenty of evidence to prove that many cases

beginning apparently as croupous pneumonia, later on show patent indications of pulmonary tuberculosis, and succumb to it.

In studying my cases of pulmonary tuberculosis I have taken particular care to secure facts relative to the possibility of previous pneumonias, together with full details concerning the true character of the attack as evidenced by symptoms, course, etc. In one series of 193 cases of pulmonary tuberculosis, 26, or 13%, gave a history of previous "so-called" pneumonia, (or pneumonias), all of suspicious type, varying from one showing no signs or symptoms of croupous pneumonia except fever and consolidation, to others atypical only in one or two ways, *i. e.*, altogether without expectoration, or long continued with no crisis.

Croupous pneumonia is the most common of acute diseases, and in fact seems to stand next in frequency to tuberculosis; the ratio of deaths of tuberculosis as against pneumonia being as 100 to 76, according to the U. S. Census Report of 1890. It is probable that this large death-rate in pneumonia stands for only about 25% of those attacked, showing enormous frequency of the disease in this country alone; but we must also bear in mind that there are probably thousands of deaths reported as pneumonia, where the diagnosis was vague, and that among them are probably a variety of lung inflammations not all croupous.

If 13% of cases of pulmonary tuberculosis show previous pneumonias, all more or less closely related to the onset of the tuberculosis, it is reasonable to suspect that many cases of croupous pneumonia end in pulmonary tuberculosis. Nevertheless Osler says, "Ordinary fibrinous pneumonia never terminates in tuberculosis." In this apparent contradiction lies the point of these remarks. It indicates a discrepancy somewhere: either the assumed infrequency of croupous pneumonia terminating in tuberculosis, or the observation that 13% of my tuberculous cases show in their histories previous pneumonias, or the diagnosis of antecedent pneumonia, is incorrect. I believe that the so-called pneumonias were mostly incorrectly diagnosed, and that these acute attacks were, in fact, acute onsets or outbreaks of previously existing pulmonary tuberculosis. Long after all indications of a true croupous pneumonia should have ceased, these cases, through this error, remained with the true nature of the cough undetected; meanwhile the persistent cough continues, the patient is unknowingly a disseminating focus of tuberculosis, and remains so until attention is compelled to the true malady by more obvious signs; moreover, valuable time is lost, marked physical deterioration may ensue, and the chances of an early arrest, with minimum damage to the lungs, grow less and less.

If I read these facts aright, they seem to point out but one duty—that whenever we see a case of what is apparently croupous pneumonia, very atypical in onset or course, or having subsequent persistent cough, it behooves us to bring to our aid as early as possible every diagnostic method to detect or exclude the presence of tuberculosis. It is common for tuberculosis to announce itself by an onset superficially simulating croupous pneumonia. The following cases will illustrate:

J. G., aged 28, family history clear, except that father, still living, had been alcoholic, and a brother had died a year previously of pulmonary and laryngeal tuberculosis. He had always been well up to the date of present illness, which came on with a chill, sharp pain in the side, shortness of breath, high fever, and signs of consolidation of the left lower lobe in its upper portion; there was a slight mucopurulent expectoration from the beginning.

Careful questioning elicited the fact that the expectation had been present for nearly 6 months before the illness, which together with the family history, and the anomalous expectoration, cast suspicion upon the apparent nature of the malady. An immediate examination of the sputum showed many tubercle bacilli, proving

that we had to deal with tuberculosis and not with true croupous pneumonia of an atypical character.

My experience leads me to believe that there are many such cases occurring every day, being diagnosed pneumonia, and recognized as tuberculosis only when the malady declares itself so plainly that even a layman could determine its presence.

Though it is probably true that few cases of croupous pneumonia culminate in tuberculosis, still we must not forget that it is possible to have a mixed infection, wherein the pneumococcus may cause a goodly share of the first changes, and the tubercle bacillus bring in its characteristic effects later.

During the past year the following case, illustrating the above-mentioned fact, came under observation:

S., aged 36, always well up to 1899; from 1896 to 1899 worked unduly hard, doing much traveling with little rest. In 1899 he had an attack of croupous pneumonia which was atypical in that there was no chill, no side pain, and no rusty expectoration. In the slightly tenacious mucous expectorations pneumococci were found; the expectoration persisted after convalescence was well established, and tubercle bacilli were found in it 3 weeks after the pneumonia had ceased.

It is quite possible that this case may have been one of tuberculosis engrafted on a resolving pneumonia as a secondary infection; but I believe that so rapid an infection must be exceedingly rare. In my histories, one record says, among other things:

March, 1899, had an atypical pneumonia in Pueblo, Colorado. This man was, when I first saw him nearly a year thereafter, the picture of health, weighing 196 pounds; yet notwithstanding, had a tuberculous infiltration in the right lung, with slight softening, and tubercle bacilli in the sputum. One suspicious fact about his history, which should be most carefully considered, was that during the 3 years previous to 1899, he had been more or less constantly with, and caring for, his wife, who had pulmonary tuberculosis. No attention was paid to his slight, persistent cough and the expectoration that continued after the pneumonia, until some months later, when its failure to disappear resulted in an examination for tubercle bacilli with a positive result. I take it that the primary attack was a tuberculous bronchopneumonia, the true nature of which, and the subsequent cough, should have been recognized earlier.

In many cases encountered during the past 3 years, during which time I have given this topic most careful attention, I have observed tuberculosis develop in the same lobe in which there had been a previous attack (in some cases attacks) of pneumonia; this is more than a coincidence, as careful inquiry showed such pneumonia-like seizures to have been atypical. These facts, it seems to the writer, warrant the conviction that under such circumstances we had to deal with the histories, not of true croupous pneumonia, but of tuberculosis, having an acute, severe onset.

This is, perhaps, all well known; nevertheless, every one of the cases under consideration, was not correctly diagnosed until a considerable time had elapsed, some remaining unrecognized as tuberculous even for several months. It is not the purpose of this paper to dwell on differential diagnosis between croupous pneumonia and pulmonary tuberculosis, nor on the self-evident need of accuracy in nomenclature; it is desired rather to emphasize this point: *Be suspicious of an atypical pneumonia.* Let it be understood that I by no means consider all cases of unusual pneumonia to be tuberculous, but I do believe that every such case should be suspected and put under surveillance until proved not tuberculous. It is my belief that a large percentage of cases of atypical pneumonia would prove tuberculous, exhibiting the tuberculous deposit in the same area previously attacked by pneumonia, if watched beyond convalescence.

Happily we have today sufficient diagnostic resources at our command to enable us to make an early, correct diagnosis in the class of cases under consideration. A careful blood-count at almost the onset might enable us to suspect the nature of a pneumonia-like attack, possibly even at once excluding completely a croupous pneumonia; moreover, we should always examine for

pneumococci or tubercle bacilli, and later on, if need be, give a diagnostic injection of tuberculin, as in the early stages we may fail to find any characteristic organism in the sputa. We must concern ourselves also with the previous history of a case; if it shows a tuberculous tendency in the family, or evident channel of infection, and if there is an atypical pneumonia, the case should be watched with especial care. We must also not forget the intrinsic tendency of pulmonary tuberculosis to heal, or be kept in abeyance, even under very unfavorable circumstances, by a strong reactive tendency in certain individuals; such a one may have a so-called pneumonia, and have had a slight cough preceding it for several weeks or months, with perhaps a slight hemoptysis, and recover, remaining unrecognized as a case of tuberculosis.

Further and more amplified examination of clinical histories and literature would show a larger percentage of patients having had atypical pneumonia previous to tuberculosis, than is indicated by my percentage. Let it be understood that all these 26 cases remained undiagnosed as tuberculous for a considerable period after the acute pneumonic attack; 7 gave a history of more or less persistent cough for varying periods before the pneumonia, for in 1 case 8 years; 17 had marked cough remaining after the pneumonia, with mucopurulent expectoration; 7 developed the tuberculous deposit in the same lobe that had been previously solidified by an atypical pneumonia; 4 had repeated attacks of pneumonias, at intervals, all distinctly atypical in history and course; 8 had unusually severe pleurisies with the pneumonias. Surely such histories carry an ominous stamp from the onset.

With our present numerous and advanced methods of diagnosis, including examination of the blood and of the sputum for tubercle bacilli and pneumococci, the biologic and tuberculin tests, and the ordinary methods of chest examination, there is indeed little excuse for allowing similar cases to go many weeks, even days, unrecognized.

ELECTROLYSIS IN DISEASES OF THE SKIN.

BY

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of Cincinnati, O.

In my cases I prefer the wet galvanic battery. A constant current is necessary. The current being made we have alkalies liberated at positive pole while at negative acid forms. At the negative pole we see bubbles of hydrogen gas forming caused by the potassium and sodium set free uniting with the oxygen causing the decomposition of water in the tissue. The same chemical action produces caustic soda and potash, and thus destroys animal tissue, as if applied in the usual way. At the positive pole the tissue becomes oxidized and charred by the oxygen and chlorine which is produced. If a steel needle is used on positive pole it will become oxidized. The results obtained are far more satisfactory when the needle is used on negative pole. When the needle is attached to negative pole the destruction or dissolution is immediate, the needle remains clear and is easily withdrawn; while with the needle on the positive pole a dark center is formed, the puncture remains hard, and the needle has a tendency to stick and become oxidized.

The more simple in construction the battery the better. A constant current, and sufficient knowledge to use the proper amount must be gained by experience. The milliamperemeter is used by a great many, but with a proper amount of experience I believe one can do the work as well without it. I depend entirely upon observing the formation of hydrogen gas around the needle, thus indicating sufficient destruction. As to the num-

ber of cells to be used, or the time to leave a needle inserted in the hair follicle, there is no rule that can be invariably relied upon. Each individual differs, some being good conductors, and others bad. Atmospheric conditions make a difference also. A thin, moist skin is a good conductor, while a dry, thick skin conducts very poorly. The amount of current used cannot be uniform. I have frequently removed a hair with 4 cells, leaving the needle inserted in the hair follicle half a minute before destruction was sufficient, while with the next hair it was necessary to remove the needle almost instantly. A hair requires a certain degree of destruction, regardless of the time required or the current used. Therefore, the milliamperemeter is of but little value. A very good rule to follow is to insert the needle about $\frac{1}{4}$ inch into the average hair follicle, but a much less distance for smaller hairs. Aim to have the point come in contact with the hair bulb. One may tell when the needle reaches the hair bulb by the slight resistance met. A puncture of the sheath of the hair follicle will be recognized by a slight jerk as the needle passes through the mesh of the subcutaneous tissue. Leave the needle inserted until the white froth bubbles from around it, but there is great danger in leaving a needle inserted too long. When a scar forms a small scar follows, and when hairs are closely situated, a large scar will sometimes be the result; this may be avoided by using a straight steel needle. Never use one with a bulbous point, as it is not only painful to insert, but in order to destroy the papilla, one must use a stronger current. The neck of the needle being smallest at the surface we have our strongest current here. Consequently the greater destruction is at the surface instead of at the root of the hair. Use a perfectly straight needle, and as small as possible. The end must be blunt, not sharp, thus rendering it less liable to puncture the sheath. I prefer jewelers' brooches, Nos. 3 to 7.

Most physicians who do this special work recommend the use of the sponge electrode, but I am unable to get a uniform current by this method. The operation being painful, the moment a stinging sensation begins the patient grasps the sponge harder, producing a stronger current. I always place a small bowl of water in the patient's lap, place one end of the conducting cord attached to the positive pole into the bowl, and allow the patient to dip 2 or 3 fingers of one hand into the water, thus making the circuit. To lessen the pain I have the patient remove the fingers from the water while inserting or removing the needle; destruction having been sufficient, I remove the hair with epilating forceps.

When hairs are extremely large, I reinsert the needle, that I may be absolutely sure of the destruction. I remove about 250 hairs in 1 hour, and have worked 6 hours in a day upon one patient without the slightest skin injury. The operation produces slight redness, which disappears in a day or two. I always dip the needle before using in a carbolic solution and bathe the parts with an antiseptic solution, and when the work is completed apply zinc oxide or a preparation of cold cream. I have never met any complication directly due to the operation, nor have I ever produced scars. Superfluous hairs can be permanently eradicated, but the operation being tedious, it requires great endurance on the part of the patient. It is absolutely impossible to remove the hairs permanently with one insertion, as a small number of hairs will return, usually 10% to 15%, depending entirely upon the ability of the operator. A number of fine hairs will develop after the removal of the coarser ones. This is not due to stimulation produced by removing the coarser ones, but these are hairs which have not yet reached their normal size, and they will grow regardless of treatment. The most satisfactory patients are women past middle life when all lanugo hairs have developed; in young women it may be years before the development is complete.

All forms of nevus may be successfully treated by electrolysis. The common birthmark or "port wine mark" is the most unsatisfactory under this head. In treatment, first observe the small capillaries by stretching the skin tightly, then a small needle attached to the negative pole is passed into each capillary, following its course so far as possible, allowing the needle to remain until destruction has been sufficient. Repeat the operation in the above manner endeavoring to destroy the vascular supply. The result, though tardy, will be very satisfactory, and very little, if any, scarring will result if one is careful. If it should be impossible to follow each capillary, then insert the needle at an angle into the meshwork of fine capillaries. Make a series of punctures, not too close together and in parallel lines across the mark. With each puncture the needle should go into the subcutaneous tissue. Great care must be taken not to produce a great, white scar.

Moles are destroyed by passing a small needle through the base in several directions. A strong current is required, however, and the mole should be almost cut away by the needle. One operation is sufficient in such cases. A scab will form and should not be removed, but let fall off of its own accord. In most cases no scar will result, but should one form it would be very insignificant and scarcely noticeable. Hairs should be removed several days before attempting removal of a nevus. In removing the hairs the nevus is frequently reduced and in some cases entirely removed.

Cavernous nevus, when not too large, can be cured by electrolysis. In this operation a small needle must be passed through and beneath the growth, making several passes parallel. Then repeat it in the opposite direction, or you may radiate the needle from the one point of entrance. No hemorrhage will result and the operation may be but a short one.

Dilated vessels can be destroyed by passing a No. 3 or No. 5 needle perpendicularly into the vessel. As the destruction takes place small bubbles of gas can be seen coursing in all directions. It may be necessary to repeat the operation. A current of from 4 to 6 cells is necessary.

Cicatricial scar tissue can by this treatment be successfully removed also. I use the No. 3 needle, with just enough current to produce a stimulating effect; puncture the scar, allowing the needle to penetrate the subcutaneous tissue; leave the needle inserted a few seconds and then make the punctures very close together, covering the entire surface. In about 3 days, at the seat of each puncture a small branny scale will form: These are removed and the operation repeated. The cicatricial tissue will grow thinner after each operation and a pinkish hue appear. Not only does this operation apply to scar tissue, but the unsightly skin graft, with its shiny, white surface, improves. In the removal of fibroma, warts and fibrous nevi I use a flat needle or knife, sharpened on either side, tapering gradually to a very fine point. I push it through the growth in several directions, cutting it almost entirely off. A minute white scar can be substituted for powder marks or tattoo-marks by passing a small needle into the discoloration, as in removing superfluous hairs. Gradually the discoloration disappears, leaving a shiny white spot which is hardly perceptible. The cicatricial tissue can be afterwards treated in the manner described, leaving a pinkish surface.

Xanthoma readily succumbs to electrolysis by simply passing the flat needle through, and gently pressing it to either side, or, if unusually large, by making several punctures in opposite directions, each puncture requiring about a half-minute.

Enlarged pores, commonly called blackheads, are treated by inserting a small needle into them, and rotating it around and around to destroy the walls; healing causes the gland to close entirely. A minute white scar will sometimes result, but often no trace whatever is perceptible.

SPECIAL ARTICLE

THE NERVOUS EXHAUSTION DUE TO WEST POINT TRAINING.

BY

DR. CHARLES E. WOODRUFF,

of Fort Riley, Kansas.

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In about three-fourths of the Congressional districts, selections to West Point cadetships are made by competitive examinations; generally there are a large number of competitors, and the successful candidates must be very able and well trained in their studies. Every year there are thus sent to the academy a very intelligent set of men, the pick of the United States. It is reasonable to expect that a large proportion of them should become famous or at least men of some note and success in life. The fact is the very reverse occurs, for it seems as though the best way to extinguish a man is to send him to West Point. Of the hundreds of able men admitted, so few are ever heard of again that civilians constantly ask, "What becomes of all these picked men if they are the choice of the United States?" "What is it the academy does to them to snuff out their abilities or keep their lights under a bushel?" Of those who enter the academy about one-half graduate, so that the weeding out should leave a remarkably picked set of men who should accomplish much in their life-work.

We must assume that the methods of selection really secure brainy men, but we can positively deny that such examinations secure the best, for it is a fact that intellectual traits like quickness and memory, by means of which boys compete in their studies, are not those upon which success in life depends. The real basis for success is mental energy combined with a good balance of faculties resulting in correct judgments. Great men not infrequently are noted as having been poor students at college. The quickness and brightness so necessary at West Point are really undesirable qualities, for they are apt to make the mind act too quickly for correct reasoning, and they are the leading characteristics of a large class of men who have little staying powers. The nerve-tissue is flabby, easily fatigued, and wears out in a few years. Some of these men are wonderfully brilliant and capable of considerable mental effort, but only for a few years. Finally, quickness and brilliancy may exist in degenerate minds of a very low order, and boys of this class can enter the academy, but they never stay long. So we are perfectly justified in denying that the candidates are all of the proper material for success in life, though we cannot deny their generally high average of ability. Many graduates of West Point have occupied the highest positions, have proved to be great men and have reflected great honor on their school. They have been great leaders in statesmanship, business, war, art and literature, and the roll of honor is a long one, of which every graduate is justly proud. The point in question is that the roll of prominent names shows too small a percentage. Did the present methods secure the best men, the Engineer Corps, receiving only the cadets of the highest standing, should have at least 90% of noted men. Edward Everett Hale said: "If you should take 12 prize medal men from Harvard and put them in a sinking ship they would all drown through inability to construct a raft." They are mental sponges capable of great absorption but not able to produce. They are generally outstripped by others, as in the famous Yale class of 1837.

Educators give many reasons for the alleged poor results of West Point training. Among others may be mentioned the fact that military students do not work voluntarily, but are forced to it to secure the prized com-

mission in the army. They cannot do otherwise than consider the curriculum a necessary evil when they see those who fail at the academy and who through political influence secure civil appointments to the army, subsequently succeed in their profession as well as graduates. In civil schools the student wants the course of instruction by means of which he is to succeed in life.

It is an error to rate scholarship as military ability. Some successful military leaders have been noted for their ignorance of general topics and hatred of books. Nevertheless it takes so much study to master the details of military science that the majority of its great professors have, like Napoleon and von Moltke, been hard students.

In the late war there was a remarkable absence of West Pointers among the ranking officers, but in this there is no reflection on the academy, as it was due to an unavoidable circumstance. After the civil war a large number of young volunteers who had the requisite influence were given commissions in the army, as there were not enough graduates for more than a small number of the vacancies. These volunteers had by gradual promotion just reached the upper grades, so that nearly all the field officers and the higher officers in the staff were of this class. West Pointers who graduated after 1865 were therefore in subordinate positions.

The training of the cadet in subordination and obedience must also be taken into account, for this dwarfs and even stifles the mental faculties needed in aggressive initiative. Great military leaders, full of energy and new ideas, are, as a rule, undisciplined and insubordinate in the lower grades. Too much training in blind obedience unfits for independent command and excellent subordinates are apt to become moral cowards when thrown on their resources. West Pointers explain that their training fits them only for subordinate positions where, as good soldiers, they should have no ideas beyond the intelligent execution of orders. This is why civilians and outsiders, who have never been subjected to the mentally destructive effects of discipline, occasionally spring to the front and take the lead where well-trained soldiers fail.

There are two other reasons for the absence of expected achievements on the part of West Point graduates. In the first place, promotion falls to those who live longest, whether they are fit for higher duties or not. There is no incentive to work, and neither civilian nor military officer will work unless he can secure the rewards of work. In the second place, men with new ideas who suggest changes in existing things, are quite apt to be insubordinate and sooner or later get into trouble. They may be considered even pestiferous and it takes them but a short time to learn that they are more comfortable if they make no suggestions.

A critical review of the methods of study and of the life of the cadet, leaves no doubt in the mind of the physician skilled in such matters, that many of the failures we have mentioned are due to nervous exhaustion caused by the unwholesome high pressure of their four years of toil. This matter of school routine has occupied the attention of physicians and educators for many years, and the discussions have crystallized the opinion that former methods have been of great harm, and that modern schools must ease up the strain on the delicate nervous system in childhood and youth. A few years ago, Dr. E. Stuver, of Fort Collins, Col., addressed queries to many physicians and educators, and his paper is a basis for argument for it gives the opinions of practical educators who see the harm done and of practical physicians who are called upon to treat the minds and nerves wrecked by the teachers.

The nervous system of a child is an exceedingly delicate mechanism which is easily disordered. He requires wholesome, easily digested food, plenty of fresh air and sunshine, frequent opportunities for unrestrained exercise, frequent periods of relaxation for rest, frequent

changes in work and plenty of sleep. It is known that the nervous system retains its infantile traits until the twenty-fifth year, at which time we are accustomed to call it stable. West Point cadets are all under the age of stability and the rules governing the training of young children apply to them with equal force, though of course in modified form. It is safe to apply to West Point the consensus of opinion of educators in the lower grades to determine the faults of that system.

The answers to Dr. Stuver's questions brought out at the very start the different points of view of the two classes of men—the teachers who do the damage and the physicians who recognize it. To the question, "Do you think our comprehensive course of study is best calculated to develop the highest physical and intellectual powers of the child?" 29 educators said no, 18 were doubtful, and 15 said yes, but of the 35 physicians who answered, 32 said no, only 1 was doubtful, and but 2 said yes. We will probably find the same differences of opinion between line officers and surgeons as to the damage done by the West Point course.

In the answers to Dr. Stuver's questions there were differences of opinion as to the proper length of time which could be safely devoted to any one recitation, but the tendency was to limit them to 10 or 20 minutes in the primary grades and to 20 or 30 minutes in the grammar grades, teachers varying greatly in their ability to interest the scholars and postpone fatigue. When a child tires it is time to stop, for further effort only injures the brain, as it is accomplished at greater expenditure of force and the impressions are very evanescent. For West Point, therefore, the extreme limit of safety is 1 hour, and the extra half hour is not only wasted but actually injurious, and they would accomplish more with half the recitations. To keep a child of 14 or less, 2 hours on a single recitation is said to be a heartless violation of all mental laws, and we can assert the same of the long recitations at West Point. In addition, the cadet, when through his work at the blackboard, must face about and stand at the military attitude of "attention," which is such an unwholesome strain that they now and then feel faint and have been known to go to hospitals as a result of this exhaustion.

The child's normal nervous force must have an outlet in motion. When this restlessness was considered wickedness, repression was resorted to and the destruction of the minds of children was not uncommon. There is still much unwholesome restraint, and one has only to watch children as they are dismissed from school to be convinced of the pressure they have been under, for they all seem to explode as soon as they are outdoors, running, screaming, tumbling, and going through their various antics. It is now known that they cannot keep quiet without an effort of the will, which is extremely exhausting, and that unrelieved nerve-pressure causes considerable destruction of nerve-tissue. Hence, in answer to the question as to how often there should be recesses or periods of relaxation, the majority said every hour, one saying every 45 minutes. It is a matter of experience that more work is done with less fatigue, if there is an opportunity every hour for the students to blow off surplus steam by unrestrained childish motion, and the more noise they make the greater the apparent relief. "Children must have their halters taken off, the bars let down, and be turned loose like young colts."

There is a partial compensation at West Point, in that the recitations alternate with periods of study in the rooms. Here there is a relaxation from the rigid attitude of attention of the class-room and the restraints of the instructor's presence, but there is still confinement, necessity of quiet, and a repression which are just as wearing in the long run. Except for a half hour after each meal and a trifle longer on Sundays, the cadet is constantly under an unwholesome, unscientific and exhausting restraint.

Calisthenics and drills require an effort of the will

and increase exhaustion instead of relieving it. Teachers and physicians alike recommend frequent relaxation in the open air free of all restraints. What a mistake, it is, then, to consider the daily rigid military drills of the cadet a wholesome exercise for boys whose will power has already been strained beyond the safety point. As a daily drill is necessary, it should be considered work, for which there should be periods of relaxation to compensate.

In all colleges there are explosions of nerve force in which the students seem to go "off the handle." They are normal, natural, noisy ways of "blowing off steam," and have more to do with keeping the students healthy than any other college habit. These outbreaks have been notably lessened by the introduction of gymnasiums and athletic sports, normal, voluntary and unrestrained methods of relieving nervous tension. All these reliefs are reduced to an unwholesome minimum at West Point and the repression has the result of more exhaustion. It can be denied that the frolic needed in the cadet life will destroy discipline, for it would be just as absurd to claim that the screaming, yelling, howling mob of school children at recess is ruining the public school discipline. The wholesome taste for sport is so starved in the cadet that his mania for extracting fun out of everything is really piteous.

The unwholesome nervous strain of cadet life, with its violation of mental laws, is very ably stated by Lieutenant W. E. Ellis, Fourth U. S. Artillery, in a recent article written in praise of the school. "The amount of work performed by the cadet is prodigious. Scarcely a moment is wasted. Under the rigorous discipline, which taxes mental and physical capacity to the utmost for six days in every week, with only a slight loosening up on the seventh, the West Point cadet is always, barring accident, in perfect physical condition. Many a baseball victory has been won with hardly an hour's preliminary practice during the week, and preparation for the most terrific football struggle has been confined to an occasional hour under the electric light in the riding hall, in addition to brief practice on the plain before breakfast and after drill. From 5.30 in the morning throughout summer, and from 6 in winter, during the whole 4 years' course, with only a single vacation midway in the course, the unceasing work goes on, until taps sound at 10 in the evening. To illustrate, the astronomical course to which most colleges devote a year's study is covered at West Point in 2½ months, and it is done thoroughly, too, as is proven by the rigid examinations which every cadet must pass to maintain his position in the class."

As "training" is unnatural, exhausting and harmful in many ways, and is the principal factor in shortening the lives of professional athletes, who by the way are notoriously shortlived, we can appreciate the harm done to the cadet by this system. It is surprising to what extremes of unwholesome existence a healthy boy may be subjected without killing him. It is on this account and also by reason of the exceptionally good physique of the cadet at the start, that the damage is hidden. Strains which break the adult only bend the youth.

The above quotation shows that the educational system is one of intense cramming, for the whole course covers 3 times as much ground as any brain can healthfully absorb. In addition the cadets become expert in memorizing for short periods. They can read over certain lessons so intently that they can recite them if asked within an hour, but so soon as they leave the class room, they feel the knowledge oozing out and by the next day have forgotten much of it. The length of the daily lessons is so inordinate that no human brain can learn them properly in the required time. This method of using a superficial memory is the best the cadet can do, and it is vicious in every respect.

Of many schools it is said, "Unfortunately, under our cramming, high-pressure methods of education, with the

frequent examinations and grand-stand plays for public show and approval, children are spurred on and incited to cram and memorize, regardless of the permanent effects of such a course. This sort of work keeps the child in a constant state of worry, anxiety and excitement; the brain is irritated, the vitality lowered and the mind weakened. Under such a system even the brightest and best pupils will lie awake nights and worry over their grades, their examinations and promotions, when never a thought of care on such matters should disturb them."

Graduates of West Point have told me that while at the Academy their nights brought distressing nightmares more often than absolute oblivion. They seemed to have problems floating before them, and they struggled in dreams with work. This means that the overexcited brain-cells refuse to quiet down and that the bloodvessels are still dilated instead of being contracted as in normal sleep, and though parts of the brain may sleep other parts are just as active as when the cadet is awake. No wonder then that they sometimes get up in an exhausted condition as when they retired.

The question of the amount of sleep is an important one, for brain nutrition takes place during this time. Deprivation of sleep is far more destructive of brain tissue than is starvation. At the age of 16, there should be 8½ hours' sleep for mechanics, but brainworkers must have at least 10 hours. These periods are lessened as we grow older, so that at 24 years of age the minimum is 7¼ hours and the maximum 9¼. Taking an average of all these ages we can affirm without fear of contradiction that the cadet should have 9 hours' sleep, and that some of them should have 10. Yet according to the regulations it is impossible for them to get more than 8 in winter and 7½ in summer. Cadets, no matter how exhausted, are not allowed to go to bed until after the evening study hours, a barbarous custom which compels many of them to sleep in their chairs on occasions when they are too exhausted to study at night.

Some students drink large quantities of coffee to keep them awake. They are spurring on by this stimulant a tired nervous system at the very time the opposite class of drugs is imperatively needed. Sedatives must be used to contract the dilated bloodvessels and to quiet and soothe the irritated nerve-cells into recuperative sleep. It would be a good plan to keep these useless stimulants from the cadet supper-table, and indeed, as such drugs may be very harmful if used in excess before the age of stability, there is scientific reason for keeping them even from the breakfast table. Very little coffee is allowed the German cadet.

It is known that mental energy decreases from the moment of awakening and that the machine seems to run down about the middle of the afternoon, and this is the reason for the siesta of middle life and old age. After a short sleep or "nooning" there is a rise of energy. "Mental work is injurious after dinner," so the greatest damage at West Point probably takes place in the afternoons, when the sufferings of the cadets in their efforts to keep awake are sometimes acute. The Germans are much more humane, for their cadets have a 2 o'clock dinner, after which they are free until 4.30.

It is stated that "nature will not permit a forced brain to sleep;" therefore nightwork is more harmful than any other, for a considerable interval should elapse between study-hour and bedtime, to allow the dilated bloodvessels to contract and the excited brain-cells to quiet down. In certain schools for boys, where night study-hours were abolished, it was found that the boys slept better and somnambulism ceased. The quality of nightwork is also very poor. The majority of errors made by bank clerks are in the afternoons, and it is found to be an economy to shorten the afternoon work. Experiments in California have been so decisive that home work by the public school pupils is to be abolished by law.

The exact amount of work which a growing brain

can do before it becomes exhausted, varies with age and the personal equation. "Sir Edwin Chadwick, from a large number of observations extending over 50 years, came to the conclusion that the limit of effective class teaching was inside of 3 hours, and furthermore, that those children who attended school ¾ of the day, and worked at some manual occupation the balance of the time—the half-timers, as they are called—acquired a superior mental activity and outstripped those who devoted their whole time to the regular course of study." Dr. Clement Dukes, physician to Rugby School, estimates the maximum hours of mental work per week which can profitably be expected from a growing brain, as 6 hours at 5 or 6 years of age, gradually increasing to 40 hours at 16 or 17, 45 at 17 to 18, and 50 at 18 or 19. For the West Point cadet an average of 52 hours per week is a very low estimate, and a majority of them put in between 60 and 65 hours, exclusive of the 20 hours or more in which the nervous system is on a strain at rigid drills and other formations. Dr. Duke says that such overstrain results in arrested progress and even in retrogression, "in weakened brain, body and interest," and that the growing brain is actually checked in growth. Many a cadet finds to his dismay that the pace is too rapid, and the academy thus yearly turns out as failures some of its very best material. How much more scientific and sensible is the slower German method in which the cadet's recitations cease at 1 p. m., and where there is freedom from all work after the 2 p. m. dinner until 4.30, after which the drills, a light lunch at 5 and a heavier supper later take up much of the time until the 9.30 bed-hour.

Another cause of exhausting strain is the dread of failure, due to the feeling that there is a special disgrace in this failure. Hundreds of successful civilians would not hide their West Point failure if they knew that the best men are sometimes rejected. The Sandhurst cadet is not nagged thus, for he is not dismissed until he fails twice in the examinations. The dread of hazing also causes as much, if not more, exhaustion than the actual hazing itself, which usually consists of the pranks boys play upon one another the world over.

A brain used to its utmost 8 hours a day should have a half-holiday twice a week, or a complete change all day long once a week, an extra change every 2 months, and every 6 months a long rest of several weeks. No such ideal being possible at West Point, it is necessary to relax the deadening and exhausting monotony. A British cadet gets 16 weeks' holiday in his course of 18 months; the West Pointer gets 16 weeks in 48 months.

Variety in the work is of as much importance as frequent interruptions, for sameness soon palls and then work can be accomplished only at greater expense. Distasteful work is still worse and the modern educator makes it his business to render work pleasant. The conditions at West Point are unfavorable for such modern ideas, for no one cares whether the cadet is pleased or not. If he fails he goes home and there are hundreds waiting to take his place. In civil schools, where the income depends upon the success in teaching, the aim is to get as good results as the material permits, and but few fail.

Now let us consider the known results of the unwholesome high pressure at West Point to prove that it is one of the causes for the extinction of many a graduate. We have already mentioned the difficulty of keeping awake in the evening as one of the symptoms of exhaustion. During afternoon recitations it is generally a struggle for the cadet is not actively occupied, and a dry lecture of a half hour will put most of them to sleep. A student who can not keep awake during a dry lecture of 45 minutes is unfit for study and only damaged by the effort. At the end of the scholastic year those who go into camp literally spend the summer in sleep. Every spare hour is given to slumber and every afternoon will find all asleep who have no duties. Officers, ignorant of nerv-

ous diseases, do not appreciate this disgraceful state of affairs, for the least desire to sleep in daylight is not healthy and is actually repugnant to the healthy nervous system of youth. In the furlough at the end of 2 years the exhaustion is worse and instead of getting the much needed recreation the average cadet spends the time mostly in sleep. They may be said to average 12 to 15 hours in bed throughout the summer. After the 4 years matters are still worse, another furlough is spent in sleep and it is fully 2 years before the average cadet is rested up, and for many years a few need a siesta upon any unusual exertion. During the academic year not a few cadets are admitted to the hospital for no other reason than exhaustion. It is safe to say that upon graduation fully $\frac{1}{10}$ of the cadets are in a condition of profound exhaustion, mentally and physically, so severe indeed that some are unable to join their regiments for several months.

The academy is noted for its excellent discipline, a matter of great pride to its alumni; yet it is safe to say that unless the cadets were kept in this nervous torpor of partial exhaustion, the restraints would be wholly impossible. As a rule they are in a species of mental torpor at drills, going through the exercises in a purely automatic manner. As before mentioned there are remarkable "breaking out" experiences in all institutions for the young where there is restraint and monotony. In the deadly monotony of West Point there is not enough physical exercise to prevent these explosions, except on rare occasions, and this is proof that there is too much exhaustion of nerve-tissue to permit nerve-force to collect in its natural motor-channels. The average cadet finally sinks into a deplorable condition of mental apathy, with an ever-present fear of failure, closely resembling the first stages of melancholia. The longing to be freed of all restraints and never look into a book again, amounts almost to a mania. Not a few are so broken as to be identically the same as the cases of neurasthenia found after the fortieth year. In youth it is difficult for exertion to be so excessive that repair is wholly impossible, for the will-power is not strong enough. After a certain stage of fatigue, boys simply sleep with their eyes open, partly oblivious to their surroundings. The strong mature will-power may take a man to the breaking point. Yet I have had cases to treat among officers suffering severely from the dozens of symptoms due to the exhaustion of their training; and some scandals have been caused by men of this type.

It is exceedingly rare for a graduate to be able to do any mental work in the first year after graduation, a few can work after 2 or 4 years of rest, but the majority never regain their full mental powers. Few if any are uninjured. The defects of the sufferers are not noticed, for hard mental work is rarely required with the troops, the work being merely routine. I have known the exhaustion mistaken for laziness and the young officer begin his career with a bad reputation. As a rule, the graduates, who after a few years return to West Point as instructors, are completely exhausted by 2 hours' work in the class room. Dr. Duke calls attention to the premature exhaustion of forced brains, and says that "greater staying power and less training is better than excessive training with diminution of vigor."

A dreadful symptom in most graduates is the intense hatred of books—a bibliophobia so intense that the mere mention of study will raise loud protests. Cadets who on entering the school are enthusiastic students are completely weaned of the desires which all other schools seek to cultivate. Knowledge is of such enormous extent, that the students in civil schools are taught that their graduation is the beginning of their work, but the West Pointer looks upon his graduation as the end.

The condition of many graduates is best described as "burnt out" which is scientifically correct, for the oxidations due to exertion are not repaired. When we recol-

lect that mathematical labor causes a greater excretion of wastes than any other, we can appreciate the rapidity of the burning out in a course essentially mathematical. These studies are the chief culprits, for they take up more time than any other 2 or 3 combined. The waste of invaluable nerve tissue is inexcusable, because nine-tenths of the graduates never have use for more mathematics than what they knew before they became cadets. The course could be cut to one-third its present extent, indeed the St. Cyr cadet trained for infantry or cavalry has no mathematics whatever. A famous Professor of mathematics said to his class, before a course of lectures, "Gentlemen, to my mind, the most interesting thing about the subject is that I do not see how under any circumstances it can ever be put to any practical use." The same may be said of much of that at West Point.

In their exhausted state, the graduates are in proper condition to contract any infection. If they were as strong as they are supposed to be, so many of them would not fall victims of disease so soon after they go home. They are ripe for alcoholism, which is but a symptom of exhaustion, and a few succumb though nearly all recover before they have become chronics. None of them are fit for tropical service upon graduation for that climate causes increased exhaustion, a condition not appreciated by those who have never served there.

A writer has stated that "tradition and precedent are the 2 divinities of the military academy, hence it comes that while the world makes giant strides, the military academy is the same yesterday, today and forever." In its methods it is just one century behind the times. It was organized at a time when universities gave courses of instruction of which the modern high school would be ashamed. Its entrance-examination, fixed by law, is about what was needed for a first-class university at a time when there was no public school system. The present candidates, with few exceptions, must brush up in studies which they had dropped several years before. The faculty complain bitterly of the law and demand a higher standard, as at St. Cyr, so they might omit the more elementary studies of the first year or two. They would then introduce subjects taught at the service schools, institutions started by the way, to finish what West Point fails to do. The state of affairs would then be as bad as it is at present.

The real fault is a system which demands of the human brain 3 times as much as it can do. Instead of trying to crowd more into the course a new course is needed. The last century has seen such a tremendous advance in knowledge that one brain can not possibly absorb more than one little specialty of one profession, and universities now have 20 courses of study where one sufficed a century ago. Likewise military science has grown far beyond the limit of a single brain, and modern armies are composed of specialists, none of whom can possibly learn all the duties of the others. In Europe this is all recognized and their military schools are technical institutions giving a training in the specialties of the science and art of war. We go on after the old method of trying to run all the specialists through the same mould, and the academy fails of being either a preparatory or a technical school along modern lines. Yale has already taken a modern step by reducing the course so that the students can obtain a degree in 3 years. Life is too short for the old methods.

It seems remarkable also to see officers rushed back to West Point as teachers when they have not the least idea of any of the laws of the science of pedagogy. Without training, it is as useless to expect them to do good teaching as to expect them to do good surgical work, and in addition the old system is perpetuated and its evil intensified. Some of the instructors are so ignorant of methods of teaching that they insist upon verbatim recitations, a method now considered a crime. These faults at conservative West Point are to be expected, for until a decade or so ago, but little time had been given to the

scientific study of the growing brain. Pedagogy is a new science, but its laws can not be applied to the academy too soon.

The academy has been of more importance than the people generally recognize, for its graduates have been the backbone of our armies in every crisis of our history and Washington knew that they would be. It is then intemperate to argue that it had better be abolished. Its enemies sometimes say that unless it can be remodeled on modern lines, it bids fair to do more harm than good, and that college graduates who have not been "burnt out" and mentally warped, have a better chance of becoming able leaders than the West Pointer too exhausted to take up advanced work. It must be sorrowfully confessed that the history of modern warfare gives some basis for such an opinion. All military science originates in Europe. America is a follower and never has been a leader, except for a short time. Europe does all this with inferior schools, which do not compare with West Point. All foreign visitors are enthusiastic in their praise of the American school. European officers do all this with an education essentially that of a high school, and their subsequent work is evidence that they are more able than Americans. The contrast is the more remarkable because in all other sciences, with a few minor exceptions, American invention leads the world. Indeed, American civilians who make military inventions, sometimes go abroad to have their ideas recognized and adopted. We demand of our cadets 3 times as much as any other nation in the world, Sandhurst and Woolwich cadets even leading "a life of luxurious ease compared with that of the West Pointer," and by this overpressure we defeat the very object desired—prolonged usefulness.

The friends of West Point, and every patriot should be its friend, should insist upon the uprooting of evils and modernizing its methods. The first step is to reduce the course to such a point that a fairly good brain can absorb it properly, and this can be done by eliminating the preliminary or elementary studies and the useless advanced ones. The entrance examination will have to cover more ground, and that can be safely done, as the public school system is now competent to prepare the candidates. The academy will then be a technical school and nothing else. All students could follow the same course for 2 years in such branches as are needed in every army position. They should then be commissioned as second lieutenants before they take up their specialties, a system adopted, so it is said, by Russia. This would be only a modification of what we sometimes do after the 4 years' course. There is even no objection to sending some of these 2-year men to medical schools, as they do in the German Army in a modified way. Ordnance, engineer, and artillery lieutenants could then be given 2 years of instruction which would be of no earthly use to the line lieutenants. The latter could be given a short course—say of 8 months—and then sent to their regiments. It has even been suggested to limit appointments to college graduates, but to give them as prizes for scholarship would bring a worse class of neurotics than the present method.

To commission cadets as second lieutenants after 2 years work would remove very much of the nervous strain of the present course, providing they had a good vacation each summer, and more holidays. It also would correct one of the most ridiculous conditions in our service. A soldier can obtain his commission after 2 years of easy work, but the cadet must wait 4 years and do a hundred times the work exacted of the soldier. No nation in the world makes it so easy for the soldier and at the same time so difficult for the cadet to enter the commissioned ranks. Very many other advantages would result from a reduced course, but they do not concern us here, though we might mention the increase in the number of graduates, a practical matter of much importance, now that the enlarged army calls for so

many more technically trained men than it ever has before. It would be quite practicable to send the infantry and cavalry graduates to their separate technical schools where they should be joined by the officers appointed from the ranks or civil life. By these means the capacity of the school would be doubled, its graduates as well educated as they are at present, and the scientific corps supplied with better men, and all the graduates would have greater staying powers than they now have. The best military schools in the world are those of Russia, for they are based upon modern scientific mental laws. Every means is taken to avoid mental and physical fatigue, and the methods of mental and physical culture are superb. Their great aim is to turn into the army, officers of great endurance. We do the very opposite at present, and we can afford to take a lesson from this great, virile, and newest of world powers.

The academy must abolish the mistaken system of rejecting the cadets, who, though very able, are not possessed of the unwholesome and abnormal qualities of quickness and brightness. It is stupid to argue that all of that half who cannot keep the pace would not make good officers—they are selected with too much care for such a supposition. These rejects, by the way, are better fitted for tropical service than the more neurotic who succeed at West Point. By retaining them and by the above system of shorter courses of study, the academy could supply 3 times the number of officers it now does, there would be no need for an increase in the cadet corps and Congressmen would make appointments every 2 years instead of every 4. Another reason for this increase in the output of graduates lies in the fact that 2 years is the extreme limit for tropical service, unless the officer does duty in a cool building and is never exposed to the climate by service in the field. Regiments which stay there longer than this limit will require surplus officers to take the place of those recuperating at home—a system used by foreign armies, much needed by us already, and one which we will have to adopt or the troops will be perpetually short of officers.

In European armies paresis was formerly called a military disease on account of its frequency among professional soldiers. The causes were undoubtedly the rapid pace at which they lived and the awful nervous strains of frequent warfare. Drunkenness has disappeared in great part from our service and field duty was not common until recently, so that paresis has not been common in America, but unfortunately its place has been taken by neurasthenia, which now ranks as a military disease and is probably more common than in brain-workers in civil life. It is the real cause for quite numerous retirements under other diagnosis. The causes are partly idleness and the nagging of military discipline, so intensely irritating in certain commands, as well as the strains of the cadet life. How important, then, it is for us to so manage our cadets that their nervous systems are strengthened to be able to stand this strain and develop great staying powers, even if they know less of the mathematics of wave motions.

The International Sunshine Society, which has for its object the rendering of aid to the shut-in and sick, has nearly 100 members in Baltimore.

Milk Depot.—A movement to establish a central milk depot in Atlanta, Ga., under the direct supervision of the Board of Health, is assuming definite shape.

New Hospital.—Work has begun on the hospital to be erected by the Franciscan Sisters at Louisville, Kentucky. The building will be built of brick and stone and will be 3 stories in height. The cost will \$50,000.

Sanitarium at Crab Orchard.—The Southeastern Kentucky Medical Association has purchased a tract of land at Crab Orchard, on which is located the celebrated chalybeate well, and, it is said, will shortly build a sanitarium there.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

June 1, 1901. [No. 2109.]

1. Address on Theories of Inheritance, with Special Reference to the Inheritance of Acquired Conditions in Man. J. GEORGE ADAMI.
2. The Pathogenesis of Tubercles and Allied Conditions in the Cord. CHALMERS WATSON.
3. Case of Malignant Disease of the Lung, with Pseudotuberculosis. H. BATTY SHAW.
4. Sequel to a Case of Pulmonary Hypertrophic Osteoarthropathy; Necropsy. E. FARQUHAR BUZZARD.
5. The Pulse-rate in Pulmonary Tuberculosis. THOMPSON CAMPBELL.
6. The Position in which the Regurgitant Aortic Murmur is Most Clearly Audible at the Base of the Heart. H. W. SYERS.
7. The Development of *Filaria Nocturna* in Different Species of Mosquitoes. GEORGE C. LOW.
8. Note on the Value of Experiments in the Question of Food Preservatives. A. S. GRÜNBAUM.

1.—Briefly, devoting especial attention to Weismann's theory, Adami criticizes adversely many of this author's contentions, and he formulates a side-chain theory of structure somewhat akin to that laid down by Ehrlich in his now well known theory of the nature of immunity. This **side-chain theory of inheritance of acquired characteristics in man** is elaborated and attention is devoted seriatim to inheritance in unicellular forms, sexual conjugation and inheritance, inheritance in multicellular forms, and atavism. With reference to the question, Can acquired defects be transmitted? he considers the noninheritance of acquired mutilations, the indirect inheritance of acquired diathesis, and the direct inheritance of acquired constitutional states. [A.O.J.K.]

2.—Watson, writing of the **pathogenesis of tubercles and allied conditions in the cord**, holds that tubercles is not a "nervous" disease in the sense usually apprehended, and that the lesions in and around the vessels are of primary importance, the lesions of the neurons being determined by local interference with the blood-supply. This does not exclude the consideration of a varying vitality of neurons as an important factor in the disease. Further, he states that there is good ground for the belief that the condition is dependent on a chronic auto-intoxication, the vascular lesions being to some extent general, but tending to be more advanced locally, and that the more advanced local changes determine a failure of nutrition in the adjacent nerve elements. If these views are correct he believes that the condition ought to be curable in the early stages, and that the present tendency to differentiate tubercles sharply from many other diseases in which there is a well-marked lesion of the cord of an allied character is to be deprecated. He believes that we should rather investigate the nature of different toxins and the conditions that have brought about variations in the results of their action. [A.O.J.K.]

2.—Shaw reports a case of **sarcoma of the root of the left lung**, producing stenosis of the bronchus and vessels, and associated with pneumonia, probably due to the septic organisms present. The latter named condition much resembled tuberculosis macroscopically, but examination revealed only streptococci, staphylococci, and a few slender bacilli—no tubercle bacilli, giant cells, or tuberculous granuloma systems. Reference is made to a number of similar cases reported in the literature. [A.O.J.K.]

4.—Buzzard reports the sequel to a case of **pulmonary hypertrophic osteoarthropathy**, first reported by Walters in the *British Medical Journal*, February 8, 1896. The patient had serious disease of the lungs, with the expectation of considerable quantities of thick, purulent sputum, kyphosis, and paralysis of the legs. He died October 9, 1899. At the necropsy, among the interesting findings were extensive excavations of the lungs, one of the cavities being in direct communication with the space between the third and fourth dorsal vertebrae; absence of conclusive evidence of tuberculosis in the lungs and the bronchial glands; thickening of the ends of the radius and

the ulna, the increase in thickness affecting the dense bone more than the cancellous. The end of 1 finger being examined showed no appreciable alteration in the bones or joint; there was, however, an excess of fat in the pulpy end of the finger, whence its bulbous shape. [A.O.J.K.]

5.—Campbell, in a note on the **pulse-rate in pulmonary tuberculosis**, states that allowing for the possibility of over-exertion, excitability under examination, and the presence of mitral stenosis, all of which accelerate the pulse-rate, the frequency of the pulse is a useful aid in prognosis. Making these allowances, a patient with a pulse-rate of over 100 is not likely to make any approach to recovery from pulmonary tuberculosis during 6 months (which should be the ordinary limit of residence in a sanatorium). Cases in which a tuberculous area in the lung has been cleared out by excavation, followed by a period of quiescence, during which the cardiac pulsations may not exceed 84 per minute, are suitable for treatment, as there is likelihood that life will be prolonged considerably by 6 months residence in a sanatorium; so that a consideration of the pulse-rate may point to a more hopeful outlook than would at first sight be suggested by somewhat advanced physical signs. A pulse of 100 or more will usually be found to accompany an evening temperature reaching or exceeding 101°, and these 2 signs, of grave import, being persistently present in a case in which absolute rest has been enforced for some time, give little hope of treatment proving of any avail. An acceleration of the pulse is found at the onset of the pulmonary affection, so a gradual fall will be found to take place if a case is making progress toward recovery, a difference of from several to 16 beats per minute having been noted in the rate on admission and at the end of 6 months' treatment. [A.O.J.K.]

6.—Syers expresses his conviction that the **murmur of aortic insufficiency** is most clearly audible in the second left interspace rather than in the second right interspace, as usually taught. The point at which the murmur is loudest is almost invariably the middle of the sternum, and it is frequently very loudly audible just above the xiphoid cartilage. The mistake relative to the point of maximum intensity and clearness of the murmur he believes has arisen from the statements in the textbooks being accepted in a slavish fashion without inquiry and from the growing tendency to employ the binaural stethoscope, "one of the most serious dangers that has ever threatened the practice of auscultation," and one which if persisted in, he believes, will lead very rapidly to the decline and fall of diagnosis of chest disease. [A.O.J.K.]

7.—Low describes some experiments regarding the **development of *Filaria nocturna* in different species of mosquito** in St. Lucia. Experiments with *Culex taeniatus*, a very bloodthirsty animal, revealed that it is not an efficient host for the filaria. Though the embryos migrate to the thorax and undergo some development, yet none ever reach maturity, and therefore never pass to the proboscis. On the other hand, in *Culex fatigans* the embryos of the filaria develop with marked rapidity and by the eleventh or twelfth day mature forms may be seen in the head, neck and proboscis, and more rarely in the abdominal cavity of the mosquito. The facts of the case are summed up as follows: Some mosquitoes are inefficient hosts for the filaria, the embryos never migrating from the stomach; some are partially efficient, the embryos reaching the muscles, where they undergo partial development, and then become absorbed; while others are properly efficient, the time taken for complete metamorphosis varying with the temperature and other climatic influences of the place in which the experiments are conducted. It may be as short as 8 days, as originally suggested by Manson. Experiments were also undertaken to determine the intermediate host of *Filaria demarquai*—*Anopheles albipes*, *Culex taeniatus* and *Culex fatigans* being used. So far the experiments have been entirely negative—these mosquitoes not acting as efficient hosts. [A.O.J.K.]

8.—Grünbaum, in a Note on the **value of experiments in the question of food preservatives**, criticizes adversely certain experiments undertaken by Rosenheim and Tunncliffe, whose paper, according to Grünbaum, seems to suggest that they find nothing to condemn in the use of preservatives in milk. [A.O.J.K.]

The Journal of the American Medical Association.

June 15, 1901. [Vol. XXXVI. No. 24.]

1. The Natural Method of Teaching the Subject of Medicine. WIL-
LIAM OSLER.
2. Relation of the Medical Profession in the Twentieth Century to the
Tuberculosis Problem. S. A. KNOFF.
3. Gamma of the Spermatic Cord, with Report of a Case. R. R.
CAMPBELL.
4. Surgical Shock. WILLIAM H. GERMAN.
5. Nonconstrictive Dressing for Fractures. J. F. PRITCHARD.
6. Acute Glaucoma Developing In a Cataractous Eye, after Cataract
Extraction in Other Eye. Iridectomy and Cure. H. N.
RAFFERTY.
7. Sitophobia of Enteric Origin. MAX EINHORN.
8. The Relation Existing Between Diseases of the Conjunctiva, Nose
and Throat. HEMAN H. BROWN.
9. Round Ligament Ventrosuspension of the Uterus. D. TOD
GILLIAM.
10. Magnetic Foreign Bodies in the Eye. E. VILLIERS APPLEBY.
11. Variability of the Tubercle Bacillus. CAR RAMUS.
12. Medical Colleges and Professional Standards. INEZ C. PHILBRICK.
13. Philippine Customs and Habits. J. C. MINOR.
14. Medical Departments in Public Libraries. C. D. SPIVAK.

3.—The literature of the subject is reviewed. In syphilitic affections of the testes and epididymis the spermatic cord is seldom involved and less frequently still as an independent manifestation, as in the case reported. [H.M.]

4.—Shock is a sudden depression of the whole of the functions of the body. The symptoms vary from profound collapse to mere temporary impairment. The pathology is obscure. One theory ascribes the phenomena to suspension of nervous power, resulting in paralysis of heart and abdominal vessels and the vasomotor system, causing stagnation of blood and insufficient oxygenation of the heart muscles which are thus unable to force the small amount of blood through the empty vessels. The better theory is that shock is due to peripheral irritation of the sensory and sympathetic nerves and functional paralysis of the nerve centers which causes arrest or enfeeblement of cardiac and respiratory action. Cases of torpid and of erethistic shock, or prostration with excitement, are described. From uncomplicated shock recovery is usually complete, occasionally permanent impairment follows, a case of change of disposition being reported. In so-called secondary or delayed shock some other explanation must be sought. The cause of death may be found in pulmonary edema, renal congestion, concealed hemorrhage, septic collapse, or fatty embolism from minute drops which have been set free by the accident. In the latter case the measures suitable for true shock are the most valuable. When injury of large bones has occurred the limb should be immobilized as soon as possible so that absorption of fat cells from the marrow may be prevented. [H.M.]

5.—All indications are fulfilled when fragments of bone are in apposition and at rest. Healing is more rapid with unimpeded circulation. The so-called Hodgen's splint can be made in a few minutes by means of an iron rod properly bent, a few safety pins, a piece of cloth to make suspension for the leg, and a cord for attachment to the ceiling. It can be used in all cases of leg and thigh fracture by varying the adjustment by bending the rod at the knee and the amount of extension by moving the bed. For the arm a trough or other nonconstrictive dressing can be applied. In clavicle fractures all indications are fulfilled by requiring the patient to lie on his back on a firm, smooth mattress. Plaster-of-paris should never be used for a primary dressing, but only during convalescence, in order to give the patient his freedom. Every surgeon ought to be able to dress his case of fracture with what he can find on the spot. [H.M.]

7.—Sitophobia is used by Einhorn to describe the fear on the part of mentally sound persons of taking food on account of resultant bad consequences. In 2 cases reported it developed as a sequel of constipation, the patients fearing to tax the intestinal tract any further, and in others it followed chronic diarrhea. Similar cases are of daily occurrence. The constipation is more

aggravated by the abstinence, and in the diarrheal cases the deficient nutrition undermines the constitution. The symptoms are those of general anemia, anemia of the brain, dizziness, dryness in the throat, extreme fatigue, insomnia, etc. The treatment consists in increasing the food taken. Sometimes this must be done gradually, administering bromids in nervous, and codein in painful conditions. [H.M.]

8.—Besides the continuity of membranous tissue existing between the nasal cavities and conjunctiva, there is equally intimate association through the nerve, arterial and venous supply. This is described in detail. While nerve reflex will explain the majority of disturbances of the conjunctiva, venous stasis due to nasal hypertrophies holds a prominent place. The latter will explain the aggravation of symptoms after a night's sleep, the horizontal position favoring sluggishness of the circulation. [H.M.]

9.—The Alexander-Kellogg operation for anchorage makes no provision for liberating the adherent uterus. Intrapertoneal shortening is defective on account of the slender distal extremity of the sound ligament, and the Kelly ventrosuspension render the uterus practically immobile, if of permanent advantage; or, failing this, it gradually sinks into its former abnormal position. It often leads to serious embarrassment in pregnancy. The sound ligament grows with the development of the uterus. Theoretically, the same change occurs when it is implanted in the abdominal wall. The idea originated with Ferguson, but his operation has been modified by the author. An abdominal incision is made at the usual site, the adhesions are broken up, the uterus brought forward, the round ligament seized and a silk thread carried under, $\frac{1}{2}$ inches from the uterus, and held by forceps. The fascia, muscle and peritoneum are grasped by a volsellum 1 inch from the lower angle of the wound, and during traction, perforating forceps are thrust through, seizing the thread which holds the ligament. The clamp is removed from the thread, which is drawn through the perforation, bringing a loop of round ligament after it. The latter is fastened into the perforated wand by a catgut suture. Inclosing the abdominal incision the projecting loops are caught en route by the running suture which closes the fascia, and drawn to the middle line. The chances of incarceration of the bowel are exceedingly remote. Scrupulous asepsis is necessary. [H.M.]

10.—The ordinary methods of extracting superficially embedded foreign bodies is described. If deeply located in the cornea, the overlying tissue is cut and a strong electro-magnet applied. As a rule it is easy to remove pieces of iron from the sclera. In penetrating wounds, with retention of the magnetic body, after determining the visual acuity and field, and examining with focal illuminations and ophthalmoscope, the sideroscope should be used. That of Hirschberg is described. Frequently it is necessary to use the x-rays for diagnosis. The area of the eye can be outlined previously by fuse wire, fastened to temples and lids by court plaster. The history of the magnet in eye surgery is briefly reviewed and a short description of the Haab and Hirschberg magnets is given. For extraction, the site which will cause least injury to the eye is chosen. For diagnosis, the magnet should be applied only when all other means have failed. The method of applying is described. [H.M.]

11.—Tubercle bacilli are not always easy to demonstrate, even though present in large numbers. Fuchsin solutions are variable. Those which give the best results, together with other tubercle bacilli stains, are mentioned. Carbolic acid is the preferred mordant. Cobb's modification of the Berlin method of preparing specimens is described, as is also the best method of cleaning slides. Bacilli from different patients and from the same patient at different times will not invariably stain by one method. In some undoubted cases none can be shown by any method, though there are bodies which may be involution forms. Some will stain only after 18 or 24 hours' exposure. Difference in size is observed. Though they cannot be demonstrated they are believed to be constantly present in the sputum of well-marked cases. Other bacilli retaining anilin dyes are named and differential diagnosis in regard to them and scratch marks is considered. Resistance to destaining acids is probably due to the 22% of fat in normal tubercle bacilli. Variations may be due to smaller percentages or to the

production of an antitoxin or to mixed infection. Death may be due to loss of function or intoxication. In the latter, mixed infection probably plays an important role. Staphylococci are most in evidence. Streptococci are the most resistant. The antagonism of smallpox and syphilis with tuberculousis is touched upon. [H.M.]

14.—Since 1898 the movement for the establishment of medical departments in public libraries has spread rapidly owing to the passage of favorable resolutions by the American Medical Association and American Library Association. After 3 years 1 voice is raised in protest against "spending the money of the people for books benefiting only one class." Ninety-five percent of the reading of the public consists of novels. Are not the 5% readers of "solid literature" the real public for whom books are written, published and preserved? Ought public libraries exclude books on agriculture because this would be catering to farmers, books on chemistry because they supply the wants of chemists? Dr. Wire asks why physicians should be favored over lawyers at the public expense. There are about 10 medical departments of libraries supported by the State, whereas every state or territorial library is *eo ipso* a law library, and therefore the number of supported law libraries amounts to more than 60. [H.M.]

Boston Medical and Surgical Journal.

June 13, 1901. [Vol. CXLIV, No. 24.]

1. Some Observations on Chronic Seminal Vesiculitis. ARTHUR L. CHUTE.
2. Iodophilia. THEODORE DUNHAM.

1.—Chute and O'Neil, in some observations on chronic seminal vesiculitis, state that the disease generally occurs with urethral disease and that it is much more frequent than it is generally supposed to be. The writers found 60 cases among 540 out-patients presenting various sorts of genitourinary disease. Neurasthenic symptoms, combined with irregularities of erection, are almost pathognomonic of this disease, but the only way in which an absolute diagnosis can be made is by rectal examination. Such an examination is strongly advised in all cases of urethral disease, recent or of long duration, in which the disease is not progressing favorably. The treatment said to be of the greatest benefit and apparently curative, so far at least as subjective symptoms go, is the mechanical emptying of the diseased vesicles and ducts. [C. A. O.]

2.—Iodophilia is of distinct value in diagnosing certain doubtful conditions. The staining solution is made with 3 parts of potassium iodid, 1 part of iodine and 100 parts of water, thickened to syrupy consistency with gum arabic. The blood smear, which need not be fresh, is mounted in 1 drop of this and studied with an oil-immersion lens. In certain conditions the protoplasm of a certain proportion of the polymorphonuclear neutrophiles takes on a reddish-brown coloration. In some it is a diffuse stain, in others is confined to refractive granules and varies from light pink to dark red. It is always present in progressive suppurations and pneumonias. The intensity of the reaction is said to be closely related to the intensity of the process. It is found in pneumonia before the physical signs are specially suggestive. The only diseases which must be eliminated from the diagnosis are certain grave anemias, advanced pernicious anemia and leukemia. [H.M.]

Medical Record.

June 15, 1901. [Vol. 59, No. 24.]

1. A Note on the Spread of Yellow Fever in Houses. Extrinsic Incubation. H. R. CARTER.
2. On the Origin of Cancer: What Remains to be Demonstrated. SAMUEL W. BANDLER.
3. The Redundancy of the Preinsula in the Brains of Distinguished Educated Men. EDWARD A. SPITZKA.

1.—The history of a large number of cases of yellow fever occurring in Mississippi in 1897 and 1898 is traced in detail in

order to show that a certain time from the development of the infecting case passes before the property of communicating the disease to others is attained by the infected place. This time is named the **period of extrinsic incubation**. As bearing out this theory it is noted that cases of yellow fever which occur aboard ship after disinfection at maritime quarantine have not been followed by others among the crew; that cases in houses which were disinfected soon after were not followed by others among the inmates; that cases which occurred in houses vacated soon after have not been followed by others among those leaving, but cases have occurred among those who remained in the house or in the neighborhood; that secondary cases do not occur among those exposed seen after the occurrence of the primary case, but do occur among these exposed later. By deducting the period of incubation and the period of exposure of the secondary cases from the interval between them and the primary case the period of extrinsic incubation is estimated as generally not less than 10 days. The practical application to quarantine is pointed out and attention is called to the correspondence of these observations with those of Reed in regard to the time that must elapse after the infection of the mosquito before it can communicate the disease to man. [H.M.]

2.—Cullen has pointed out that in Gaylord's preliminary communication there is no conclusive evidence that a pure culture was in any instance employed or that the organism was recovered from the growth produced. The observations of various investigators as to the relation of yeasts to new growths, etc., is reviewed, including the production of adenocarcinoma by Sanfelice with the blastomycetes of fruit juices. The investigations of Leopold are described in detail and the degree in which they correspond to Koch's 4 postulates is pointed out. The presence of yeast in the carcinomatous tissues was proved by the formation of alcohol when pieces were put in grape-sugar solution, and also microscopically; pure cultures were made; growths were produced by inoculating the organism into another body, and the same organism was recovered from these growths. The growths, however, were not carcinomatous, but their structure was that of giant-celled sarcoma. Since **cancer cells have produced real carcinoma** in animals, we must demand the same result on injection of the causal microorganism, and this Leopold has not obtained. Gaylord has obtained true carcinomatous tissue from his inoculations, but the presence of cancer cells cannot be excluded from the peritoneal fluid which he used. The causal relation of blastomycetes to the growths produced in animals by Leopold must be granted. The decision concerning the character of these neoplasms and their actual relation to carcinoma and sarcoma is to be the controversial point. [H.M.]

3.—The anatomic features of the human insula are of fundamental importance in the interpretation of mental states. Charcot and others regarded this as the cortical center of speech and it was claimed this lobe was largest and most complex in the human brain. E. C. Spitzka showed that it was larger and more complex in the porpoise, his final conclusions being that the greater development of the caudal portion was due to its being commensurate with the amplitude of the cortical field of the eighth pair, the functions transmitted by which—equilibrium and audition—are highly developed in the cetacea. The insula of the porpoise is narrow and pointed cephalad. The reverse is true in the human insula. Would it be rash to propose that the postinsula shares in its development that of the auditory sense center while the growth of the preinsula is more in consonance with that of the true speech center? At the present time the insula is regarded as the middle association center of the auditory perceptive and the emissary centers. The left insula of deaf mutes has been shown to be defective. Writers generally agree that exposure of the insula indicates defective brain development. In the brains of both Seguin's the left preinsula is exposed. This is attributed to excessive development, while exposure in the defective is due to deficient development of the opercula and in such cases the insula itself is of inferior development. In the Seguin's there is **redundancy of the polar region of the left preinsula**. The fissures are deeper, with complementary fullness of the gyrus. The effect of paternal influence is discussed. [H.M.]

Medical News.

June 15, 1901. [Vol. LXXVIII, No. 24.]

1. Decortication of the Lung for Chronic Empyema. GEORGE RYERSON FOWLER.
2. A Study of Some Complications and Sequels of Typhoid Fever. H. A. HARE and H. R. M. LANDIS.
3. "The Porro-cesarean Operation" with Report of 2 Successful Cases. JAMES H. GLASS.
4. The Treatment of Scarlatinal Nephritis. CHARLES GILMORE KERLEY.

1.—Fowler reviews 41 cases of decortication of the lungs, and reports his last case because of its operative interest, although it is too recent to judge of its functional result. Total pleurectomy was performed under spinal cocainization. The operation lasted 1½ hours, and was absolutely painless, except the insertion of the last 3 sutures. The indications and contraindications for operation, or for the employment of the various methods, except those relating to the condition of the chest organs discoverable by physical signs, can hardly be stated before opening the chest. The thickened pleura may be impossible of detachment in some cases. A study of 30 of the 41 cases, shows that tuberculous disease was responsible for all the deaths (3), at least half the failures to cure the empyema, and a majority of the failures to procure complete restoration of the function of the lung. Fowler concludes that decortication is adapted to all old cases of empyema where extensive tuberculous lesions are not present; that it may be substituted for Estlander's operation in the majority of cases where it has been considered as indicated, and that it should replace Schede's operation in all cases. The operation of choice is the extirpation of the visceral, cortical, and diaphragmatic portions of the diseased pleural membrane. Respiratory exercises are an essential part of the aftertreatment. [A.G.E.]

2.—The literature of the complications and sequels of typhoid has almost equaled in the past 2 years that of the previous 20 years. There has been an uninterrupted decrease in mortality, probably due to improved sanitation. The causes of abortion during its course are considered, and cases are reported showing that the pregnancy may be uninterrupted. Literature shows that typhoid is frequently found in the newborn. In these, intestinal lesions are absent, owing to absence of intestinal function, and to infection having occurred through the circulation. The disease is unusual under 2 years. In children a sudden onset is not infrequent, perforation and hemorrhage are rare, the temperature may be extremely irregular. Except under 2 years, the mortality is lower than in adults, and complications and sequels less frequent. In advanced life typhoid is uncommon and exceedingly dangerous. Cases with mildness of onset, and those marked by intercurrent disease, are next considered, and those with abrupt onset, chills, septicemic types, and those complicated with malaria. Abortive types are described. The replacement of the formerly typical diarrhea by constipation in half the cases in recent years is noted, as is also the difficulty sometimes of differentiating from appendicitis, peritonitis, and enteritis, when abdominal pain is severe. Bronchitis and pneumonia may be present at the onset from localization of the bacillus. Nervous symptoms, including simulated meningitis, neuralgia, aphasia, oculomotor paralysis, mania, and melancholia, are described. [H.M.]

3.—Glass, in view of the practically common mortality in well done Sanger and Porro-cesarean operations, has reached the opinion (1) that tubal excision without hysterectomy for the purpose of sterilization and interference with future pregnancy is unwarrantable, since the first should presume the second step, as the organ left is rendered functionless and can only become a source of possible trouble or evil; (2) that we should have a well-defined plan of ovarian conservatism and that in all cases possible an ovary or its fraction should be left in situ, since recent study so conclusively shows the value of its secretion in general nutrition, and its preventative influence in the nervous disturbance incident to the early and artificial menopause. He reports 2 cases of Porro-cesarean operation, in the first of which delivery per vias naturales was prevented by a carcinoma springing from the cervical canal and invading the

vaginal wall posteriorly. The patient recovered from the operation, but died 1 year later from a recurrence of the cancer in the trigone of the bladder, which caused a fatal nephritis. In the second case, examination after several days of labor showed a sloughing funis presented, implying of course a dead child and presumably septic uterus. The necessary Porro-cesarean operation was performed, with complete recovery of the patient. [W.K.]

4.—Every scarlet fever patient should be kept in bed 3 weeks, in a room at 68° to 72° F. When nephritis develops there is danger of over-treatment. Milk broths and thin gruels only should be given. The bowels should be kept open with calomel. Aconit in minute doses may be used for diaphoresis, and hot-air baths may be given under the bedclothes. If this is not sufficient, a bath in water at 108° F. should be substituted. The bed should be heated before returning the child to it. The best remedy of all is hot water flushings of the colon, 1 to 1½ pints of saline solution at 110° F. being used every 6 to 8 hours, the rectal tube being inserted 10 inches. [H.M.]

Philadelphia Medical Journal.

June 15, 1901. [Vol. 7, No. 24.]

1. The Topical Treatment of Focal and Jacksonian Epilepsy. J. WILLIAM WHITE.
2. Theoretical and Practical Considerations on the Treatment of Jacksonian Epilepsy by Operation; With the Report of 5 Cases. JAMES JACKSON PUTNAM.
3. What I Have Learned from 161 Operations for the Relief of Senile Hypertrophy of the Prostate Gland. ORVILLE HORWITZ.
4. The Value of the Combined Medical and Surgical Clinic to the Student. ROBERT G. LeCONTE.
5. A Case of Abdominal Pregnancy. AUGUSTUS C. BEHLE.
6. Speicalism and Some of Its Relations to the General Practice of Medicine. HENRY WALLACE.

1.—White states that the essential cause of epilepsy, exclusive of demonstrable sources of brain irritation, is unknown, but that areas of the cerebral cortex seem to be in an unstable equilibrium. In trying to account for the apparently beneficial effect of various operations on epileptics, he finds but 4 possible explanations: (1) anesthesia; (2) psychic influence or so-called mental impression; (3) relief of tension; (4) reflex action, or the "reaction of traumatism." Anesthesia has been discarded after a series of observations on epileptics. The effect of psychic influence must be admitted to be possible. Relief of tension can hardly be considered a factor, and reflex action is of vague influence. White then considers the question of giving patients the benefit of both operative interference and sedation of the affected brain area. To this end he has employed the following method in 2 cases: The affected center is exposed by a small trephine opening and 30 minims of a 2% encain solution injected into the brain substance. This injection is repeated at intervals, and is fortified by the administration of bromids for 1 to 2 days. In CASE I a needle-like pain in arm was relieved, and the convulsions were diminished in frequency and severity. Injections were made at intervals between March 11, 1899, and December 1, 1900. CASE II was operated upon January 23, 1901, after several injections during 1900. Nausea and numbness soon followed, and 1½ hours afterward the most severe attack ever experienced by the patient came on. Patient was discharged next day, and has not been heard from since. White offers the method conservatively, because of its possibilities, stating that the results are not noticeably better than those following miscellaneous operations, while the result in CASE II throws some doubt on the entire safety of the procedure. [A.G.E.]

4.—See AMERICAN MEDICINE, Vol. 1, No. 6, page 234.

5.—Behle reports a case of abdominal pregnancy seen in St. Mark's Hospital, Salt Lake City. An incision was made through the sac which passed through part of the placenta. The knee of the fetus was then felt; the head somewhat extended and lying in the right iliac fossa, the dorsum toward the right. The cord was severed and the child delivered. The fetus showed slight signs of maceration. About a pint of thick amniotic fluid was in the sac. The fetus was a male child, very

large, weighing 6½ pounds, plump and well-developed; no deformity being noticed. It was 53 cm. in length and 43 cm. around the shoulders. The woman made an uneventful recovery. [W.K.]

Deutsche medicinische Wochenschrift.

May 9, 1901. [27 Jahrg., No. 19.]

1. The Magnet-Operation Room. J. HIRSCHBERG.
2. Hydrifatic Treatment of the Early Stage of Pulmonary Tuberculosis at Home. H. MEFFERT.
3. Serum Diagnosis of Tuberculosis. E. ROMBERG.
4. Industrial (Methemoglobin) Poisoning and Its Treatment with Oxygen Inhalation. H. BRAT.
5. The Pathology and Therapy of Cleitricial Contraction of the Bladder. DESIDER RÁSKAI.

2.—In an article on the **hydropathic treatment of incipient tuberculosis**, Meffert describes in detail a very simple home procedure extensively used in the hydropathic institute of the University of Berlin. It consists of "dry packing, cold sponging and rain-douche," repeated twice a day, and has been found of use not only in cases of incipient tuberculosis, but in later stages of the disease as well as in chlorosis. [H.H.C.]

3.—In the conclusion of his article on the **serum diagnosis of tuberculosis**, Romberg, as a result of his experiments, states that, as in the case of Von Behring's investigations on animals, the blood-serum of tubercular patients agglutinates Von Behring's emulsions of the tubercle bacilli, and that the reaction is very similar to that described by Arloing and Courmont as resulting from the mixture of their serum and pure cultures of living bacilli. He believes that a positive reaction of agglutination is a certain indication of the presence of an active tuberculous process in the body, and that a negative result indicates either an entire absence of tuberculosis, a healed in or inactive condition, or a rapid florid stage of advanced disease. [H.H.C.]

5.—Ráskai reports a case of contracted bladder following gonorrhoea, and discusses the treatment of the condition. [H.H.C.]

May 16, 1901. [27 Jahrg., No. 20.]

1. The Morphology of Bacteria and their Relation to Virulence. G. ASCOLI.
2. Occult Hemorrhages of the Stomach. I. BOAS.
3. A Simple Gas-Volumetric Method of Estimating Sugar. E. RIEGLER.
4. The Magnet-Operation Room. J. HIRSCHBERG.
5. Industrial (Methemoglobin) Poisoning and Treatment with Oxygen Inhalation. H. BRAT.

1.—Careful investigation has led Ascoli to the conclusions that (1) the existence of nuclei in bacteria, or structures corresponding to nuclei, cannot be proven; (2) the granulations so often seen in bacteria, which neither represent undeveloped spores nor nuclei, are, in spite of chemical differences, homologous structures; (3) a general relation between the granules and the vitality or virulence of the bacteria does not exist. [H.H.C.]

2.—Boas believes that **hidden gastric hemorrhage** is of very frequent occurrence, not only in gastric ulcer, gastric neurosis, etc., but more especially in carcinoma of the stomach, in which the patient often "bleeds to death, as it were, by drops," without the knowledge of the physician. He recommends a very careful analysis of the feces and gastric contents in cases where there is the least cause for suspicion. [H.H.C.]

3.—Riegler describes a very simple and effective process of **estimating the quantity of sugar present in urine**, basing his procedure on the principle that cuprous oxid, heated with hydrazin sulfate in the presence of a base (tartrate of potash and soda is the salt used), results in a reduction of the copper salt to metallic copper, while the nitrogen is set free. The apparatus used is the same as that employed by Riegler in his quantitative analysis of urea, and the estimation is simplified by the use of a table prepared by Riegler himself, giving the quantity

of sugar corresponding to each milligram of nitrogen produced during the reaction. [H.H.C.]

5.—His experimental investigation on **methemoglobin poisoning** and its treatment with oxygen inhalations leads Brat to the following conclusions: (1) Pflüger's law, that increase of oxygen-pressure leads to no greater activity of the vital processes is correct; (2) the complete saturation of the unchanged hemoglobin with oxygen, together with the oxygen absorbed in the serum, are capable of sustaining life, even when the quantity of intact hemoglobin present is less than the minimum ordinarily necessary to sustain life; (3) bleeding is conducive to an increase in the alkaliescence of the blood; (4) by increase in the pressure of the oxygen it is possible, in sufficiently alkaline blood, to change the methemoglobin into a modified compound or combination capable of sustaining life. [H.H.C.]

Berliner klinische Wochenschrift.

May 13, 1901. [38 Jahrg. No. 19.]

1. Aural Therapeutics of the Nineteenth Century. A. LUCAE.
2. The Exhibition of Gallstones by Means of X-rays and Remarks Concerning the Transmissibility of the Predisposition to Gallstones. C. BECK.
3. Pathology and Therapy of Prolapsus of the Female Urethra. A. PINKUSS.
4. New Experimental Investigation of the Curative Action of Anthrax Serums. A. SCLAVO.
5. Nervous Tachypnea. RECKZEH.
6. The Determination of Small Quantities of Free Fluid in the Peritoneal Cavity. V. CRIEGERN.

1.—Lucae contributes a short review of the progress made in the diagnosis and treatment of **aural diseases** up to the present time, giving to the English and French the credit for the advancement in aural technic during the first half of the nineteenth century and to the Germans for the latter half. [H.H.C.]

2.—After repeated attempts to demonstrate the existence of **gallstones** by means of the Röntgen apparatus, Beck, of New York, has succeeded in obtaining excellent results in at least 2 cases. In general he finds that the longer the exposure to the x-rays, the more prominent the liver outlines and the less distinct the gallstones. He therefore advises repeated experimental exposures, or at least 2 of 5 and 10 minutes respectively. Only such tubes as can stand a high voltage and are not so hard are permissible. As a standard he recommends a tube which, with a spark-length of 40 cm., will throw a gray-black shadow of the carpal extremity of the experimenter's radius, the adjacent soft parts being scarcely visible. Further, the intestinal tract should be thoroughly purged and the patient placed on his abdomen with shoulders and left side raised, the rays being allowed to act from the *side* rather than from above. In conclusion, Beck enumerates the different varieties of gallstones with their skiagraphic peculiarities, and reports 2 cases of cholelithiasis in which he was successful in obtaining good skiagraphs. [H.H.C.]

4.—Sclavo, in reporting the results of experiments with his new **anthrax serum** on sheep material, claims to have found a specific cure for the disease. He substantiates the claim by citing cases in which his serum has been successfully used on human beings afflicted with the disease. [H.H.C.]

5.—Reckzeh concludes his article on **tachypnea** with statistics of the cases coming under his observation and of those on the records of the Second University Medical Hospital at Berlin, discussing the etiology, symptoms, complications, prognosis and treatment of the conditions, which in most cases he found to be a manifestation of hysteria. [H.H.C.]

6.—von Criegern claims that even very small quantities of **free fluid in the abdominal cavity** may be diagnosed by inserting the forefinger as far as possible into the inguinal canal of the patient while in the erect position and percussing gently the abdominal wall, thus causing wave movements which can be felt by the operator's finger-tip. [H.H.C.]

Deutsches Archiv für klinische Medizin.

[Bd., LXIX Hft. 3 and 4.]

1. Behavior of the Leukocytes Under the Influence of Local Counter-irritation. ZOLLIKOFER.
2. The Varying Potassium-Sulfocyanid Content of the Saliva, and its Causes, in Healthy and Diseased Human Beings. GROBER.
3. Perforation of the Abdominal Wall in Aseptic. BERLINER.
4. Clinical Studies on the Organs of Circulation in the Early Stages of Syphilis. GRASSMANN.
5. General Infection after Gonorrhoea. ULLMANN.
6. Hematologic Studies on W. v. Leube's Case of "Rapidly Fatal Grave Anemia, with a Leukemic State of the Blood." ARNETH.
7. The Treatment of Chronic Pulmonary and Laryngeal Tuberculosis with Injections of Hætol. GIDJONSEN.
8. The Treatment of Tuberculosis with Cinnamic Acid (Experiments on Rabbits). FRAENKEL.
9. A Case of Senile Chorea. BISCHOFF.

1.—An experimental investigation into the behavior of the leukocytes of the blood in counterirritation applied to the skin. The forms of irritation investigated were iodine, mustard plaster, and Baunscheidt's application, consisting in the use of perforators and the subsequent inunction of croton oil. The experiments indicated that the beneficial effect of such irritation is not in any marked degree dependent upon leukocytosis. There is, indeed, barring the eosinophiles, usually a reduction in the white cells. Blisters and Baunscheidt's application at times produced a considerable leukocytosis, but not constantly. Iodine sometimes gave rise to a relative increase in the eosinophiles. As there is some analogy between the condition produced by counterirritation and local inflammatory processes of an infectious nature, the author thinks that the general leukocytosis of the latter is not an especially favorable reaction of the organism against the local inflammation, but is the result of a flooding of the entire circulation with chemotactic toxins. As regards local inflammation, only the local accumulation of leukocytes is of importance, although it is possible that the general leukocytosis may assist the leukocytes acting locally. This, however, is not proved. The therapeutic basis of counterirritation, therefore, is not the movements of the leukocytes, but is what the author, adopting a cumbersome word of Sahli's, calls a **phlogogetic action**; that is, one guiding the circulation of the inflamed parts into favorable channels—a rather unsatisfactory explanation. [D.R.]

2.—The existence of potassium sulfocyanid in the human saliva was discovered by Treviranus in the beginning of the nineteenth century. The substance may also be found in the urine and in the nasal and conjunctival secretions; but in all these places it seems to be derived from the saliva. It is probably not a decomposition product formed in the mouth, but is secreted by the salivary glands, and is formed out of cyanogen compounds as a disintegration product of the proteids. The sulphur of the latter, uniting with the toxic cyanogen, this is converted into the less active sulfocyanid (rhodan compound). The quantity of sulfocyanid in the saliva varies in different individuals. That first secreted gives the reaction more intensely than that secreted afterwards. The saliva of smokers seems to contain a good deal more than that of nonsmokers, although Grober was unable to detect any definite influence of nicotine. He examined 100 persons suffering from different ailments, using the following method:—2 cc. of saliva were acidulated with a drop of acetic acid, and to this 3 drops of a dilute, watery solution of iron chlorid (1 in 10) were added. Upon shaking, the characteristic red color of potassium sulfocyanid developed. For quantitative purposes, he prepared 3 standard solutions, with which the color in the test was compared. His conclusions are as follows: (1) Potassium sulfocyanid occurs only in the saliva of human beings; (2) it is not produced by decomposition of the saliva; (3) the amount secreted diminishes with the duration of the secretion; (4) change in food has no influence upon the quantitative relations of the secretion of potassium sulfocyanid; nor has the use of tobacco in nonsmokers any influence. The ingestion of minute quantities of hydrocyanic acid, however, increases the secretion; (5) the elimination of potassium sulfocyanid is

possibly dependent upon the state of proteid consumption and proteid decomposition in the organism. As this consumption and decomposition is greatly lessened in cachectic individuals, the latter eliminate less potassium sulfocyanid, or none at all. The author found, for example, that in carcinoma of the digestive tract the secretion was entirely suspended. [D.R.]

3.—Berliner reports a case of **perforation of the abdominal wall** in a patient with cirrhosis of the liver. The perforation occurred at the umbilicus. At the autopsy cirrhosis of the liver and acute miliary tuberculosis of the peritoneum were found. Microscopic examination of the fistulous canal showed that its walls were the seat of tubercles. The question arose whether the tuberculosis had antedated the perforation and had prepared the way for it, or whether it was a simple instance of inoculation tuberculosis in an already existing tract. The latter is more likely, but the possibility of the first must be kept in mind. [D.R.]

4.—An exhaustive clinical study of the organs of circulation in 288 patients in the early stages of syphilis. In $\frac{2}{3}$ of the cases the function of the heart was disturbed in the secondary stage. The disturbances varied from trivial anomalies to pronounced cardiac insufficiency; arrhythmia and abnormal rhythm, either acceleration or retardation, were common. In addition to bradycardia and tachycardia, disturbance of the nutrition of the heart muscle was frequent, and manifested itself subjectively by palpitation, objectively by signs of insufficiency of the myocardium. In 40% of the cases murmurs were heard. If present, dilation usually affected the right side of the heart. In a small proportion of cases there was an increased resistance in the peripheral arteries, even in persons who were young; but factors besides syphilis play a part here. Aortic insufficiency or signs of aortic aneurysm were not observed in any case. The blood-pressure was lowered in nearly all patients to a greater or less degree. The hemoglobin was almost invariably reduced. But the changes in the heart cannot be explained by the chlorotic state of the blood, nor as the result of the action of the mercury, since they are observed before this drug is administered. The cardiac disturbance must, therefore, be ascribed to the syphilitic infection as such. [D.R.]

5.—The author reviews the literature of **general infection produced by gonorrhoea**. In such infections the following structures may be involved: The joints, the heart (myocardium, endocardium, and pericardium), the tendon sheaths and synovial bursas, the pleura, the eye, the nervous system, and the muscles. Five cases are then cited in which gonorrhoea seemed to be the primary cause of a general infection. The first was a man of 57, in whom the clinical diagnosis was **cryptogenic septicemia**. It was found that an old gonorrhoea had given rise to a prostatic abscess, which in turn had led to septic thrombosis of the prostatic plexus. This was the starting point of a pyemia that ended fatally in 10 days. The existence of the gonorrhoea and of the prostatic abscess had been entirely overlooked during life. In the second patient there was a **general infection resembling typhoid fever**. The autopsy showed a prostatic abscess due to staphylococci as the primary cause. Although the urethra was normal, there was no other view tenable than that a former gonorrhoea had caused the prostatic abscess. The third patient, a man of 52, presented symptoms of **pyemia**, with intermittent fever and a periosteal abscess. The primary cause of the pyemia was again an abscess of the prostate. In the fourth patient, a man of 55, the diagnosis was **purulent cystitis and malignant tumor of the prostate, with pyemia**. The autopsy showed suppuration in the prostatic and perivesical tissue. Whether gonorrhoea had been the starting point was not known, but was considered likely. These cases show the importance of **carefully examining the prostate in septicemia in men**, even when the external genitalia present nothing abnormal. The fifth patient was 26 years of age; he developed a **septicemia secondary to gonorrhoea**. The first symptoms were a polyarthritis 6 weeks after the gonorrhoeal infection. The joint disease finally localized itself in the left hip, and resisted all treatment. A left-sided sciatica, a tenosynovitis of the right hand, and finally a malignant endocarditis of the aortic valve, developed. The bacterial cause was

not discovered. The gonococcus was not found in any of the cases as the cause of the general infection; only the first and second cases, however, were bacteriologically studied, and in them staphylococci were found in the metastatic foci. [D.R.]

6.—A splendid hematologic study of a remarkable case of acute pernicious anemia with a leukemic state of the blood, previously reported by v. Leube. The patient was a boy of 10, who entered the hospital May 6 and died May 9, 1900. He was healthy until April 22. From April 22 until April 29, he remained home from school. He vomited twice but was not very ill. On May 1 he again went to school, but on the fifth was dismissed on account of his pallor. Four days before death nosebleed and yellowish discoloration of the skin, with pains in the neck, teeth, and epigastrium, developed. The boy became apathetic, and finally, completely unconscious. The temperature was between 39° and 40° C. The blood showed 256,000 red corpuscles, 10,600 white, and 10% of hemoglobin. **Macrocytes**, **microcytes**, and **polychromatophilic red corpuscles** were found. There was also **poikilocytosis**. The blood-platelets seemed to be increased and large numbers of **nucleated red corpuscles** were present. These were of various types, and represented all the embryonic stages of red blood-cell formation. Regarding the leukocytes, the most interesting observation was the discovery of **polymorphonuclear, nongranular leukocytes**, the existence of which in the blood has been recorded only 4 times. **Myelocytes** of both the neutrophilic and the eosinophilic type were present. The lymphocytes were greatly increased. Large mononuclear and transitional forms were present in normal proportion. Studies were also made of the bone marrow, the splenic pulp and the lymph-glands. As for the bone marrow, poikilocytes, macrocytes and cells with anemic degeneration (polychromatophilic cells), as well as nucleated red cells of different types, were seen; there were also some cells which were so peculiar that it was difficult to determine whether they were megaloblasts or leukocytes. The author considers them to belong to an intermediate type termed by Ehrlich the **irritation form** (Reizungsform). Polynuclear leukocytes, neutrophile and eosinophile myelocytes, large and small lymphocytes, and large mononuclear and transitional cells, were also found. The article is beautifully illustrated with plates prepared by the author. [D.R.]

7.—Gidonsen has used **hetol** (sodium cinamate) advocated by Landerer, in 12 cases of **pulmonary and laryngeal tuberculosis**. He comes to the conclusion that the drug has no advantage; indeed there is a loss in body weight. [D.R.]

8.—An experimental study of the influence of **sodium cinamate** (**hetol**) on rabbits in which an ocular tuberculosis had been produced, convinced Fraenkel that the drug had no influence. [D.R.]

9.—A case of **senile hemichorea** in a woman of 73, ending fatally, after lasting 5 years. Examination of the nervous system was practically negative. There was a tuberculous caries of the vertebrae; but this developed later than the chorea. The author has continued the table of the recorded cases prepared by Riesman, the sum total in the literature now being 69. [D.R.]

Revue de Chirurgie.

March 10, 1901, [Vol. 21, No. 3.]

- Unilateral Exclusion of the Intestine in the Treatment of Rebellious Fistulas. X. DE LORA and M. PATEL.
- Ligation of the Abdominal Aorta. P. TILLAUX and P. RICHE.
- An Experimental Study of Fractures of the Upper Jaw. R. LEFORT. [Continued.]
- Chopart's Amputation. A. LAPOINTE.
- Total Extirpation of the Seminal Vesicles and the Vasa Deferentia by the Inguinal Route. R. BAUDET and P. DUVAL.
- Torsion of Hydrosalphinx. F. CATHELIN.

1.—Two cases are reported in which exclusion of the intestine from the fecal circulation was accomplished by **enteroanastomosis**. The operation was performed on a man of 40 because of pyostercoral fistula in the right iliac fossa following tuberculous appendicitis. Ileocolostomy was performed, thus excluding a large segment of the small intestine. In a second

case the operation was performed upon a man of 20 for a similar condition, but the anastomosis was made between the lower end of the ileum and the sigmoid flexure. From their experience and a study of the literature De Lora and Patel conclude that this method of treatment is accompanied by slight danger and is often very efficacious. In fistula of the small intestine the fecal material often accumulates in the lower segment of the small intestine and the fistula persists. In fistulas of the large intestine the results are more definite and often curative. If the fistula is situated in the region of the ileocecal valve, anastomosis of the ileum with the sigmoid flexure is advocated. If it is in the terminal portion of the small intestine not involving the cecum the anastomosis may be between the ascending colon and the ileum. Unilateral exclusion may even be employed in case of tuberculosis of the cecum without fistula as a curative measure and for the prevention of fistula. [M.B.T.]

2.—Tillaux and Riche have collected from the literature 12 cases in which ligation of the abdominal aorta has been performed and they report an additional case. From experience and a study of these cases they conclude that **ligation of the abdominal aorta** in man is never followed by gangrene, that congestive phenomena in the head are rare and unimportant, that paraplegia is inconstant, variable and usually transitory, and that the fatal results cannot be directly attributed to the operation itself. The case reported is that of a man of 56 who had a large tumor in the left inguinal region which had been at an earlier date taken for a hernia and a truss had been applied. Marked pulsation appeared later on, however, with evident signs of aneurysm and the tumor increased to the size of an adult head. As extirpation of the sac would have been impossible the only treatment seemed to be ligation and the abdomen was opened by a median incision and a silk ligature was applied high up about what was taken to be the common iliac artery. The arteries were quite atheromatous as the patient was an alcoholic. The circulation was immediately arrested in the aneurysm and there was no pulsation or bruit. There was not the least disturbance of the vitality of the lower extremity; no peculiar sensations or paralysis nor anesthesia following the operation. Edema of the lower left extremity developed, however, and later, urination became difficult. At the end of 2 weeks after the operation the condition became gradually worse, delirium set in, and death occurred. At the necropsy a diffuse aneurysmal sac was found which occupied the left side of the abdomen. The ligature was found to have been applied not on the common iliac artery as was supposed but to the aorta just above its bifurcation. The internal and middle coats were not ruptured. There was no clot formation above the ligature and it was possible to pass a groove director into the calibre of the artery at the point of ligature. The external iliac vein was thrombosed and the symptoms of edema probably resulted from this. [M.B.T.]

4.—Chopart's amputation is compared with other amputations of the foot, and its merits and disadvantages discussed. Lapointe believes that this operation could continue to hold a place among the amputations at this region, and if the soft parts do not permit covering the bones of the tarsus he advises resection of the astragalus to permit joining the flaps. [M.B.T.]

5.—Baudet and Duval discuss the various operations which have been proposed for the **total extirpation of the seminal vesicles** and the genital tract. From an anatomic study they find that the vesicles are located in the aponeurotic space, from which they are easily enucleated. There is only a single vascular pedicle located externally. This aponeurotic cavity may be opened from above and the vesicles readily removed after tying the vascular pedicle. Inguinal incision is considered the most favorable. The incision is continued a greater or less distance below the pubic spine, depending upon whether simple vasectomy or castration is necessary. It is continued upward along the inguinal canal to within 2 fingers' breadth of the anterior superior spine. The skin and muscles are divided, opening the canal, and the aponeurosis of the transversalis is lifted up together with the peritonium. The iliac fossa is freed by blunt dissection, to avoid tearing through the fascia which covers the great vessels. Caution is advised not to exert too great tension

on the vas so as to rupture it. After freeing the vas and vesicle from all sides it is cut free from the prostate with curved scissors and the bleeding surface is touched with the thermo-cautery. The technic of this operation was practised on 10 eadavers, and complete extirpation of the entire genital tract was found possible in all these cases. Two cases are reported in which the operation was practised on the living subject. A child 2½ years old was affected with tuberculosis of the left testicle. The family history was not known on the father's side, but the mother was quite well. The child was bottle-fed and poorly nourished. No pulmonary complication followed the attack of whooping-cough, but bronchopneumonia occurred during convalescence from measles. One year previously the mother had noticed that the testicle was affected. The serotum was enlarged, the skin was reddened, there was considerable pain. An abscess was incised and evacuated. Six months later a fistula persisted from which yellowish fluid escaped. The testicle was about twice the size of the one on the opposite side; there were no areas of softening, there was slight nodulation. The lungs were negative. The operation described was performed without any difficulty, and the child remains in excellent condition 3 months later. Pathologic study showed that the tuberculous process was far advanced. In a second case a man of 20 for 6 months had swelling of the left testicle and for 2 weeks a fistula had been discharging. The left seminal vesicle was enlarged, nodular and hard. The operation was performed as described, and 2 months later the man is in good condition, and though there is still fistula in the inguinal region he seems to be on the road to certain recovery. [M.B.T.]

Sundry American.

1. Opium Poisoning Treated with Permanganate of Potassium. EUSTORJIO CALDERON. (Pacific Medical Journal, March, 1901.)
2. Some Suggestions in Using Bromids in Epilepsy. L. PIERCE CLARK. (Indiana Medical Journal, March, 1901.)
3. Schnetter's Placenta Forceps. E. J. KEMPF. (St. Louis Medical Review, May, 1901.)
4. Koplik's Spots; Their Value in the Diagnosis of Measles, Particularly in Private Practice. JOHN ZAHORSKY. (Maryland Medical Journal, April, 1901.)

1.—Calderon cites a case of **opium poisoning** which he treated with complete success by the use of potassium permanganate. He first used the stomach pump, then washed out the stomach with a 1 to 5,000 solution of the permanganate until the water came out rose-colored, using in all about a gallon of the solution. Next he injected hypodermically a full syringe of a 1 to 20 solution in water. After this he left 150 grams of a 1% solution to be taken in tablespoonful doses every hour. The permanganate oxydizes the morphin which is contained in the stomach, causing it to become inert. The resulting mangandioxide is insoluble and therefore harmless. If the amount of morphin taken is known, the proportion of 5 parts of permanganate should be given as the antidote; if however the amount of morphin is unknown, 1 tablespoonful of a 1% solution should be given every hour. In laudanum poisoning 0.4 grams of permanganate per os neutralizes 30 grams of laudanum. [H.R.C.]

2.—In his paper on the use of the bromids in the treatment of epilepsy, Clark states that the first aim must be the suppression or at least the alleviation of the spasms. This he accomplishes by the use of the following mixture:

℞
Potass. bromid,
Ammon. bromid,
Sodii bromid, ññ 5 grains,
Elixir simplex, q. s. ad 1 dram.
M.

He begins by giving 1 teaspoonful a day for about a week, then gradually increases the dose until either the attacks cease or 1 ounce of the salt has been given. During this time care must be taken lest the patient develop bromid intoxication. Hot and cold baths, massage and electricity should be given, the bowels watched, the diet prescribed, and high rectal saline douches administered once or twice a week. After the dosage

has been established permanently the physician must endeavor by building up the general system of the patient to effectually cure the disease. Clark is also a strong advocate of the hypochlorization or salt-starvation method as an adjunct to the bromid treatment, which consists in reducing the amount of sodium chlorid consumed by the patient to ¼ the usual amount. This is accomplished by placing the patient on the following diet: Breakfast, milk, 1 pint; lunch, 2 cakes made of eggs, farina, milk and sugar, coffee; dinner, bouillon, unsalted, boiled beef, unsalted, potatoes; supper, porridge made with farina, sugar, boiling milk, etc. In cases which do not tolerate the bromid treatment he finds that a 10% solution of bromid will yield very satisfactory results. [H.R.C.]

3.—Kempf, in his paper on Schnetter's placenta forceps, tells of his own experience with the instrument, and of the good results which he has obtained from its use. He believes that it fills a want of the busy practitioner, and from its simplicity and usefulness, should highly recommend itself. [H.R.C.]

4.—Zahorsky found Koplik's spots in 18 out of 26 cases of measles. In speaking of the sign he says that: (1) Occasionally the spots are entirely absent; (2) the patient may not be seen at the proper stage of the disease (the spots appear from 1 to 3 days before the eruption on the skin, and they persist for a few hours to several days); (3) the white spots may be entirely removed; (4) the light may be imperfect. He also says that there can be no question of the value of Koplik's sign when present; but when absent, all the symptoms and signs with the history of the case, must be considered before measles can be excluded. [H.R.C.]

Münchener medicinische Wochenschrift.

April 16, 1901. [48 Jahrg., No. 16.]

1. Acute Serous Meningitis. HEGENER.
2. The Treatment of Tuberculosis. KLEBS.
3. The Theory of the Process of Fermentation. OPPENHEIMER.
4. The Treatment of Rachitis with Suprarenal Extract. HÖNIGSBERGER.
5. Addison's Disease. HINSMANS.
6. Stomach Lavage in Children. STEINHARDT.
7. Treatment of Gout with Quinic Acid. SALFELD.
8. The Statistic Report of the Pediatric Polyclinic of the Royal University at Reisingerlanum for 1900. SEITZ.
9. Treatment of Fibrinous Pneumonia. HORNUNG.

1.—Hegener gives the histories of 2 patients; one, a man of 32, and the other of 24, in whom, following **middle-ear disease**, symptoms of cerebral disturbance developed. This was characterized by a slowing of the pulse, headache, and optic neuritis. In the first patient there was also a subnormal temperature, vertigo, and tenderness of the skull on percussion. A radical operation was undertaken in the belief that there was an abscess, but none was found. Some serous fluid escaped, and afterwards, for days, the dressings were soaked with cerebrospinal fluid. The patient made a good recovery. In the second case, the mastoid was opened and a cholesteatoma removed. There was temporary improvement, but 5 days later the symptoms became more marked; the patient was drowsy, his pulse slow, and the temperature slightly elevated; there was also a spasm in the right face and arm, with unconsciousness. In the diagnosis, abscess, octogenic meningitis, and extradural abscess, were considered. A large bony flap was cut with an electric saw, and on inserting a knife into the brain, considerable serous fluid escaped. No pus was found. The dressings afterwards became soaked with cerebrospinal fluid; the man made a good recovery. The author considers these cases examples of **serous meningitis**. Unfortunately, no bacteriologic examination of the cerebrospinal fluid was made. [D.R.]

2.—Klebs emphasizes the important role played by the **toxins of the tubercle bacillus** in the production of **intestinal tuberculosis**. These toxins are probably responsible for the digestive disturbances which antedate the appearance of tuberculous lesions in the alimentary tract. He believes that **butter** containing tubercle bacilli is harmful, not alone by reason of these bacilli, the virulence of which is not great, but also on

account of the presence of tuberculotoxins. The popular opinion prevailing in some parts of Europe, that the use of butter in large quantities brings about skin eruptions—furunculosis, eczema, etc.—is well founded, as the butter probably contains tuberculous toxins. He himself has had an interesting experience with skin affections. Ten years ago he had a severe eczema of the hands, which resisted treatment for 2 years. Eventually, it was cured. On returning to Europe from Chicago, last year, he spent the summer in a Swiss village. An old leg ulcer broke out again, and the eczema reappeared on his hands. He thought that irritant substances in the butter, of which he had consumed 5 kilograms (10 lbs.) in the course of 100 days, might be responsible; but although he abandoned the use of butter, he did not grow any better. He then took internally, and applied locally, **tuberculoïdin**, with the result that he was very quickly cured. On injecting animals with an extract of melted butter, he found a marked depression of temperature, such as is produced by tuberculotoxins; and he concluded that **butter toxins and tuberculotoxins are identical**. The butter toxins are probably attached to the casein particles. Klobb advises purification of butter or its substitution by other fats, such as goose fat. Many of the symptoms of tuberculosis, he believes, are due to the tuberculous toxins, and can be counteracted by his tuberculoïdin. [D.R.]

3.—By electrolysis, Breiding obtained a pure and stable form of metals (so-called Metallsole), which had an extraordinary **catalytic action** upon peroxid of hydrogen, and was capable of decomposing it, just like organic matter and enzymes. He called these colloid metals **inorganic ferments**, and considered them identical with organic ferments. Oppenheimer, however, takes issue with him, and considers that the term inorganic ferments is a contradiction in terms, as ferments are of necessity organic. Ferment action consists of 2 phases. The second phase, that of the actual decomposition, may be identical with the catalytic action of metallic substances; but before this catalysis is possible, the ferment probably forms a compound with the body upon which it acts; this is the first phase. The ferment is specific and selective, and acts only upon certain substances. Thus the **precipitins, hemolysins, and bacteriolysins** are strictly specific, and their action is best explained on Ehrlich's lateral chain theory. It is also possible to produce antiferments, the lab-ferment and egg-albumin, fibrin, and even peptone; but antipepsins and antidiastases have not been obtained. Oppenheimer's conclusions are: First, that the catalytic action of organic substances can be separated from their specific ferment action; that fermentative processes do not strictly obey the laws of catalysis. The most important feature differentiating ferments from inorganic catalytic substances is that the former enter into actual combination with the specific substratum upon which they act. [D.R.]

4.—The author obtained no encouraging results from the action of **suprarenal gland** in the treatment of rickets. [D.R.]

5.—Attention is called to the importance of **accessory suprarenals** in connection with Addison's disease, and to the fact that the patients suffering from this disease present in the terminal stages the symptoms of profound intoxication. [D.R.]

6.—Steinhardt recommends **lavage** in the treatment of **digestive disturbances in children**. He introduces a catheter through the nose, and has found that children do not resist this method, and would be quiet while the stomach was being washed out. He uses plain water for the purpose. [D.R.]

7.—Salfeld has employed quinic acid in the form of **sional**, which is a combination of the acid with piperazin, in the treatment of **gout**. It was given in doses of 1 gram (15 grains) 5 or 6 times a day. The results were very good. Upon articular rheumatism, however, the drug had no beneficial effect. [D.R.]

8.—A criticism of an article on the treatment of **fibrinous pneumonia** by Pässler, in which Hornung especially inveighs against the use of alcohol in pneumonia and other infectious diseases. He considers alcohol a powerful vasomotor depressant; and as the infectious toxin has a similar action, he thinks that we but multiply poisons when we give alcohol. He recommends digitalis and campher, and has also seen good effects from caffeine. [D.R.]

THE PUBLIC SERVICE

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended June 15, 1901:

SMALLPOX—UNITED STATES AND INSULAR.			Cases	Deaths
Alaska:	Douglas City.....	May 25.....	5	
California:	San Francisco.....	May 25-June 1 ...	4	
Dist. of Columbia:	Washington.....	May 30.....	1	
Illinois:	Chicago.....	June 1-9.....	6	
Indiana:	Michigan City.....	June 8-10.....	2	
	South Bend.....	June 1-8.....	1	
Kansas:	Wichita.....	June 1-8.....	7	1
Louisiana:	New Orleans.....	June 1-9.....	5	1
	Shreveport.....	May 25-June 1 ...	2	
Maine:	Portland.....	June 1-8.....	1	
Maryland:	Baltimore.....	June 1-8.....	1	
Massachusetts:	Boston.....	June 1-8.....	1	
	Fall River.....	June 1-8.....	1	
	Marblehead.....	June 1-5.....	1	
	New Bedford.....	June 1-8.....	27	1
	Somerville.....	June 1-8.....	1	
Michigan:	Detroit.....	June 1-8.....	33	
	West Bay City.....	June 1-8.....	1	
Minnesota:	Winnona.....	June 1-8.....	1	
Missouri:	St. Louis.....	May 26-June 2 ...	32	
New Hampshire:	Manchester.....	June 1-8.....	4	
New York:	New York.....	June 1-8.....	86	16
	Cincinnati.....	May 31-June 7 ...	5	
Ohio:	Cleveland.....	June 1-8.....	30	
	Toledo.....	June 1-8.....	1	
Pennsylvania:	Lebanon.....	June 1-8.....	1	
	Philadelphia.....	June 1-8.....	1	1
	Pittsburg.....	June 1-8.....	5	
Rhode Island:	Providence.....	June 1-8.....	1	1
Utah:	Ogden.....	May 1-31.....	11	
	Salt Lake City.....	June 1-8.....	4	
Washington:	Tacoma.....	May 26-June 2 ...	1	
Wisconsin:	Green Bay.....	June 2-9.....	2	
Philippine Islands:	Manila.....	April 13-20.....	9	
Porto Rico:	San Juan.....	May 10.....		
			Extinct; 8 cases on island.	

SMALLPOX—FOREIGN.			Cases	Deaths
Austria:	Prague.....	May 18-25.....	3	
Belgium:	Antwerp.....	May 18-25.....	3	1
Brazil:	Pernambuco.....	April 1-15.....		27
China:	Hongkong.....	April 22-27.....	7	5
Colombia:	Panama.....	May 27-June 3 ...	5	1
France:	Paris.....	May 18-25.....		15
Great Britain:	Glasgow.....	May 25-31.....	42	1
Greece:	Athens.....	May 18-25.....	2	
India:	Calcutta.....	May 4-11.....		34
	Karachi.....	April 28-May 12..	9	3
Italy:	Naples.....	May 19-26.....	161	28
Japan:	Nagasaki.....	May 6.....	1 on U. S. S. Indiana.	
	Tokyo.....	May 11.....	3	
Manitoba:	Winnipeg.....	May 25-June 1... 2		
Mexico:	Mexico City.....	May 19-June 2... 3		
Russia:	Odessa.....	May 11-26.....	9	1
	St. Petersburg.....	May 4-18.....	24	5
	Warsaw.....	May 4-11.....		8

YELLOW FEVER.			Cases	Deaths
Mexico:	Vera Cruz.....	May 18-25.....		1

CHOLERA.			Cases	Deaths
India:	Bombay.....	May 7-14.....		3
	Calcutta.....	May 4-11.....		47

PLAGUE—FOREIGN AND INSULAR.			Cases	Deaths
Africa:	Cape Town.....	To Apr. 5.....	412	181
China:	Hongkong.....	Apr. 20-27.....	65	55
India:	Bombay.....	May 7-14.....		289
	Calcutta.....	May 4-11.....		134
	Karachi.....	Apr. 28-May 12..	657	563
Japan:	Formosa, May 19, Incr's'ng.	From		
	May 3-June 1.....		2,157	
Philippine Islands:	Manila.....	Apr. 13-20.....	27	16

Changes in the Medical Corps of the U. S. Navy for the week ended June 15, 1901:

WENTWORTH, A. R., surgeon, detached from the Solace and ordered to the Albany.
HARRIS, H. N. T., surgeon, detached from the Albany and ordered to the Monocacy.
EVANS, S. G., passed assistant surgeon, detached from the Monocacy and ordered to the Solace.
MEYERS, G. M., assistant surgeon, appointed assistant surgeon from June 1, 1901.
MURPHY, J. F., assistant surgeon, ordered to the Naval Academy, June 15.
BACKUS, J. W., assistant surgeon, ordered to the Vermont, June 17.
ASSERSON, F. A., assistant surgeon, ordered to the naval hospital, New York, June 17.
MAYERS, G. M., assistant surgeon, ordered to the Pensacola Navy Yard, June 18.

Changes in the Medical Corps of the U. S. Marine-Hospital Service for the 14 days ended June 13, 1901:

WHITE, J. H., surgeon, to report at Washington, D. C., for conference, June 7, 1901.
WILLIAMS, L. L., surgeon, granted leave of absence for 3 days, from June 6—June 6, 1901. Granted 2 days extension of leave of absence, June 8, 1901.
PRETTUS, W. J., surgeon, granted leave of absence for 3 days from June 13, 1901—June 11, 1901.
NYDEGGER, J. A., passed assistant surgeon, granted leave of absence for 30 days from June 8, 1901—June 8, 1901.

SPRAGUE, E. K., passed assistant surgeon, granted leave of absence for 30 days from May 30—May 31, 1901.
 WICKES, H. W., passed assistant surgeon, granted leave of absence for 4 days from June 3—May 31, 1901.
 DECKEL, C. E., assistant surgeon, granted leave of absence for 10 days, on account of sickness—June 6, 1901.
 KING, W. W., assistant surgeon, granted leave of absence for 4 days—June 11, 1901.
 BREADY, J. E., acting assistant surgeon, granted leave of absence for 1 day, June 19—June 11, 1901.
 ECROYD, HENRY, acting assistant surgeon, granted leave of absence for 10 days from June 8—June 6, 1901.
 MASON, W. C., acting assistant surgeon, granted leave of absence for 6 days from June 2—June 10, 1901.
 SMYTH, F. R., acting assistant surgeon. Leave of absence for 3 days granted Acting Assistant Surgeon Smyth by Bureau telegram of May 31, 1901, revoked—June 10, 1901.
 STANTON, J. G., acting assistant surgeon, granted leave of absence for 15 days from June 3—June 6, 1901.

Board Convened.

Board convened to meet at Washington, D. C., on June 7, 1901, for the physical examination of an applicant for cadetship in the U. S. Revenue Cutter Service. Detail for the Board: Passed Assistant Surgeon H. D. Geddings, Chairman; Assistant Surgeon B. S. Warren, Recorder.

Changes in the Medical Corps of the U. S. Army, for week ended June 15, 1901:

Orders of May 31, which relate to Captain Charles R. Gill, assistant surgeon, are revoked, and Captain Gill will proceed to Fort Totten in time to accompany the 2d battalion of engineers from that post to San Francisco, Cal.

HALLOCK, Captain HARRY M., assistant surgeon, is relieved from duty at Fort McPherson, to take effect upon the expiration of the leave granted him May 11, and will then proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

SARGENT, E. H., contract surgeon, is assigned for duty at Vancouver Barracks.

Leave for 1 month, to take effect on or about June 30, is granted Contract Surgeon Halsey L. Wood.

The following named hospital stewards, appointed June 1, are assigned to duty at their present stations: Benjamin L. Jacobson, San Juan, P. R.; Arthur Eutroppe, Fort Baker; Charles M. Hunter, Fort Niobrara; August A. Bemtgen, Army general hospital, Washington Barracks; Andrew S. Donnan, Fort Banks; Edwin A. Searson, Fort Howard; Arthur M. Fiske, Fort Terry; Frederick Thomas, Army general hospital, Washington Barracks; LeGare J. LaMar, Fort Ephan Allen; Mathew Galvin, general hospital, Fort Bayard; Richard A. Wood, Fort Stevens; John L. Gerlach, Fort Porter; John R. Sands, Fort Clark; Rowland D. Laws, muster-out camp, Presidio; Charles L. Keeler, Army general hospital, Presidio; Thomas G. Bristow, Alcatraz Island, Cal.; John J. Walker, Fort Walla Walla; Samuel S. Snarr, Key West Barracks.

EDWARDS, WILLIAM, hospital steward, general hospital, Fort Bayard, is transferred to Frankford Arsenal, Pa., for duty to relieve Hospital Steward Max Werner. Steward Werner will be sent to San Francisco, Cal., and report for assignment to duty at Honolulu.

BAIGENT, JOHN, hospital surgeon, hospital corps, appointed June 1, Hamilton Barracks, Matanzas, Cuba, will report by letter to the commanding general, department of Cuba, Havana, Cuba, for assignment to duty.

MINOR, FREDERICK L., hospital steward, appointed June 1, Columbia Barracks, Havana, Cuba, will report to the commanding general, department of Cuba, for assignment to duty.

WALLS, HENRY J., and KRAUSE, HENRY C., hospital stewards, appointed June 1, headquarters, department of Cuba, Havana, Cuba, will report to the commanding general, department of Cuba, for assignment to duty.

NAYLOR, WILLIAM S., hospital steward, appointed June 1, Holguin, Cuba, will report by letter to the commanding general, department of Cuba, Havana, Cuba, for assignment to duty.

HERRMANN, CHRISTOPHER, hospital steward, appointed June 1, Presidio, will report for transportation to Manila, P. I. Upon arrival at Manila he will report for assignment to duty.

COLLINS, JOHN L., hospital steward, appointed June 1, Plattsburg Barracks, will be sent to Fort Williams, for duty.

CLEVELAND, DELANCEY, Jr., hospital steward, appointed June 1, Hamilton Barracks, Matanzas, Cuba, will report by letter to the commanding general, department of Cuba, Havana, Cuba, for assignment to duty.

SCHUMANN, THEODORE, hospital steward, appointed June 1, Vancouver Barracks, will be sent to San Francisco, Cal., and report for transportation to Manila, P. I. Upon arrival at Manila he will report for assignment to duty.

ABELE, JOHN G., hospital steward, appointed June 1, Fort Egbert, Alaska, will be sent to Fort Davis, Alaska, for duty.

SCULL, JAMES A., hospital steward, appointed June 1, now en route from China to Manila, will report upon his arrival at Manila, for assignment to duty.

LOEBENSTEIN, CHARLES T., hospital steward, appointed June 1, Fort Adams, will be sent to Fort Greble, for duty.

The following changes in the stations and duties of officers are ordered: Captain Francis A. Winter, assistant surgeon, is relieved from duty at Fort Sheridan, to take effect upon the expiration of the leave granted him May 23, and will then proceed to Jefferson Barracks, for duty, to relieve Major Marshall W. Wood, surgeon. Major Wood will proceed to St. Louis, Mo., and assume charge of the medical supply depot in that city, to relieve Lieutenant-Colonel Joseph Girard, D. S. G. Lieutenant-Colonel Girard will proceed to Vancouver Barracks and report to the commanding general, department of the Columbia, for duty as chief surgeon of that department, and will also report to the commanding officer, Vancouver Barracks, for duty as surgeon at that post.

ASHBURN, PERCY M., first lieutenant, assistant surgeon, upon his arrival at San Francisco, Cal., will proceed to Fort Sheridan, and report for duty.

AISENMAN, WOLF, hospital steward, Fort Hamilton, is relieved from further duty at that post and will report on the Army transport Ingalls, for duty aboard that vessel during its voyage to Manila, P. I. Upon arrival at Manila he will report to the commanding general, division of the Philippines, for assignment to duty.

HERNST, WILLIAM, hospital steward, hospital corps, now at Honolulu H. T., is transferred to the general hospital, Fort Bayard, for duty. ERWIN, Captain JAMES J., assistant surgeon, is honorably discharged, to take effect June 30. Captain Erwin will proceed to his home. Leave for 1 month is granted Contract Surgeon S. A. Greenwell. Leave for 21 days, from June 14, is granted Major W. Fitzhugh Carter, surgeon.

Leave granted Contract Surgeon H. E. Menage, May 2, is extended 1 month.

BAKER, WALTER S., hospital steward, appointed June 5, San Francisco, Cal., will report to the commanding general, department of California, for assignment to duty.

GRISWOLD, Major RICHARD S., surgeon, recently appointed, now in New York City, will proceed to San Francisco, Cal., and report for transportation to Manila, P. I., where he will report for assignment to duty.

The following changes in the stations and duties of officers are ordered: So much of par. 24, S. O. 53, March 12, this office, as assigns Major John S. Kulp, surgeon, to duty at Fort Hancock, is amended so as to direct him to proceed to New York City, for duty as attending surgeon and examiner of recruits and as medical superintendent of the Army transport service in that city, to relieve Major William D. Crosby, surgeon. Major Kulp will report by letter to the commanding general, department of the East. Major Crosby will proceed to Fort McPherson, for duty.

The following changes in the stations and duties of officers are ordered: So much of par. 12, S. O. 131, June 6, this office, as directs First Lieutenant Basil H. Duteber, assistant surgeon, to proceed to Fort Totten, for duty, is amended so as to direct him to proceed to Fort Hancock, for duty, to relieve Captain Deane C. Howard, assistant surgeon. So much of par. 7, S. O. 2, January 3, this office, as relates to Captain Deane C. Howard, assistant surgeon, is amended so as to direct Captain Howard to proceed to Havana, Cuba, and report for assignment to duty.

BAMBERGER, RAYMOND S., hospital steward, now at San Juan, P. R., is transferred to the Army general hospital, Washington Barracks, for duty with the hospital corps.

STEWART, LYELL R., hospital steward, now in Washington, D. C., having relinquished the unexpired term of furlough granted him, is relieved from further duty in the department of Cuba. He will be sent to New York City and report for transportation to Manila, P. I., on the Army transport Ingalls. Upon arrival at Manila he will report for assignment to a station.

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To lessen the spread of disease by insects, the Marine-Hospital Service enjoins upon its medical officers every precaution to prevent the access of flies, mosquitos, and fleas to hospitals and quarantine stations under their charge. Fumigation by sulfur is considered the best method for destruction of these pests, since formaldehyd is uncertain, and pyrethrum powder merely stupefies and does not kill. If, failing the sulfur, pyrethrum is used, insects must be gathered directly after the use of the powder and burned. Petroleum must be used on all pools of water accessible to stations of the service, and containers of drinking-water should be carefully covered. All patients should be carefully protected by netting, those suffering from communicable disease to prevent the carrying of contagion, others to prevent their being infected. Special attention must be given to water casks, etc., on ships coming from regions where malaria and yellow fever prevail. These orders constitute an advance in sanitary science of a kind too often unmarked. The adoption of such measures by the Government make them the natural and familiar thing, to neglect which will in time be recognized to be as inimical to public safety as to neglect vaccination or permit a mad dog to roam at large. But, when the day of comparative immunity from plague, yellow fever, typhoid and malaria has come, popular antiscience will doubtless soon forget to whom it owes such freedom, and use this, as it has so many past steps in the elimination of disease, in some curiously distorted manner for the vilification of those who spend their lives for the betterment of the race.

Plundering and Corruption in the Name of Charity would be the fitting designation of some of the work of the Pennsylvania Legislature in its recent appropriations or refusals of appropriations to private and semipublic institution. To read the reports of the proceedings one blushes at the revelations, and wonders whither "Americanism" is tending. There is hardly a pretence of principle or fair play, and only payment of corrupt political "deals," with general pauperization of our charitable institutions, or obedience to "influence," is visible in the results of the balloting. Why such an institution as the University of Pennsylvania should be denied help while others are freely endowed, why a little charity that loudly demands gets what it wishes, while a great one like the Pennsylvania Hospital, which asks for nothing, is not considered at all, is essentially

inexplicable and thoroughly disgusting. The present methods and injustices of appropriation by this State are so flagitiously evil that they harm and debauch both the giver and the receiver. Such exhibitions of debasement have the one merit that the present plan is seen to be far worse than that of no appropriations whatever. Either reform or abrogation is imperatively demanded.

The Fourth-of-July Battles since the Revolutionary war have perhaps been more fatal, in deaths and injuries than was that war itself. The stupidity and disgrace of our modern "celebrations" are unpatriotic to a shameless degree. Our newspapers succeeded in learning of 59 deaths and 2,767 injuries resulting from last year's "celebration," and Dr. Reynolds, of Chicago, is quoted as finding a total of at least 47 deaths in his city in the past. In Philadelphia last year 10 were killed and 311 injured. The profession should bring its influence to bear to stop the reckless folly. There is at least one Mayor in the United States alive to his duty. Mayor Harrison, of Chicago, has declared that:

"Discharges of fireworks, firecrackers, gunpowder, or other explosives in any alley, back yard, or other confined space is hereby positively prohibited.

"The discharge of cannons, guns, pistols, revolvers, dynamite or cannon crackers, or other firearms is hereby absolutely prohibited under penalty of \$25 for each offense.

"The placing upon the car tracks of any railway, or upon the rails of any railroad within the limits of the city of Chicago any torpedo, bomb, or other thing containing any substance of an explosive nature is hereby absolutely prohibited under penalty of a fine of \$10 for each offense.

"The sale or gift of toy pistols or metal caps to children is hereby absolutely prohibited. Any violation of this provision will subject the offender to arrest and a fine of \$10."

A Uniform Examination for License to Practise Medicine or Reciprocity.—Ever since the introduction of the much-needed State laws for license to practise medicine there has been the disagreeable necessity for nearly every physician who has changed his place of residence to take another examination for license to practise. This has given rise to a good deal of dissatisfaction and discussion as to the best way of avoiding this hardship. The conditions in different States at present are so different that uniformity in the examination for license to practise will be impossible for some time to come. In some of the sparsely settled Western and Southern States where the inducements to settle are not great, it cannot be expected that the best trained

and most highly educated practitioners will desire to practise and it would not be right to demand so severe an examination for license to practise in such States as in more favored districts. However, a uniform requirement is quite possible in many of the older States where the conditions of education are more settled. In replying to a toast on "Medical Education" at the annual banquet of the Surgical Section of the American Medical Association, Dr. W. L. Rodman suggested a solution of the problem which seems more feasible than reciprocity in medical licensure. Dr. Rodman suggested that examination papers should be prepared under the direction of the medical officers of the army, navy and marine-hospital service, these boards working in cooperation with members from the boards of different States. Examination papers prepared in this way should be sent once a year to some central city or cities in the different States where the examination could be conducted by the local officers. The papers could then be returned to the central board for correction. This would, of course, involve an enormous amount of labor for such a board, but it would make possible a perfectly uniform examination and probably few would complain of the justice of the questions asked or of partiality in marking. At a little extra expense a few extra officers could be taken by the government service and could be assigned to this duty and it seems to us the most reasonable method which has thus far been suggested of obtaining a uniform standard. Of course, such a method of examination would have to be approved and accepted by each of the local State boards, as the United States Government has no right to dictate to the States in such matters. There seems to be no real reason why half the States of the Union should not have this uniform requirement for admission to the practice of medicine and surgery. Such a central board would be more economical than numerous large State boards and it would do away with a great deal of undignified wrangling of candidates with examiners and between different boards as to whether their examinations are of equivalent value.

Stagnation in the Navy Medical Department is a complaint that comes from many sources. The incorrectness of the methods of the complainants is as suggestive as the facts themselves. What are naval surgeons doing for the progress of the corps or of medical science? We hear answers which charge that no opportunities are offered whereby good work can be done. There are no hospital or Red Cross ships in the Orient, the "ambulance" ship with her formalin sterilizers having been dismantled for a navy transport. There is not, it is said, an x-ray apparatus on any ship outside of the United States, and the literature furnished, or not furnished, by the government is ridiculously insufficient in quantity and quality. All this, too, while appropriations are being turned back into the treasury. The hospital at Yokohama has only two medical men in attendance, while the appointment of new acting assistant surgeons is unaccountably postponed. Why, also, should not the medical officers have graduated retirement as have those of the army and of the line, after 30 or 40 years of service and at their own request, to make

a specified number of vacancies? Even in the English service the time is 20 years. Does anybody in authority care for either professional or governmental efficiency and advance? Original work and utilization of great opportunities seem to be positively discouraged. Upon whom rests the responsibility?

The London Polyclinic and English Medical Progress, or rather the lack of progress were contrasted at a "Festival Dinner," London, on May 22, presided over by Mr. A. J. Balfour, and attended by 500 representative medical men. Donations in aid of the Polyclinic amounting to \$8,500, were announced. The Polyclinic said the chairman had three functions, that of medical charity; that of giving postgraduate instruction; but more important, that of medical research and discovery. There followed some quite plain truth-telling by Mr. Balfour, who said:

After making all allowances for the great claims on the gratitude of the world which the British medical profession undoubtedly had, it remained true, he believed, that in comparison with Germany, France, or Italy, England had not done all that it might as pioneer of medical discovery. In England they were proud to say that they left to private enterprise and benevolence duties which in other less fortunate countries were entrusted to the government, but if that policy was to be successful, they must have the private enterprise and the private benevolence—(cheers)—and he questioned whether they had shown the possession of those great qualities to the extent that they ought to have done. "We have not done sufficient," continued the right honorable gentleman: "we lag behind: We, the richest country in the world, lag behind Germany, France, Switzerland, and Italy. Is it not disgraceful? Are we too poor, or are we too stupid? Do we lack the imagination required to show what these apparently remote and abstract studies do for the service of mankind? I greatly fear that we lack the imagination, and that we have allowed ourselves to lag in the glorious race run by the civilized countries in pursuit of knowledge, and that we have permitted ourselves by far too large an extent to depend upon others for those additions to our knowledge, which surely we might have made for ourselves. Let us not be backward in this great international competition, which may be merely said in some sense to balance that more costly and more destructive competition in armaments, and it may be in commerce. Here, at all events, the interests of all nations are as one; here, at all events, there should be no undue rivalry, or, if any rivalry at all, it should be only as to which nation shall add the most to that scientific knowledge upon which depends, more than the efforts of statesmen, politicians, soldiers, and sailors, the future happiness and progress of mankind."

We heartily wish the desired success to the London Polyclinic, and to every other similar institution having the same objects. We could have wished that the chairman had seen fit in his comparisons to cast his eye westward. The United States has, in truth, as strikingly outrun England in the race for medical discovery and progress as any of the nations he mentions. A strange lethargy seems to have palsied the English profession.

Philanthropy in School Work.—Chicago has the distinction of being the first city in the world to furnish free transportation for crippled children of school age to a school of their own. The superintendent of compulsory education of that city in investigating many cases of absence found that a number of children remained from the school sessions both on account of sensitive

ness because of their deformity, and because, in many instances, they were unable to reach the school without an attendant, an impossibility in families all the members of which had to be breadwinners. The community had provided for the schooling of these unfortunates, but the cost of transportation fell mainly upon the parents and guardians, except when private charity furnished the means. In a building in the stockyard district where the larger proportion of these children live, a large room has been set apart for them in order that they may not be annoyed and jostled by their healthy and boisterous mates. A smooth-running omnibus with an attendant plies daily between the school and the homes of the children, and eighteen crippled and comparatively helpless children constitute the first class. Similar schools are contemplated in other parts of the city. That the school boards of other cities will turn their attention from the jobbery in books and the traffic in positions of which they are too often accused, and enter into a noble emulation in the humanities with Chicago is devoutly to be hoped, even though their efforts should be crippled by the bartering of school and hospital appropriations in political corruption.

Leprosy in the United States.—A circular letter, 8,000 copies, sent from Washington to every city and county physician, every health officer and every responsible head of a hospital in the country, has brought in 2,000 replies, from which information has been gathered that an alarming number of cases of leprosy exists in the United States, chiefly among foreigners. An act for the suppression and prevention of leprosy has been presented to Congress through Hon. Irving P. Wanger, of Pennsylvania, endorsed by the Philadelphia and Pennsylvania State Boards of Health. This bill, which was first submitted to the State Boards of Health of Maine, Massachusetts, Ohio, Minnesota, Louisiana and other States, and which was approved by most of them, proposes to remove the care of lepers from the State Boards of Health, and includes the appointment of a single commissioner on leprosy and emigration laws especially against countries known to be leprosy. By its provisions every State Board is privileged—not compelled—to turn over its lepers to the National Commission. The mixed isolation law of Dr. Hansen, of Bergen, Norway, which allows some lepers to remain in their homes, has been adopted by Wisconsin and Minnesota, but this could not be done with impunity in other States where the climate is not so antagonistic to the bacillus. It will be compulsory with every State Board of Health, and its only duty will be to take direct supervision of every reported leper residing within the State limits, and to maintain absolute and continuous isolation. Sending lepers to the National Asylum is preferred to the State asylums as recommended in the bill, but this is left to the option of the States. The proposition to set apart a farm of a mile square in Yellowstone Park for a National Leper Home is also included. Leprosy is found in its worst types on the coast, and the question of its transmission, whether by fish or mosquitos, will be studied this summer by an expert of the fish expedition to Hawaii. Dr. Isadore Dyer, who has made a careful study of the disease, in connection with the interest

aroused by the difficulty in selecting a site for the lepers' home near New Orleans, reviews the history of leprosy in Louisiana, and urgently appeals to the press and public-spirited citizens to take action for the control and eradication of this disease, as the results following the Berlin Conference of 1897, composed of delegates of all the powers met to discuss the terror and evil of leprosy and its prevention, show conclusively the wisdom of legislation, sanitary precaution, segregation and systematic medical treatment. National measures, not those of different States, must be the most effective, since thus alone would there be concerted action.

The New Specific Test for Blood.—By far the most important and suggestive results of experimental research during very recent times are those that relate to certain specific biologic reactions. Of these, possibly the most important, at least in a diagnostic and medico-legal sense, is the specific test for blood. Recently it was ascertained that the injection of the blood of an animal into an animal of another species results in the production of a certain substance or substances destructive of the blood of the first mentioned animal. The demonstration of this fact opened a field of research almost unlimited in its extent. It was soon ascertained that similar specific results were achieved when tissues other than the blood were employed in the experiments. In this connection, Nuttall and Dinkelspiel present in abstract in the *British Medical Journal* of May 11, the results of a series of experiments that they were led to undertake in view of the recent discovery of specific precipitins that act upon various bacterial products—milks, peptone, egg albumin, and different kinds of blood. Having injected rabbits intraperitoneally with horse-serum, dog-serum, ox-serum, sheep-serum and human serum, they were able to observe the formation of specific precipitins in their blood. The antisera from these animals were tried on twenty-four different bloods with uniformly negative results, if one excepts the slight reaction exerted by the antiserum for human blood upon the blood of two species of monkey. In addition, a slight clouding was produced by the antiserum for ox-blood when added to sheep's serum and vice versa. Some animals gave an effective serum after the third injection. Bloods that had been dried for two months and preserved at room temperature, either in the dark or exposed to diffuse daylight, or in the dark at 37° C., as also such as had been exposed for a week to the action of sunlight, as also serum from a blister, the result of a burn, all gave a positive reaction when tested with their particular antiserum. Some human blood that had undergone putrefaction for two months, when diluted 1. in 100 with normal salt solution, gave a marked reaction with the antiserum for human blood, which it did not do on the addition of other blood serums. A rabbit that was treated with some old antidiphtherial horse serum preserved with trikresol in a corked bottle for 2 years and 7 months, yielded a specific precipitin for horse serum. Positive results also were obtained by treating a rabbit with a pleuritic fluid that had been kept in the laboratory for 5 or 6 months, and preserved

by the addition of chloroform. A slight but distinct reaction was obtained with human nasal and lacrimal secretion. Dilutions of human blood (1 in 100) mixed with an equal volume of dilutions of blood of the ox, sheep, dog and horse and tested for human blood, all gave a positive reaction and vice versa. Control experiments with normal rabbit serum, as also with non-homologous antisera, gave negative results. Nuttall and Dinkelspiel state that their investigations confirm and extend the observations of others with regard to the formation of specific precipitins in the blood serum of animals treated with various serums. They conclude that these precipitins are specific, although they may produce a slight reaction with the serums of allied animals. They believe also that the substance in the serum that brings about the formation of the precipitin, as also the precipitin itself, are remarkably resistant. Finally they believe that this specific test is the most delicate means hitherto discovered of detecting and differentiating bloods, and they hope that it may be put to forensic use. This phase of the subject has also been commented upon by a number of other writers, among whom may be mentioned Bordet, Uhlenhuth, Wasserman and Schültze, Deutsch, Nolf and others. Details of the investigations of Nuttall and Dinkelspiel are promised in the forthcoming number of the *Journal of Hygiene*.

Cesarean Section for Placenta Prævia.—The recent advocacy of this radical treatment for placenta prævia demands a word of comment and caution, and, possibly, a word of condemnation. The one argument in its favor is that it reduces the fearful fetal mortality in these cases. But the question is, whether an increased maternal mortality will not ensue if such a procedure is extensively adopted. The splendid results attained by Fry, of Washington, who employed bipolar version, thus saving fourteen mothers and five children in fourteen cases of placenta prævia, and by DeLee, of Chicago, in the use of the tampon in a series of twenty-five cases without maternal mortality, show pretty conclusively that, if proper care is taken, the maternal deathrate may be very satisfactory. This condition is rarely recognized until labor is in progress. It is usually diagnosed and treated by the general practitioner, and he is generally better equipped for the treatment of this complication by version, and other conservative methods, than by cesarean section; and if such radical teaching should be disseminated and be adopted we believe the maternal and fetal mortality would be increased. It is unfair to apply to these cases of ectopic placenta the admirable statistics of Zweifel, Olshausen, Reynolds and others, who have reduced the mortality of the cesarean operation to 3% in elective cases for contracted pelvis. The pathologic condition is essentially different, the choice of time for operation, and often the diagnosis of lesion, radically different, and the results will vary materially. Cesarean section for placenta prævia will, probably, always be a dramatic maternity-hospital operation, only applicable occasionally, and never generally adopted by the rank and file of medical men for the relief of this dangerous complication of gestation.

The Model Tenement Houses are likely to increase in numbers it seems; for, according to the report of the City and Suburban Homes Company, of New York, the venture is a business success. This corporation is dealing with the tenement house problem, combining business with philanthropy, and its success is attested by a 4% dividend on the company's capital, which amounts to about \$2,000,000 in Manhattan. The *New York Evening Post* is authority for the statement that this company will spend \$1,250,000 more next year, chiefly on model tenements for colored people on the west side. The success of this movement exposes the falsity of the view that wretched tenement house conditions are inevitable, that model tenements will not pay, and that the poor prefer filth to cleanliness. Such opinions come from those who make 15% out of the tenements as they are now managed, and from indolent people who want to wash their hands of the entire problem. Many such corporations are urgently needed in every city in the United States. It is useless to expect that people who are obliged to live in dirty, poorly ventilated houses, without baths or other proper sanitary arrangements, can develop sound, healthy bodies. The wretched tenement houses of the large cities have always been the hotbeds of all kinds of disease, and will continue to be so until the poorer classes have an opportunity to get better quarters at an outlay which is within the limits of their means.

The Origin of Gallstones.—For many years speculation has been rife regarding the origin of gallstones, but not until animal experiments were made was definite light thrown upon the method of their formation. The old theory of a gallstone diathesis, maintained by Bouchard, Chauffard, and others, has been abandoned, since it is in reality not an explanation. The theory of a change in the composition of the bile, a change purely chemical in nature and origin, is also not satisfactory. At present the view that best meets the requirements of the case is certainly the one that attributes the formation of gallstones to a microbial influence. Naunyn was the first to advocate this, and numerous experiments have since corroborated it. Gilbert, Mignot, and Fournier in France, were able to produce gallstones by the injection of the colon bacillus or the typhoid bacillus into the gall bladder, and Mark W. Richardson and Harvey Cushing, in this country, were equally successful.

It is important in such experiments that the bacterium employed should not be too virulent. It may be injected into the gallbladder directly or intravenously. Cushing's experiments showed that the presence of bacteria in the bile was not alone sufficient to produce gallstones; it was necessary to injure the gallbladder so as to bring about a catarrhal process. This gives support to Naunyn's view that, in addition to a bacterial cause, a catarrhal inflammation ("lithogenous catarrh") of the gallbladder is an essential element. That the bacteria form the nucleus of gallstones after having been previously agglutinated in the bile, is a plausible hypothesis, but has not yet been proved. The microbial theory of gallstone formation is also strengthened by the discovery of bacteria, at times living, in the interior

of naturally formed gallstones. Thus, Fournier found bacteria in 23 out of 70 calculi examined, and Mignet discovered the colon bacillus in 3 out of 5 cases of gallstones. In recent experiments reported from Durante's clinic in Rome, Italia used *Bacillus coli* and the typhoid bacillus for the production of gallstone. Dogs and rabbits were employed, and the injections were made directly into the gallbladder, the cystic duct being previously ligated. When virulent organisms were used, the animals invariably died without any concretions having been formed; but when the bacteria had been attenuated, they seemed to bring about a change in the reaction of the bile (an acidification) which led to a precipitation of the cholesterol. The crystals of the latter became cemented together by the mucus from the inflamed mucous membrane, and assumed the characteristics of gallstones. Whether dead bacteria are capable of producing gallstones was not determined.

Newspaper Medical Advertisements.—We commend the policy of the new management of *The Philadelphia Times* to exclude "hideous advertisements." It says:

"It is not hard to draw the line. *The Philadelphia Times* has drawn a line that it never allows to be passed. It refuses to insert, at any price, though they are repeatedly offered, all advertisements of "diseases of men," "female remedies," "guaranteed cures," and such like indecencies, and of massage, clairvoyance and other cloaks for vice. It equally refuses advertisements which promise something for nothing, that guarantee big dividends or otherwise lure the reader to questionable investments. And it absolutely rejects all objectionable displays and the huge illustrations in advertisements that are offensive to good taste and to common decency."

It has always been incomprehensible to us why 100,000 medical men take and read newspapers offending every decent sentiment of the profession in the way characterized by the *Times*. If we refused to buy such journals or sanction such journalism, and if we let the editors and publishers know of our refusal, we could largely or entirely stop the abuse. It is our plainest duty to support such newspapers as thus sacrifice a temporary gain in the cause of decency. We hope that physicians will buy the *Times* in preference to other papers which have no honor or principle in such things. Are there, indeed, others that adopt the same standards and rules? If so every medical journal in the United States should know of the fact and tell its readers of the good news.

In the work of the Medical Department United States Army proving that the infection of yellow fever is conveyed by the mosquito, there was also incidental demonstration of the greatest abstract love, that which leads a man to lay down his life, not merely for his friend, but for his race. When the investigation reached the point that further progress depended upon human experiment, the brave physicians attached to the Service offered themselves in the cause of humanity, fully recognizing the danger attached to the demonstration they believed would, and which did, follow. To this love of humanity and of pure science Jesse W. Lazear fell a victim; but through his sacrifice and that of others was established a discovery characterized as great in import-

ance to the race as any save those of vaccination and anesthetization. It is well that there should be commemoration of the heroism of this action, and we are heartily in accord with the movement for raising funds for a lasting memorial to Dr. Lazear, now in hand by his friends and associates. Dr. Stewart Paton, of Johns Hopkins Hospital, has been appointed to receive subscriptions.

Physicians should have some adequate means of redress for the injury and mortification inflicted upon them through the use of their names in flamboyant and unethical exploitations of the unscience popularly known as newspaper medicine. The latest victim of these outrageous methods is Dr. DeForest Willard of this city, who after the usual unavailing personal visit to the offending paper, requests us to say that "the unwarranted and unwarrantable use of his name in connection with a recent Sunday newspaper article, very justly arouses his disgust and disapprobation."

The *Lancet* contends that cigarets are less harmful than either cigars or the pipe. We regret the indirect advice. The evil of cigaret smoking consists in the excess and continuousness of the smoking habit it seems to encourage, and in the fact that the apparent cheapness of the cigaret also adds to the addiction. Worse than all is the morbid devotion of youths and even children to the noxious habit. If the *Lancet's* contention be admitted, the cigaret habit is at least harmful and disgusting to others!

Mrs. Eddy recently characterized homeopathy as a stepping stone from allopathy to "Unchristian Unscience." We have no knowledge of the school called allopathy, but we are quite certain that she is in error as to homeopathy. At their recent convention in Richfield Springs, N. Y., the homeopaths put themselves on record that they would have nothing to do with such nonsense, and one woman physician denied that Eddyism was spreading among homeopathic women.

There is great dissatisfaction in many cases running to anger at the lack of arrangements on the part of the railways for the return tickets of members of the American Medical Association from St. Paul. Many gave up the attempt to secure such tickets; the red tape in some cases was beyond the power of railway officials to overcome or understand. Another year the "Community of Interests," so far as physicians are concerned, will be broken, if better plans are not made.

The excursion of the American Medical Association delegates to Yellowstone National Park was a little marred by insufficient hotel accommodations, but every one's enjoyment was increased by the railway company's agent in charge of the party. Mr. Sweet became so popular that a subscription was secured for a gift to be made to him. The park is a veritable wonderland, and many physicians will henceforth have a new interest in some problems of geology.

BOOK REVIEWS

Atlas of Ophthalmoscopy, by Professor O. Haab, of Zürich. Translated from the third German edition and edited by G. E. De Schweinitz, M.D., Professor of Ophthalmology, Jefferson Medical College. 152 colored lithographic illustrations and 82 pages of text. Philadelphia: 1901. \$3.00. Saunders' Hand-Atlas Series.

It is of tremendous advantage to the American ophthalmic student that this hand-atlas of internal diseases of the eye by Dr. Haab has been brought over into our language. The 82 pages of text are of great value in leading up to and elucidating the illustrations. Next to study of the eyeground in the human subject comes study of good pictures of the more important and frequent pathologic conditions seen in the consulting room and clinic. To have side by side with the ophthalmoscopic pictures such splendid plates of the microscopic lesions adds tenfold to the value of the work. The American editor has done much to aid in making this a *vade mecum* to the ophthalmoscopist.

A Few Essentials of the Diseases of Children Arranged in the Form of Questions and Answers, by William M. Powell, M.D. Third Edition. Thoroughly Revised by Alfred Hand, Jr., A.B., M.D. Philadelphia and London: W. B. Saunders & Co., 1901. Pp. 259.

While the use of the so-called "quiz compend" must be deprecated, it cannot be denied that the undergraduate is in need of some handy volume in which he can study the elementary principles of a given topic; and not rarely the practitioner also finds it convenient to have a small book in which he can at a glance get the gist of a subject. When it comes to pediatrics, the little work before us can be recommended. The book has been revised by Dr. Alfred Hand, Jr., with due attention to the progress in the field of children's diseases. The addition of a chapter on infant feeding enhances the value of the book.

Cancer of the Uterus, its Pathology, Symptomatology, Diagnosis and Treatment; also the Pathology of Diseases of the Endometrium. By THOMAS STEVEN CULLEN, M.B. (Toronto), Associate Professor of Gynecology in the Johns Hopkins University. With 11 lithographic plates and over 300 colored and black illustrations in the text by Max Broedel and Hermann Becker. New York: D. Appleton & Co., 1900.

The size of this book, which covers 693 pages, divided into 27 chapters and an appendix, in discussing carcinoma of the uterus, is not out of proportion to the importance of the subject. The bulk of the book is devoted to a discussion of the various forms of carcinoma of the uterus, special attention being given to the pathology and diagnosis, but there are also adequate chapters on normal anatomy, the removal and examination of tissues for diagnosis, methods of operating and prognosis. Important points are brought out by reports of cases which are usually given in detail and by numerous beautiful illustrations. The space given to pathology and diagnosis, with illustrative cases, is out of proportion to the remaining topics discussed, but these questions are of specially great importance, because less thoroughly understood by the general practitioner. Some idea of the exhaustive way in which the subject is treated may be gained when we state that 44 pages, the largest chapter in the work, are devoted to adenocarcinoma of the uterus. The complete reports of cases cover so much space that probably the average reader will not find time to read many of them, but a brief summary of each case is given before the detailed report, so that the reader can gather from this whether the case is likely to be of special interest to him. In discussing the prognosis of carcinoma the entire series of cases is tabulated and the results are given in concise form. This chapter will prove one of the most interesting for the average reader. Out of 61 cases of squamous cell carcinoma of the cervix, operative removal was found impossible in 4 cases; 31 patients of the remaining number who were operated upon have died or given unmistakable evidences of return of the growth. Thus, there are only 13 living and well. Some patients died shortly after leaving the hospital; others have remained well for months or years. In 6 cases the uterus was removed per vagi-

nam; in 5 by the abdominal route, and in the remaining 2 the combined method was used. Although the number of successful cases is small, Cullen believes that the surgeon should not be discouraged, and that with earlier diagnosis and improved methods of operating the percentage of recoveries will be greatly increased. Of 12 cases of adenocarcinoma of the cervix 2 are living and well; of 30 cases of adenocarcinoma of the body of the uterus, 3 died as a result of the operation; 6 from local recurrences from 5 months to 2 years and 7 months after operation, and 1 could not be located. The remaining 20 are still free from carcinoma. This is certainly encouraging, and because of the favorable results which have been obtained, a proportionately large amount of space is devoted to the discussion of adenocarcinoma of the body of the uterus.

In summarizing the theories as to etiology from an analysis of the cases which form the basis for this book, Cullen expresses his belief that heredity has little influence; trauma as produced by parturition apparently bears a causal relation to carcinoma of the cervix but not to that of the body of the uterus. Cohnheim's theory as to the origin of carcinoma from embryonic inclusion of epithelial elements, Ribbert's theory and the parasitic theory are not thought to offer satisfactory explanation. He concludes that the results of many investigations, while giving an increased knowledge concerning the histologic structure of carcinoma, have still left its etiology an unsettled question. As to methods of operation, Werder's method of combining the advantages of vaginal and abdominal methods is preferred. Vaginal hysterectomy, Cullen believes, should be avoided whenever possible. He uses the vaginal method only in patients with very thick abdominal walls in whom an abdominal operation would be fraught with much difficulty, and for elderly patients who cannot stand prolonged operation, or for weak patients. The disadvantages of the operation are that the operator can form no accurate idea of the extent of the growth, that many ligatures must be placed by touch, and it is impossible to remove infected glands satisfactorily.

The preparation of such a work as this involves an enormous amount of labor, extensive, thoroughly-studied clinical material, carefully-taken histories, thoroughness in pathologic study, and much trouble in following the patients to learn the later results of operation. Cullen speaks of the large number of cases of carcinoma that come too late for operation and every surgeon knows how appallingly large this number is. Any book which directs the general practitioner to the importance of the study of malignant disease and aids him in its early recognition, cannot fail to be of great value. Unfortunately, there are few hospitals in which the records are so carefully kept, and the pathologic material so carefully studied, that the results can be utilized for the benefit of the profession, and for the surgeon the book will be indispensable. As an example of book-making nothing finer can be found. The importance of such accurate and beautiful cuts and engravings as illustrate this book can hardly be overestimated, and the artists certainly should share the credit with the author for having produced a monograph which is unexcelled in medical literature.

Clinical Examination of the Urine and Urinary Diagnosis.

—A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery, by J. BERGEN OGDEN, M.D., Instructor in Chemistry, Harvard University Medical School; Assistant in Clinical Pathology, Boston City Hospital; Medical Chemist to the Carney Hospital; Visiting Chemist to the Long Island Hospital, Boston.

The subject matter is fully and comprehensively discussed, and the book is well adapted to the needs of the student and the practitioner. The author has added an improvement over the older books by discussing the subject under 2 headings. Part I deals with the chemistry and microscopic findings in the normal and pathologic urine. This portion is fully abreast of the latest teaching in a subject which is yearly attracting more attention. It contains numerous instructive illustrations, and comprises the entire ground usually covered by the older works on this subject. In Part II a new and valuable feature is introduced, viz., the subject of diagnosis, with especial reference to the urinary findings in the various diseases. The author takes up the numerous diseases of the urinary tract and gives the

urinary findings in each disorder; then the various diseases outside of the urinary tract and the resulting influence which each disorder has upon the quantity and quality of urine. Part II is valuable in that it gives in brief under each separate disease the information with reference to the urine which is found in works on practice and diagnosis only after extensive search and inquiry. We feel that this work can be safely recommended to those desiring a succinct and complete discussion of the clinical significance of the urine.

Gallstone Disease, with Special Attention to the Differential Diagnosis of the Separate Forms, based on an Experience Gained from 433 Laparotomies upon Gallstones, by Professor HANS KEHR, of Halberstadt. Authorized translation by WILLIAM WOTKYNs SEYMOUR, A.B., M.D. Formerly Professor of Gynecology in the University of Vermont. Philadelphia: P. Blakiston's Son & Co. Cloth, \$2.50.

Part I is made up of a series of 4 lectures on the Pathology, Anamnesis and Examination, special diagnosis, and treatment of cholelithiasis. Part II consists of the detailed history of 100 operative cases. The great merit of the book depends on the fact that it is a review of the author's rich and practical experience. Special attention is given to the differential diagnosis based on a knowledge of the pathologic anatomy of the various forms of gallstone disease. The importance of early operation is emphasized, the attendant dangers being no comparison to the disastrous results which may attend protracted palliative treatment to which, however, in suitable cases a place is accorded. The thoughtful reading of the work, which is eminently practical, cannot fail to give to the reader a more intelligent idea of the conditions which may exist in gallstone disease as well as the measures which should be instituted for their relief.

Anatomical Atlas of Obstetrics, with special reference to Diagnosis and Treatment. By Dr. OSKAR SCHAEFFER, Privatdocent in Obstetrics and Gynecology in the University of Heidelberg. Authorized translation from the second revised German edition. Edited by J. Clifton Edgar, Professor of Obstetrics, etc., Cornell University, New York, with 122 figures on 56 lithographic plates and 68 other illustrations. Philadelphia and London; W. B. Saunders & Co., 1901. Price \$3.00, net.

This volume is one of Saunders' well known series of hand atlases and therefore needs little comment. Every year the medical teacher realizes more and more fully the value of the stereopticon and the biograph as teaching adjuncts, and next in value to these appliances ranks a well illustrated book. A good illustration or diagram will often convey more information to the mind of the student than many pages of descriptive text, and the pages of this atlas are replete with splendid illustrations. The work is divided into 2 parts. The first treats of the physiology and diathetics of pregnancy, labor, and the puerperium; the second deals with the pathology and treatment of pregnancy, labor and the puerperium. The volume will be found of special value as a book of reference to be used in connection with the larger treatises on obstetrics. The type, paper, binding and lithographic plates are excellent.

Pulmonary Tuberculosis, Pneumonia, and Allied Diseases of the Lungs: Their Etiology, Pathology and Treatment, with a Chapter on Physical Diagnosis. By Thomas J. Mays, A. M., M.D., Professor of Diseases of the Chest in the Philadelphia Polyclinic; Visiting Physician to the Rush Hospital for Consumptives. Illustrated. New York: E. B. Treat & Co., 241-3 West Twenty-third Street, 1901. \$3.00 net.

Dr. Mays regards pulmonary tuberculosis as a disease dependent on some lesion of the central nervous system or pneumogastric—in other words, the consequence of a neurosis. He even regards the lung diseases other than tuberculous as so manifestations of a localized neurosis. Acting upon this theory he recommends as treatment for tuberculosis only such remedies as operate through the central nervous system. The treatment of the subject matter is both interesting and lucid, while the chapter on physical diagnosis with its differential tables is a valuable adjunct.

AMERICAN NEWS AND NOTES.

GENERAL.

Famine Sufferers of China.—The sum of \$20,000 for the relief of the famine sufferers has been cabled to Reverend Arthur Smith, of Tientsin, Chairman of the Missionary Relief Committee.

The American Medico-Psychologic Association held its fifty-seventh annual meeting in Milwaukee, Wis., June 11-14 inclusive. It is the oldest national association in this country. The annual address was by Dr. Warren P. Lombard, of the University of Michigan.

The Dentists of the Army are being very well equipped with the instruments of their profession. They were allowed to select what they believed were required in their work in the field, the selection, of course, to be within certain bounds governed by the known necessities of each case.

The Board of Pension Examining Surgeons has been completed by the appointment of Dr. P. W. Falls. Dr. Falls received his commission from Washington June 5, and is the third member required on the board, Dr. Joseph Scott and Dr. A. G. Maylie having received their commission last week.

American Orthopedic Association.—At the meeting held at Niagara Falls May 11, 12, 13, 1901, the following officers were elected: President, H. Augustus Wilson; first vice-president, William J. Taylor; second vice-president, G. G. Davis, of Philadelphia; secretary, John Riddlon, of Chicago; treasurer, E. G. Brackett, of Boston. Philadelphia was chosen as the place for the next meeting in May, 1902.

Support of Physicians.—Each physician in the United States has 655 persons to look to for his support, according to the latest Governmental statistics. California stands at the bottom, or top, depending on the view, of the list, for there are only 416 actual and prospective patients for each physician, while in Alaska 2,349 persons have to depend on 1 doctor. New York is near the average, with 603 persons for each physician, Pennsylvania has 662, and New Jersey has 856.

London Tuberculosis Congress.—A fund of over \$15,000 has been subscribed to defray the cost of making the Congress which will be held in London July 23-26 a success. An excursion party of physicians from the United States will leave New York, July 10 on the steamer Zealand, and land at Cherbourg for a few days in Paris before the Congress opens. The return will be made from Liverpool August 1 by the New England for Boston or by the Umbria for New York August 3.

Cornered Opium Market.—Advices have been received from Smyrna to the effect that rain has seriously impaired the Turkish opium crop and that American buyers have realized handsome profits. Just before the rain, brokers representing an American drug syndicate purchased nearly 80,000 pounds of opium, practically cornering the visible supply. Their operations, together with the prospective shortage, have sent up the price of opium in the London market 18 cents per pound.

Obituary.—ROBERT J. MARTIN, of Augusta, Me., June 16.—MAURICE B. PERKINS, of Union College, June 18, aged 65.—WILLIAM L. SMITH, of Pleasant Hill, Ky., June 18.—W. A. MEYER, of Cincinnati, Ohio, June 19, aged 30.—WILLIAM IRVING, of St. Mary's, Ontario, June 19.—LEE WOODS, of Abbeville, La., June 14.—J. W. SMITH, of Dover, Tenn., June 17, aged 84. MARY BARTON, of Washington, June 19, aged 55.—J. HOWARD ATHEY, of Holly Springs, Miss., June 20, aged 69.—JOSIAH C. ORR, of Athens, Ga., June 13.—WILLIAM J. CAMPBELL, of Worcester, Mass., June 14.—E. E. WAITE, of New Bedford, Mass., June 20, aged 43.

Yellow Fever.—Surgeon-General Wyman has under advisement the question of raising the quarantine on passengers from Cuba destined for points north of the Southern Maryland boundary line. A recommendation that the quarantine be raised is made in an official cablegram received yesterday from Surgeon Glennan, in charge at Havana. The reports from throughout the island are satisfactory and show a general absence of yellow fever. The Louisiana State Board of Health, however has taken a firm stand against relaxing the restrictions, and has demanded the disinfection of all baggage received there from Cuban points. Nonimmune passengers from Cuba now are held at quarantine at New York a sufficient period to make a total of 5 days from Cuba. Surgeon Glennan proposes to discontinue this detention of usually a day and a half in quarantine.

EASTERN STATES.

The Massachusetts State Board of Health has been ordered by the Legislature to make a scientific and thorough physiologic investigation of the healthfulness of baking powders, making such tests as will demonstrate whether or not the

brands on sale are injurious to health, and to determine whether the introduction into food of an article in small quantities, ordinarily harmless, would, when taken by a person in feeble health or dietetically disordered, eventually undermine the system. The results of these investigations are to be reported at the next General Court.

NEW YORK.

St. Vincent's Hospital will receive \$2,500 by the will of Mrs. Matilda B. Brown.

Elmira Reformatory.—Dr. Frank L. Christian, formerly a house physician at Bellevue Hospital, and more lately medical officer of the Eastern District Reformatory, has been appointed medical superintendent. He has resigned from the Eastern District Reformatory.

Court Criticises Chiropody Law.—A barber was convicted in Special Sessions recently for practising as a chiropodist without a license. The law makes this a misdemeanor, punishable by a fine of not less than \$50. Justice Jerome suspended sentence and said that the measure was wrong.

Sanatorium Burned.—The Mountain House, near Cornwall, N. Y., was destroyed by fire recently. The building was being prepared for use as a sanatorium for tuberculous individuals. To such a use the people of Cornwall objected, and had arranged to hold a mass meeting to make a public protest.

Charged with Neglect of Duty.—Dr. Obed L. Lusk, assistant sanitary superintendent of the borough of Queen's, has been indicted by the grand jury. The charge is neglect of duty in allowing a man with smallpox to remain in his home in a crowded tenement and in not removing the body until 2 days after death. The conduct was severely criticized by the jury.

Damages for Injuries.—A verdict for \$17,500 was awarded in the Supreme Court of Brooklyn, recently, to Miss Julia C. Bennett, in her suit against the Brooklyn Heights Railroad Company, to recover \$50,000 damages for personal injuries. Mrs. Kate V. Hoey recovered \$12,500 damages from the Metropolitan Street Railway Company for the death of her husband, who died of tuberculosis 9 months after an injury.

A Census of the Tuberculous.—Dr. Daniel Lewis, Commissioner of the State Board of Health, is going to take a census of the tuberculous individuals of New York State. The names will not be mentioned in any use that may be made of the results of the inquiry, which will comprise first, the extent to which tuberculosis exists, then the effect of the climate, the locations chiefly affected, and the possible origins. The census will be carried on by means of the physicians, who number 10,000 in the State.

Medical Society of the State of New York.—Dr. Henry L. Elsner, President, announces the appointment of his Business Committee for the ensuing year, consisting of Dr. Nathan Jacobson, Chairman, 430 South Salina Street, Syracuse, N. Y.; Dr. George Ryerson Fowler and Dr. William C. Krauss. All letters and inquiries pertaining to papers and scientific communications for the semiannual meeting, to be held in New York City, October 15 and 16, 1901, and the annual meeting, to be held in Albany, January, 1902, should be addressed to the Chairman.

A National Locomotor Ataxia League has been organized in New York. The object is to erect and maintain a sanatorium for the care and treatment of those so afflicted, with the hope that the special opportunities for investigation to be found at this sanatorium will make possible the discovery of a cure. It is reported that a reward of \$10,000 has been offered for the first permanent and guaranteed cure. The applicants must bear the cost of the experiments, which must be upon 2 cases in the advanced stage and under the surveillance of the league. It is said that 300 persons have joined the league, and that there are between 18,000 and 20,000 cases in the United States. The officers and directors are all sufferers, as the Constitution provides.

PHILADELPHIA, PENNSYLVANIA, ETC.

St. Joseph's Hospital.—Dr. Charles F. Nassau has been appointed surgeon in place of Dr. J. Chalmers DaCosta, resigned.

The Philadelphia Flower, Fruit and Ice Mission recently distributed 2,200 bouquets among the various hospitals, homes and missions. In addition to this money was sent to the different diet kitchens to provide the worthy poor with ice.

Typhoid Diminishing.—The Philadelphia health report for the week ended June 22 shows the number of deaths to have been 410. The condition in West Philadelphia is much improved so far as typhoid fever is concerned. A total of 61 cases

is reported with 7 deaths; scarlet fever 79 cases with 5 deaths, and 73 cases of diphtheria with 11 deaths.

An Antituberculosis League Dispensary is to be established at Atlantic City by the local Ministerial Union. The proposition is to maintain the dispensary for the benefit of residents suffering with tuberculosis who are too poor to have regular medical attention. It is designed to secure a portion of a city lot on which to erect the building.

Medical Department of the University of Pennsylvania.—The Class of 1881 celebrated its twentieth anniversary with a dinner at the Hotel Bellevue, June 12, 1901. A permanent organization was established with the following officers: President, Dr. G. E. deSchweinitz; vice-president, Dr. W. Easterly Ashton; secretary and treasurer, Dr. Daniel W. Nead.

Woman's Medical College.—A report from the obstetric department shows 303 cases attended from May 1, 1900, to May 1, 1901; number of children born, 303; no maternal deaths and 20 fetal deaths. The number of after-visits made by physicians and students was 5,017. The report of the maternity shows 110 cases delivered, no maternal deaths and 7 fetal deaths.

The Hygienic Committee of the Board of Education of Philadelphia recently decided that the eyes of all pupils attending the elementary schools at the commencement of the term must be examined.

The question of excluding teachers suffering from any contagious disease, including pulmonary tuberculosis, was discussed and will be taken up at the next meeting.

Medico-Chirurgical Hospital.—It is reported that a petition has been filed asking that important amendments be made in the charter of the corporation. The principal change is in the Board of Trustees. As now constituted, this body consists of 16 members, 6 members of the Medico-Chirurgical College Faculty, 2 appointed by the Governor, 2 elected by the corporation and the remainder by the contributors to the hospital. All, with the exception of the Faculty members, serve for 1 year. Under the amendment the Board consists of 12 members, who shall serve until their successors are elected. The first Board is to be elected by members of the corporation, and thereafter the Board is to fill vacancies which may occur among its members.

SOUTHERN STATES.

Maryland University Hospital.—Dr. George H. Stewart has succeeded Dr. S. Peachy Latare as medical superintendent.

Blind Crows.—A disease, resembling cataract, has developed among the crows of Arlington, Va., blinding hundreds of them.

Leprosy.—The certified death of a leper is reported from San Antonio, Texas, and there are 2 other cases of leprosy in the city.

Knoxville (Tenn.) Hospital.—The City Council has decided to borrow \$16,000 to complete the city hospital. The total cost will be \$48,000.

Frederick City (Md.) Hospital.—The erection of the building has begun and will be pushed rapidly. The present estimated cost is \$7,910.40.

Providence Hospital, in Washington, is to have additions and improvements to cost \$200,000. In the same yard will be erected a power house and nurses' home, at a cost of \$50,000.

The Maryland School for the Deaf and Dumb, at Frederick, closed June 12, after a season marked by the largest attendance in the history of the institution, 106 pupils having been enrolled.

Dallas Medical College, which was recently made the medical department of Trinity University, had its commencement exercises June 18. There were 8 graduates in medicine and 2 in pharmacy.

Charlotte Williams Hospital.—A gift of \$10,000 to this institution from J. W. Middendorf, of Baltimore. The hospital is in Richmond, Va., and was founded as a memorial by a gift of \$100,000 from the Williams family of that city.

Surgeon at Every Fire.—The Commissioners of the District of Columbia have unanimously approved the recommendation of the chief engineer of the fire department, that 1 member of the board of police and fire surgeons, if no more, shall be present at every large fire.

The Baltimore County Medical Association met June 20, at Towson. Many new members were elected. Dr. Richard Grady read a paper on "The Preservation of the Health of

Teeth," and Dr. T. C. Peebles one on "Twenty-six cases of Typhoid Fever in Private Practice, with one Death."

Unsanitary Towns in Maryland.—Dr. John S. Fulton, of the State Board of Health, on a recent visit with Health Officer Dr. Howard Bratton of Cecil county, to Port Deposit, found the sanitary condition of that town very poor, but is reported to have said that it is no worse than Baltimore and most other Maryland towns.

The Child-Labor Act, passed by the recent Legislature of Tennessee, prohibiting the employment of children under 14 years of age in shops, mines, and factories, has gone into effect. The factory superintendents say that it does not interfere with them, but will seriously embarrass poor families who are partly dependent on the work of the children.

Child Labor.—An agreement has been signed by 88 Georgia mills not to employ children under 10 years after September 1, 1901, and not to employ children under 12 at night, except when widowed mothers need their help. This is a voluntary movement on the part of the manufacturers. It is said that they defeated legislation on the subject but public opinion and the agitation of labor organizations against child-work have had much to do with bringing about this action.

Army Medical School Faculty.—The following-named officers of the medical department have been detailed as members of the faculty of the Army Medical School in Washington, D. C.: Colonel William H. Forwood, president of the faculty; Colonel Calvin De Witt, professor of military medicine; Major John Van R. Hoff, lecturer on the duties of medical officers in war and peace; Major William C. Borden, professor of military surgery; Major Frederick P. Reynolds, instructor in hospital corps drill and first aid to the wounded.

WESTERN STATES.

A Crematory will be built in Kalamazoo, Mich., at a cost of \$1,800.

South Dakota State Guards.—Dr. Weimer, of Yankton, has been made Surgeon-General, and Dr. O. H. Gerdes, of Enreka, Medical Surveyor.

The Barker Divorce Bill, prohibiting the marriage within a year, except by permission of court, of persons divorced, has passed both Houses in Wisconsin.

The New Hospital at La Crosse, Wis., was opened on May 14. The building has complete appointments in every detail, and has accommodations for 50 patients.

Dr. Christian Fenger, of Chicago, in recognition of his contributions to surgical knowledge has been decorated with the Crose of Danneborg by Christian IX of Denmark.

Dr. Nicholas Senn Honored.—At the recent annual commencement of Rush Medical College, the honorary title of Master of Surgery was conferred upon Dr. Nicholas Senn.

A compulsory vaccination law passed in Wisconsin is rendered valueless by the fact that persons having religious scruples against inoculation can be exempted on an appeal to court.

St. Mary's Sanatorium.—The Boyle Memorial, of Fond du Lac, Wis., will cost, when completed, \$50,000. The sanatorium is the gift of John T. Boyle in memory of his mother, after whom it is named.

A Private Hotel and Sanatorium at a cost of \$400,000 is to be built by 5 of the foremost physicians and surgeons of Chicago. It is to be provided with an ample staff of attending physicians as well as with a corps of nurses.

Chief Kenawashi, between 90 and 100 years old, the oldest medicine man of the Yakima Indian tribe, was shot and killed recently because he failed to cure several cases of smallpox on the Yakima reservation, in Washington, last winter.

The Western Reserve University is to receive gifts from prominent persons in Cleveland amounting to \$100,000. A chair will be added in the Medical College, endowed by H. M. Hanna, in memory of his father, the late Dr. Leonard Hanna.

Fire in Army Hospital.—A fire in the General Military Hospital at the Presidio, San Francisco, Cal., June 10, destroyed 3 wards, kitchen, diningroom, and medical supplyroom. None of the patients were injured. The loss is estimated at \$25,000.

The New Wesley Hospital, the only Methodist institution of its kind in Chicago, was recently opened. The institution will be dedicated when the indebtedness of \$25,000 has been paid. The building is 6 stories high, contains 250 rooms, and cost \$210,000.

Bequests to Hospitals.—The will of the late Dr. W. S. Caldwell provides that Providence Hospital of Chicago shall receive the residue of his estate, estimated at \$50,000. St. Francis Hospital and the Orphans' Home, of Freeport, Ill., receive \$10,000 each.

Chicago's Impure Water.—The following bulletin has been issued by the health department: "All of the city water is suspicious, and is not entirely safe to use for drinking purposes unless it is boiled or filtered. The water should be boiled at least 20 minutes."

Free Vaccination and Free Virus is the proposition of the Indiana State Board of Health, the expense, estimated at \$16,000, to be drawn from the contingent fund by the governor. The board proposes to furnish absolutely pure virus, and have the vaccination done in each county by its own agent.

Northwestern University, Woman's Medical School.—The alumnae association at the twenty-first annual meeting elected the following officers: President, Annie White Sage; first vice-president, Vira Brockway; second vice-president, Catherine Angell Warthern; secretary, Eliza H. Root; assistant secretary, Mary Gilruth McEwen; treasurer, Mary Hollister.

Trade Interests was the subject of a paper read at the recent meeting of the Illinois Pharmaceutical Association by Thomas V. Wooten. The claim was set forth that there exists a growing disposition on the part of physicians, encouraged by the manufacturers of tablets, etc., to dispense with the writing of prescriptions to druggists and instead provide their own prescriptions, much to the detriment of the legitimate pharmacist.

Tuberculosis in Colorado.—The discussion of tuberculosis was the feature of the recent opening session of the Colorado State Medical Society. Dr. Henry Sewall reported for a committee on the subject Tuberculosis in Colorado. He said that in 16 months to May 1, 1901, 1,674 deaths from tuberculosis were reported. In 970 cases the disease originated outside of Colorado. In 480 cases the origin was not given. In 224 cases, or 13.32%, the disease originated in Colorado.

Extending an Operation Without Consent.—Judge Kavanagh, of Chicago, recently ruled that when a surgeon is performing an operation on a person under the influence of an anesthetic, and finds that another operation, not contemplated before, is necessary, he has the legal right to perform the second operation without waiting to get the consent of the patient. This ruling was made when he directed a verdict of not guilty in the suit of Mrs. Agnes Mulhern against the Post-graduate Medical School and Hospital. Mrs. Mulhern was operated on by Dr. Franklin H. Martin, June 7, 1897. After the surgeon had made the incision, he found that other internal organs were diseased besides those for which the patient was taking treatment. Both operations were performed, and the patient is now in good general health.

CANADA.

McGill University has been chosen as one of the institutions to carry on original research work under the supervision of the newly incorporated Rockefeller Institute of Medical Research. It is understood that Professor Adami, of the pathologic department, will be in charge.

New Canadian Society.—The graduates of Queen's University (Kingston, Ontario) in New York have organized a society, to be known as the New York Society of Graduates and Alumni of Queen's University. The society will act conjointly with the New York Society of McGill University and the Canadian Society of that city in sending a representative to present an address to the Duke of Cornwall and York on the occasion of his visit to this country.

Ontario Medical Association.—The twenty-first annual meeting was held in Toronto, June 19. The first paper was by Dr. William Oldright, subject, Three Recent Gallstone Cases. Dr. Herbert A. Bruce read a paper on Excision of the Upper Jaw for Sarcoma, and a patient on whom he operated was shown. Hernia was discussed by Dr. Angus McKay, and Ectopic Gestation by Dr. Garrett. Problems of Vaccination was the subject of an earnest address by Dr. P. H. Bryce, the Provincial Medical Health Officer. He says physicians, as well as the laity, underestimate the value of vaccination. The Medical Aspect of Empyema was discussed by Dr. R. Ferguson, and the Surgical Aspect by Dr. J. L. Turnbull. The evening address by Dr. George H. Carveth, on the Open Air Treatment of Disease, was well illustrated. Dr. Ryerson said, in the discussion which followed, that typhoid patients in South Africa made more rapid and better recoveries when treated in tents than in hospitals. Drs. Elliott, of Gravenhurst, Freel and Bryce spoke strongly in favor of it, the latter recommending it for smallpox cases.

FOREIGN NEWS AND NOTES

GENERAL.

The Naval Hospital at Yokohama is about completed, and a letter to Surgeon-General Van Reypen, of the navy, states that the building is greatly admired, occupying a commanding location on one of the bluffs and looking from a distance like the Capitol at Washington. The Japanese Government has given a lease in perpetuity for the site occupied by the hospital.

European Hospitals in Cairo.—The European Hospital, which was governed by the various consuls, has now been closed, as being no longer necessary, for the leading nationalities have all found themselves in a position to erect a hospital of their own. The Germans and Austrians have for some years each had a hospital, while the Greeks and Italians are now about to build one. The French have just opened a very good hospital of 30 beds in the desert outside Cairo.

Infectious Disease Hospital.—Near the city of Melbourne, Australia, a large building has been erected, which is to be used as an infectious disease hospital. It is stated that something like £10,000, will still be required to complete the internal arrangements. So far the total cost has been £20,000 which has been contributed by public subscription and Government donation. The Government declines to assume any further responsibilities in the matter, inasmuch as it has gone to a large expense in equipping a plague hospital on Coode Island.

Mortality in Concentrated Camps.—It is reported that the mortality in the Johannesburg camp, up to May 31, was 6 men, 6 women, and 63 children; and in the Transvaal camps, up to the same date, 39 men, 47 women and 318 children. The authorities are arranging for the release of the women and children who have friends to receive them, but the government cannot undertake to feed them in isolated positions. There are 40,229 persons in the concentrated camps of the Transvaal and Orange River colonies. The high death rate among the children is accounted for by an epidemic of measles.

Obituary.—FRANCIS WILLIAM WARRINGTON of Congleton, Cheshire, Eng., June 7, aged 62. JOHN PHILIP TOPPING of Goodmayes, Ilford, Eng., June 2, aged 42. THOMAS BOND of Westminster Hospital, London, June 6, aged 60. THOMAS CAYZER, at Mayfield near Liverpool, Eng., May 29, aged 67. WILLIAM CHARLES BLAND at Arranmore, Eastbourne, Eng., June 4, aged 53. EDWARD JOHNSON HARDY Booth of Huddersfield, Eng., May 31, aged 55. CHARLES A. CLARK at North Sidney, N.S.W., June 5, aged 45. JAMES ALEXANDER DUNBAR, Inspector-General of Hospital, Bengal army, June 6, aged 86. ALEXANDER G. MELVILLE, late professor Queen's College, Galway, aged 82.

Cremation.—The annual report of the French Society for the Propagation of Incineration, shows that there are 40 cremation societies in Germany with a total membership of 12,000. There are 25 crematories in the United States and 22 in Italy. In Sweden cremation is becoming more frequent and in Copenhagen 70 cremations were carried out in 1890. In Austria, Holland, Belgium and Spain great efforts are being made for the introduction of cremation. In Paris in 1900 there were 297 incinerations at the request of the family of the deceased; from hospitals, theaters, etc., 2,752; embryos, 2,776; total, 5,825. In addition to the crematory built in 1879 by the Cremation Society there are now crematories in Manchester, Liverpool and Glasgow. At Hull, Birmingham and near London, new crematories are in the course of erection. At Woking 1,824 cremations had taken place down to the end of 1900; at Manchester, since 1892, 475; at Liverpool, since 1896, 102; and at Glasgow, since 1894, 75.

Bubonic Plague.—Since the beginning of the outbreak until June 8, 700 cases of plague have occurred at Capetown, of which number 326 have proved fatal. At Port Elizabeth, up to June 1, 7 cases of plague occurred. Though there are many Chinese in Capetown, only 1 Chinaman has succumbed to plague. This fact is to be taken into consideration along with the fact that Europeans readily contract the disease, and of which many die. In Southern China the European is comparatively exempt, whereas the Chinese falls a ready victim. The Malays are also wonderfully free from plague in Capetown, but in no Malay State or Country has plague as yet prevailed to any extent. The plague returns for all India during the week ended May 18, show 1,918 deaths from the disease, against 2,592 during the week preceding. In Bombay City 295 deaths occurred from plague during the week ended May 18. In the Bombay districts the registered deaths from plague amounted to 457 during the week ended May 18, against 338 during the previous week. The continuance of plague at Zagazig, Egypt, has caused a panic amongst the inhabitants of the city, who are fleeing to the surrounding country. In consequence of this exodus the disease is reported to have broken out in several of the neighboring villages. Officially, some 18 cases of plague are all that have been reported. During the week ended June 8 there were 161 cases and 155 deaths from plague in Hong Kong.

GREAT BRITAIN.

A New Hospital for Tuberculous Individuals is to be built near Aberdeen, which will be supported entirely by voluntary contributions. Every facility according to the best continental models will be afforded for open air treatment.

London Open-air Sanatorium.—The treatment of tuberculosis at Pinewood, Wokingham, will be opened for the reception of patients August 1, 1901. The sanatorium is situated in 85 acres of pine forest, on sandy soil, and with a southern aspect. The cases suitable for admission to this sanatorium are those in the early stages of tuberculosis.

Cutlery for Lunatics was recently advertised for by the British Admiralty office, and it brought to light some unusual cutlery that, while made regularly in Sheffield for the past 20 years or more, is but little known. The knives are perfectly dull, round blades, with a small cutting area about an inch long, situated in such a way that it cannot be used except for the purpose intended. The fork terminates in a small round ball, on which there are 3 prongs about an inch long.

The British Congress on Tuberculosis will be held in London, July 22 to 27. On the evening of Monday, July 22, the opening day of the Congress, a reception will be held by the Organizing Committee in the Queen's Hall. July 23, Professor Koch will address a public meeting in St. James's Hall, and in the evening a reception will be held by the Lord Mayor in the Mansion House. July 24, Professor Brouardel, of Paris, will address a public meeting in St. James's Hall. On July 26, excursions will be arranged to sanatoriums and other places of interest. During the period of the Congress some of the largest private houses in London with interesting collections of pictures will be thrown open to visitors.

CONTINENTAL EUROPE.

Ernst Haeckel of Jena has just begun his eighty-first semester of lectures on Embryology and Zoology. His students decorated the lecture hall and held an informal celebration in honor of the occasion.

Therapeutic Serums.—A State Institute for the manufacture of therapeutic serums has been established in Copenhagen. It is proposed to supply the Danish Colonies as well as Denmark from this source.

Dr. Fohlgemut, a Berlin surgeon, is credited with the invention of an apparatus by which chloroform may be inhaled with a mixture of oxygen which secures anesthesia and frees the use of chloroform from danger.

Medical Attendants of the French Senate.—Dr. Depasse has just been promoted to the position of physician in succession to Dr. Chavanne, retired, and Dr. Maurice has been appointed assistant physician.

Water Pollution.—A royal Prussian commission is studying the subject of keeping the rivers pure, and effective legislation will be established regarding the influx of sewers and impure water from factories, mining operations, etc.

A Society for the Study of the History of Medicine and the Natural Sciences has recently been founded in Germany. The organizing committee consists of Prof. G. W. A. Kahlbaum, of Basel; Prof. J. Pagel, of Berlin, and Dr. Sudhoff, of Hochdohle.

Sanatorium for Tuberculous Children.—The birth of the new Italian Princess has been made the occasion for a handsome donation by the King of 200,000 lire (£8,000) to the Commune of Rome toward the erection of a sanatorium for tuberculous children.

University for Women.—The Russian Government has authorized the establishment of a university for women, having the faculties of natural science, pure science, and medicine. A Moscow merchant has donated 3,000,000 roubles toward its foundation.

An Institute of Colonial Medicine.—An active campaign is being waged at present with a view to the creation in Paris of a school of colonial medicine. Professor Raphael Blanchard is at the head of the movement, and a public subscription has been started for the inauguration and endowment of the new institute. Already nearly 250,000 francs have been subscribed.

Specialists in Germany.—Of 27,374 medical men in Germany, 3,431 described themselves as specialists. There is 1 medical man to every 2,014 of the population of the empire and 1 specialist to every 16,066 of the population. In Saxony there are no less than 370 specialists among 2,048 medical men. The majority of the specialists, of course, resided in the large towns with more than 100,000 inhabitants, the number being 2,068, or 60.3% of all the specialists; in the towns of medium size, with from 45,000 to 100,000 inhabitants, there are 512, or 14.9% of the whole, and in small towns with less than 45,000 inhabitants there were 851, or 24.8%.

SOCIETY REPORTS

NINTH CONGRESS OF THE GERMAN GYNECOLOGICAL SOCIETY.

May 29-31, 1901.

[Specially reported for AMERICAN MEDICINE by J. EDWIN SWEET.]

[Concluded from page 527.]

WYDER (Zürich) discusses the **Symptoms, Diagnosis, Prognosis and Therapy of Puerperal Eclampsia**. In regard to the symptoms and diagnosis, Wyder brings nothing new. He considers that the prognosis under all circumstances, whether it is a case of eclampsia ante, inter or post partum, must be placed as *valde dubia*. In regard to the therapy it is hardly to be expected that obstetricians will agree as long as we have no certain knowledge of the etiology of the disease. A rational treatment must be based on the following principles: (1) The woman must be confined by the most rapid method possible, at the same time as carefully as possible, without any too great consideration for the life of the child; (2) all obstetric manipulations should be performed in narcosis on account of the heightened reflex irritability; (3) painful attention to anti-septic and aseptic precautions; (4) the most careful study of the individual when using those drugs known as heart poisons—chloroform, chloral hydrate, morphin, veratrum viride—and to restrict their use as much as possible; (5) careful stimulation of the secretory activity of the kidneys, the skin, the bowels, to further the excretion of the toxins; (6) a removal of at least a part of the poisonous substances coursing in the circulation, or a dilution of the same, by bleeding in suitable cases, and subcutaneous, intravenous, or rectal salt infusions; (7) increased oxidation of the blood by means of oxygen inhalations, a method which has been but little tried in Germany; (8) in case of threatened heart collapse, excitants, such as camphor, ether, caffeine. In cases with albumin in the urine, etc., Wyder recommends prophylactic treatment—milk diet, etc., and if the prodromal symptoms of eclampsia appear, vomiting, pain in the stomach and head, he does not hesitate to induce premature confinement.

Speaking before the congress, FEHLING adds to his paper some facts gathered since its publication, notably the results of Schmori; Fehling still holds that we have no constant pathologic anatomic findings in eclampsia. Treatment would be based on the supposition that the disease is caused by the fetus, and should consist in rapid and careful confinement. Dührssen's incision is too brusque for general practice, of use possibly in clinics in trained hands. A natural confinement, where one could have hastened matters, is to be considered a mistake. He uses salt infusion, eventually following bleeding. The narcotics should be restricted to the examination and to the attack. Fehling thinks he has seen cases where death was due alone to the use of morphin. He has had 30 cases, with 11% mortality.

WYDER considers the disease an intoxication, not an infection, which does not continue after the birth of the child. In those cases where the attack occurs but once, and where it occurs days after confinement, it is hard to recognize the fetal influence. The idea that eclampsia is a form of uremia modified by the pregnancy, is not entirely without justification. He considers the disease the expression of influences of different kinds. He thinks further study will disclose more subtle changes in the brain, and that we should examine the children more carefully.

SÖHLEIN (Giessen) calls attention to the fact that the prognosis is gradually becoming better. He has had 26 cases in Hesse, with no deaths. Ten years ago Söhlein found a mortality of 20% in the German clinics, which has now fallen to 15% and 10%. He thinks this due to improved therapy, especially to the metrenrhyster.

SCHMORL (Dresden), as guest of the Society, reports on the pathologic findings in 73 cases of eclampsia. In every case but he found the same changes in the secretory epithelium of the kidneys, parenchymatous, and fatty degeneration; in 3 cases, hemoglobin infarcts; in 71 cases hemorrhagic and anemic necroses of the liver, changes which begin at the periphery of the acini; in the other 2 cases he found total thrombosis of the portal vein. The changes in the liver have no relation to the severity of the convulsions. In 10 cases, icterus was present; in 3 he found similarity to acute yellow atrophy of the liver. He thinks that bile salts are still more often present in the circulation, but that the time is too short to permit of the coloring of the skin. In 66 cases he found thrombi and hemorrhages in the lungs. In 58 of 65 cases he found capillary hemorrhages in the brain, often localized in the nucleus caudatus. In 42 cases, hemorrhages in the heart-muscle with necrosis and parenchymatous and fatty degeneration. In several cases pathologic conditions of the suprarenals and the pancreas were noted. The emboli, composed of cells from the placenta and of liver cells are always secondary, and play no pathognomonic role. Schmori has examined 8 children; in 5 he found the

characteristic changes in the kidneys; in 3, those of the liver. The result of these studies is that eclampsia is characterized by definite pathologic findings, consisting of the degenerative changes in the secretory epithelium of the kidneys, hemorrhages, and thrombosis of the liver, thrombosis, hemorrhages, and softening of the brain, and the changes in the heart muscle. Schmori believes this picture more constant than the findings in cases of sepsis, poisoning, etc., where the pathologic picture may vary greatly, and yet pathology considers the picture pathognomonic. In no other disease does the same complex occur. Schmori believes, therefore, that eclampsia is an identical disease in all cases, not a complex of symptoms. When the toxin is produced is not known, possibly the new teaching of the lysins will clear up the question.

KRÖNIG and FÜTH (Leipzig) have experimented to determine the **Etiology of Eclampsia**. Authors have studied the freezing point of the blood and its viscosity, and conclude: (1) The fact that an osmotic pressure exists between fetus and mother makes it probable that the disease is an intoxication of fetal origin. A change in the blood of eclamptic patients is not to be determined, neither by a determination of the viscosity, nor of the specific weight. (2) The pulse tension is increased, yet this is doubtless not due to an increase of the viscosity of the blood.

SCHUMACHER (Strassburg), as guest, reports **Experiments Relating to Eclampsia**. He has injected urine into the circulation of animals and endeavored to ascertain its toxicity. He finds it very difficult to ascertain the toxic equivalent of normal urine. A certain relation exists between toxic effect and specific weight—the more concentrated, the greater toxic effect. Neither urine nor amniotic fluid is more toxic in cases of eclampsia than in normal cases. The blood serum has likewise the same effect in eclampsia and in normal cases. The serum of the fetus is no more toxic than that of the mother, contrary to what Tarnier claims. Schumacher explains the false results of former authors by assuming that they neglected the specific weight of the urine.

BLUMREICH and ZUNTZ, as guests: **Experimental Additions to the Pathogenesis of Eclampsia**, have experimented on animals by determining the reaction of the cortex of the brain to toxins which produce convulsions; they find that the brain of pregnant animals reacts to smaller doses of creatin than does the brain of nonpregnant animals.

DIENST (Breslau), as guest: **Anatomic Findings and Examinations of the Blood and Urine of Eclamptic Mothers and their Children**.

SCHRÖDER (Bonn) on the **Determination of the Pulse Tension and the Freezing Point in Eclampsia** finds that the pulse tension is higher in pregnancy. An increase of pulse tension in eclampsia occurs only in those cases where nephritis is present. Pulse tension is dependent upon the amount of urine excreted—large amount of urine, tension lowered, and the reverse. He thinks he has found the freezing point lowered in 8 cases.

STRASSMANN (Berlin): **The Dividing Point of the Aorta in Pregnant Women and its Relation to Eclampsia**. He believes that when the aorta divides at a higher or lower point than normal, the ureters cross the psoas in such a way that they are more readily exposed to pressure. His theory is not supported by his own statistics.

KNAPP (Prague) on **The Teaching in Regard to Uremia**. GLOCKNER (Leipzig) on **The Relation Between Puerperal Eclampsia and Epilepsy**, reports 5 cases where he thinks a relation existed; in 2 cases epilepsy appeared after an attack of eclampsia and has continued.

The fourth session continues the **Discussion on Carcinoma Uteri**.

MARTIN (Greifswald) emphasizes the difficulty of deciding, even at operation, whether the lymph-glands are affected or not. He considers Schuchard's incision of great value. He has also tried the method devised by Döderlein (Tübingen), and described at the last Surgical Congress in Berlin, and finds it a great aid and astonishingly easy. He favors Schuchard's incision, followed by Döderlein's method.

JORDAN (Heidelberg) takes the field for the vaginal route. He points out that the results with the vaginal method are at worst much better than the results of cancer operations on other organs, and holds that in view of these results we have no right to expose patients to the fivefold risks of the abdominal operation. As regards analogy with other cancer operations, Jordan claims that we cannot compare cases of breast and lip cancer with cancer of the womb; we must compare with cancer of the other organs of the abdomen, and in these cases surgeons do not attempt to extirpate the lymph-glands. He points out further that Wertheim lost 3 cases from the gland extirpation. A radical operation is impossible at best. He favors Schuchard's incision.

VEIT (Leiden) does not expect much from statistics—the only way to find out how cancer spreads is the anatomic. One can doubtless cure cancer of the uterus without extirpating the lymph-glands. Veit considers the abdominal route the better, more comfortable for the operator, etc. We need not fear sepsis. He operates either from above or combined. All of his cases where he had to remove the glands died.

HOLZAPFEL (Kiel) has performed a radical operation in 96 cases, 79 by the vaginal route.

FRITSCH (Bonn) considers the result of the discussion—the

must begin again from the beginning. We have 3 methods—high portio amputation, vaginal extirpation and the abdominal route. His results with the vaginal route are better than in other cancer operations. He has 10% lasting cures, and is satisfied with that. In the abdominal method he advises tamponade, not the closing of the wound toward the vagina. He has performed total extirpation in 395 cases, with 26 losses; he has seen ileus in 2 cases.

DÖDERLEIN (Tübingen) demonstrates on charts his new method of vaginal total extirpation, which he has tried in 50 cases with no death; 1 case operated by an assistant died. He first incises the posterior cervix lip, generally opening the Douglas with this first incision; then he continues the incision along the median line of the posterior uterus wall to the fundus; drawing down the corpus, he continues down along the median line of the anterior uterus wall, continually drawing the uterus away from the bladder, and operating in the vesicovaginal space. Finally he severs the anterior cervix lip, and has the organ in halves; then he proceeds to the adnexa. Hemorrhage is slight during the dividing of the uterus, and any slight bleeding is easily controlled. He claims for his operation that it is easily performed, there is practically no danger of operative injury to bladder and ureters, and hemorrhage is slight.

WERTHELM (Vienna) defends his method, which he thinks the best, although not enthusiastic for it, because he can overlook the field of operation to better advantage.

SCHATZ (Rostock) has operated 120 cases. He has 6 cases, operated by the old method, alive after 10 years or more; 9 cases alive after 5 years or more. He mentions 3 cases in which cancer existed simultaneously in some other organ, *i. e.*, not as a metastasis.

DÖDERLEIN (Giessen) calls attention to the fact that the number of operable cases is increasing.

FREUND and WINTER closed the discussion. Freund concludes from the discussion that the larger number of those present prefer the vaginal route. He could never attain such good results as those reported by Fritsch; could show but 7-8% lasting cures, and therefore chose the abdominal route. Winter concludes: the earlier the operation, the better. No method for the prevention of implantations has been suggested. Schuchardt's incision is in general approbation. Winter himself considers the method valuable because one can operate cleaner and better. The hope of the future is in an abdominal method which gives a smaller primary mortality. Studies of the lymph-glands are greatly needed. We must differentiate between the different forms of cancer; in the future we will say, "This form of cancer I operate by the vaginal, that form by the abdominal route."

The congress then proceeded to the discussion of eclampsia.

HERZFELD (Vienna) On Eclampsia, has studied the protocols of the Pathologic Institute in Vienna, and has found 81 cases recorded. All cases had in common pathologic changes in the kidneys, edema of the brain and the lungs. In a number of cases changes in the liver. Remarkably frequent were osteophytes of the skull. In 18 cases he found compression of the ureters recorded, and gives it as his opinion that eclampsia is an intoxication caused by fetal products, which under normal conditions are excreted by the kidneys, but which, in cases of compression of the ureters, can cause eclampsia.

VEIT (Leyden) has seen but 14 cases in Leyden, with 1 death. He advises morphin and rupture of the membranes. He mentions some cases where he thinks the same toxin was at work, but was not concentrated enough to produce convulsions. He does not think we should always use forced confinement.

NAGEL (Berlin) has had a mortality of 27%, which varies in different years; in 1895-1896, 12% mortality, in 1896-1897, 39%. Altus' treatment was the same in both years; 183 children were born alive, 103 dead. Nagel calls attention to the fact that the disease often occurs in groups and suggests that it may possibly depend upon the weather. He has never seen a case of direct infection.

The fifth session began with demonstrations. Of especial interest were the preparations demonstrated by ASCH (Breslau), who found in one case that a bougie which had been sterilized in formalin produced a necrosis, not only of the mucosa, but also of the muscularis.

KRETSCHMAR (Wiesbaden) shows a rare small cystic tumor—a folliculoma malignum ovarianum gottschalk.

KRÖNIG (Leipzig) describes a method of controlling the manufacturers of catgut sterilized according to his method; he places in the tube or box containing the catgut, a substance which melts at the required temperature, 160° C.

FREUND, junior (Strassburg), shows several preparations from cases which clinically, and at operation, resembled extrauterine pregnancy; serial sections showed, however, that there was no pregnancy, but that the hematoma of the Douglas, came from other sources, as in 1 case from a burst bloodvessel of an engiomatous tube.

The Congress then proceeded to the discussion on eclampsia.

ALBERT (Dresden) thinks the disease due to a latent inflammation of the decidua. He claims to have found microbes—in microscopic preparations—in 2 cases. He thinks there is no specific germ, but that the disease is caused by the resorption of the toxins of different germs.

SCHATZ (Rostock) misses in the discussion those cases of eclampsia when the attacks appear in groups; he has seen as many as 3 distinct groupings. He further mentions those cases where the patients have a marked nervous disposition, but these cases are generally less severe. In regard to bleeding, Schatz considers the idea that the bleeding lets out a greater or less amount of the specific poison too mechanical to be plausible; venesection is of advantage because it lowers the pulse tension. He reports 1 case where the attacks were very severe following a cesarean section, but the convulsions ceased immediately upon removal of the tampons. He has also studied the influence of the weather, and finds that in Mecklenburg, the influence of the weather is directly opposed to that claimed for Berlin; in Berlin the cases are more frequent in winter, in Mecklenburg in summer.

OLEHAUSEN (Berlin) has always held that the disease is an intoxication; he has found it hard to believe that the toxins are of fetal origin; has always believed more in the influence of the pressure of the pregnant uterus. He denies the claim advanced by Harzfeld that edema of the brain is a constant pathologic finding. In a number of the 104 autopsies he has seen there was no edema of the brain, and in 1 severe case the brain was fairly sclerotic. He uses morphin less than formerly, and thinks he obtains better results. Rupture of the membranes is used in his clinic very often. He has used venesection in 84 cases with the idea that the concentration of the poison is lessened; he uses salt infusions either with or without bleeding. His latest statistics show 400 cases with 17% mortality. The disease is on the increase; in the last year he has had 83 cases, against 50 of the year before, and less in the preceding years. The disease is also more severe; he measures the severity by averaging the number of attacks for each case; for the 83 cases of the last year this average was 94. He considers cesarean section indicated and less dangerous than the deep cervix incision of Dührssen.

DÖDERLEIN (Tübingen) reports on the Frequency of Eclampsia in Würtemberg; in this province it is very rare, for example about 20 times as rare as in Russia. He does not know how to explain it—possibly because the conditions of life are better than in some other provinces. Nephritis is also relatively rare in Würtemberg.

HALBAN (Vienna) has obtained negative results in his experiments on the freezing point.

KÜSTNER (Breslau) thinks the discussion shows unity of opinion in regard to the therapy, careful and rapid confinement. He has performed cesarean section in 6 cases, all of which died; he did not gain the impression that the operation had any effect on the course of the disease.

P. MÜLLER (Berne) asks what shall be done in those cases where albumin, edema, etc., are present? Are we justified in inducing eventual abortion?

GESSNER calls attention to the many cases where the attacks cease hours before labor is completed, and which are nevertheless enrolled in the statistics as cured by confinement; he thinks there is no proof that these cases would not have cured of themselves. He uses morphin and chloral hydrate.

FRIESCH (Bonn) thinks prophylaxis would yield good results, especially in those cases where the woman has previously suffered from eclampsia.

L. MAYER (Copenhagen) has had good results in 49 cases of eclampsia with the nonelastic metreurythner.

EVERKE (Bochum) reports 52 cases from his practice. In 34 cases he used Dührssen's incision, 4 died without regaining consciousness, 3 died of sepsis; in 7 cases he performed cesarean section, of which 5 died.

BRESMER reports 4 cases from his practice in Weisbaden. All 4 died. He thinks one fault in general practice is that the physician is called too late.

SÖHLEIN does not think that the toxin is always produced by the fetus; he mentions a case in an old woman of carbolic acid poisoning which produced eclamptic symptoms.

FEHLING, closing the discussion, calls attention to the fact that eclampsia is very rare south of the river Main; the most cases occur in the large cities to the north of the Main, notably Berlin, Dresden and Leipzig; osteomalacia is, on the contrary, hardly known to the north of the Main. He uses morphin, but has given up the large doses first advised by Gustav Veit. Eclampsia occurs in but 5% of the cases of nephritis gravidarum; therefore forced confinement is indicated only in those cases in which the eclamptic symptoms have already appeared. The incision has shown unity in regard to the treatment; the theories of the etiology are still widely at variance.

The sixth session was devoted to the papers on different subjects. The session opened with the paper by KOSSMANN (Berlin) *The Identity of the Synectium with the Epithelium of the Uterus*, who demonstrates enlarged photographs of sections of the ova of rabbits which prove, as he thinks, his standpoint that the synectial cells can only arise from the epithelium of the uterus, never from the ectodium of the blastula. He thinks that the nuclei of the epithelial cells increase in number by simple division until we have the synectial cell. PFAUNTIEL (Breslau) takes the opposite standpoint, and holds that we cannot conclude from the rabbit as to the conditions in man.

NYHOFF (Groningen) read a paper on *Why does the Placenta first loosen itself, under normal conditions, after the birth of the child?*

KÜSTNER (Breslau) has endeavored to find why the danger of laparotomy is so great. He thinks many cases of shock are due to the most acute form of sepsis. He then began by using rubber gloves for his assistants, then for his left hand, and now he uses rubber gloves for both hands, and to lessen the expense of long gloves, he uses rubber cuffs; he further handles the peritoneum as exclusively as possible with instruments. He also sews sterile rubber flaps to the wound before opening the peritoneum. To improve the cosmetics of the operation he makes a suprapubic cross incision within the hair boundary. Colpotomy is less dangerous than laparotomy.

PFAUNENGTIEL (Breslau): Further Experience with the Suprasympphysic Fascia Incision. He has operated in 113 cases with his incision, which he devised to avoid postoperative hernia. He does not think it necessary to improve the cosmetics of the operation, and makes an incision above the hair boundary, parallel to the pubic bones, then the aponeurosis, then he dissects the fascia from the recti and opens the peritoneum by a vertical incision between the recti. He has had no cases of hernia following his method. A disadvantage is that the dissection of the aponeurosis from the muscles gives a better opportunity for infection. He has had some cases of wound infection, but fewer as his technic has improved. He considers the ordinary incision better for tumors.

WINTERNITZ (Tübingen): The Diagnostic and Therapeutic Value of Bacteriologic Examination of the Uterus Cavity in Cases of Fever Following Labor. He considers the bacteriologic examination the only method of determining whether the fever is caused by infection or by mastitis, etc.

ALBERT (Dresden): On the Germs Found in the Pregnant Uterus. He claims to have found cocci and rod-shaped organisms in sections of the fetal incubances. Microscopic findings in stained sections without cultures as proof of "latent inflammation" are not convincing to say the least.

ZIEGENSPECK (Munich): On the Insignificance of Douglas' Fold as to the Position of the Uterus.

VON FRANQUÉ (Würzburg): On the Formation of Metastases in the Uterus in Malignant Diseases of the Tube. He advises the removal of the whole genital system in malignant tumors of the tube, since one often finds metastases in the uterus at an early stage, a suggestion first made by Sänger.

QUEISUER (Bronberg) discusses the city care of confinement cases and the control of the women who nurse such cases after the midwife has left.

HALBAN (Vienna) has experimented on a species of ape to solve the question of menstruation. He has removed the ovaries and implanted them under the skin, and as a result of such experiments avers that Pfüger's theory of the cause of menstruation is false—menstruation is caused by some metabolic product of the ovary which can act after the organ has been removed from its normal connections.

The Congress of 1903 will meet at Würzburg under the presidency of **HOFMEIER**. The first main topic for discussion will be **Extrauterine Pregnancy**; the second, **Operations for Prolapse**, with Especial Consideration of the Lasting Results.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.

ELEVENTH ANNUAL MEETING, HELD IN ST. PAUL, JUNE 3, 1901.

Dr. EMIL AMBERG read the Report of the Committee on Interstate Reciprocity and Uniform Medical Legislation: He said that the first step toward interstate reciprocity and uniform medical legislation must be established in the various political divisions by forming the medical laws so that interstate reciprocity is allowed. The second step consists in establishing the standard for physicians who are permitted to practise. The third step consists in an arrangement by which the findings of one Board may be accepted by another Board.

The committee reported with satisfaction that the progress along all lines mentioned had been satisfactory during the last year. In regard to the first point the committee reported that the law permitted reciprocity in the following political divisions: District of Columbia, Delaware, Illinois, Indiana, Kansas, Maryland, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Virginia, Washington and Wisconsin. Concerning the second point the committee noted with satisfaction, progress in Indiana and Washington. With reference to the third point, the New England States showed that the division into groups is practicable and desirable. The demand for uniformity of medical education is apparent. The establishment of uniformity is possible. It can be established through the Examining Boards, aided by the profession and by the public. The committee came to the following conclusions:

1. The acceptance by the weaker divisions without examination of applicants from States having higher requirements without demanding reciprocal recognition and the discrimination of Medical Boards against inferior schools in their own rates reveals a commendable spirit.

2. As a step toward interstate reciprocity, the Committee commended the action already begun of reciprocal arrangements and agreements between the Boards of the several States having laws which provide for reciprocity and whose requirements are similar. This will result in the formation of groups of States with established reciprocity.

It is recommended that the members of the Confederation from States in which the standard of requirements is not yet sufficiently high, use faithfully the argument that interstate reciprocity can be obtained for the practitioners of that State only upon the basis of such legislation as will bring the standard up to that required in the States with which they intend to establish reciprocity. The 3 principal points considered were: (1) That the law in any political division should require or authorize the examination of all applicants for license by a competent Examining Board; (2) that to be eligible to examination the applicant should be required to furnish to the Examining Board evidence of having graduated from a reputable medical college in good standing with the Board in the State in which said college is located and with the Board to which application is made; (3) examinations should be uniform throughout the States as to subjects or branches upon which examination is required. The Committee believes that it would be well for the Confederation to agree upon the branches upon which applicants should be examined, to the end that uniformity of requirements by the various Boards may be attained, and that the percentage required in each subject and the manner of conducting the examinations, together with the rules to be enforced in each examination, should all be uniform. The Committee urgently recommended that reciprocity between the Examining Boards of the country on all questions pertaining to the welfare of the public and the elevation of the profession be maintained. To this end there should be the fullest and freest communication between the Boards, which should not be limited to their official reports.

Dr. HARVEY B. DALE followed with a paper entitled **Some Vulnerable Points in Medical Legislation**. He stated that the ultimate intent of medical legislation is unquestionably good. Its motive is a laudable one. It aims to directly benefit suffering humanity, not to establish a doctors' trust, nor to stifle competition, nor to strangle any practical new idea or system of treatment in its infancy. Enforced unification of standards on the part of medical colleges would simplify matters. It would result in a diploma being generally recognized for what it purports to be—a certificate of actual fitness to practise medicine. It would enable the recognized graduate in one State to move into another at his own will. It would remove all injustice and hardship now endured, not always patiently, by qualified physicians. It would strike the Upas tree at its root instead of lopping off its branches. It would do away with the manifest injustice to really qualified and honest college faculties, now inflicted by postmortem dissections of their deliberate decisions. In a word, it would reduce the present complicated legislative machinery to a very simple and effective mechanism. Given a concise, yet comprehensive, definition of what constitutes the practice of medicine, a uniform requirement that all who engage in such practice should have a medical diploma, and a legislative guarantee based upon actual information that such diploma says what it means, and means what it says, quackery would find life a burden in this country. The qualified physician of one State would be a qualified physician everywhere. The pretender might travel from Maine to California, and from California to Maine again, looking in vain for a chance to plunder the people.

Dr. HENRY BEATES, Jr., read a paper entitled: **How Should the Practice of Medicine be Legally Defined.**

He presented the following definitions for consideration: To practise medicine. Definition: For any one, excepting those carrying out the directions of the attending physician, to engage directly or indirectly, habitually or occasionally, gratuitously, or for pecuniary or other compensation, in the care, management or treatment, by any means whatsoever, either material or immaterial, for the prevention, relief or cure of any or all diseases, accidents or disability to which human or animal life is exposed, threatened or afflicted.

Practitioner of Medicine: Any one, excepting those carrying out the directions of the attending physician, who engages directly or indirectly, habitually or occasionally, gratuitously, etc., as above.

The Practice of Medicine: The engaging by any one, except those carrying out the directions of the attending physician, directly or indirectly, habitually or occasionally, gratuitously, etc., as above.

The above definitions were only offered in the nature of suggestions. During a lengthy discussion the definitions were criticized, several modifications suggested, but no action taken by the confederation committing it to any particular definition.

The following officers were elected for the ensuing year: President, **Dr. N. R. Coleman**, Columbus, Ohio; first vice-president, **Dr. Henry Beates, Jr.**, Philadelphia; second vice-president, **Dr. James A. Egan**, Springfield, Illinois; secretary-treasurer, **Dr. A. Walter Suiter**, Herkimer, New York; Executive council, **Dr. William S. Foster**, Pittsburg; **Dr. Joseph M. Matthews**, Louisville; **Dr. William A. Spurgeon**, Muncie, Ind.; **Dr. William Warren Potter**, Buffalo, and **Dr. Augustus Korndorfer**, Philadelphia.

CORRESPONDENCE

ANTIVIVISECTION IN MASSACHUSETTS.

BY

HAROLD C. ERNST, M.D.,
of Boston, Mass.

A paragraph in AMERICAN MEDICINE, page 282, of the issue of May 18, 1901, I think is unfortunate because it may mislead. It is the last part of the statement in regard to antivivisection, in which the lines run as follows: "while the Massachusetts laws guard against this point by the admission of any authorized agent of an incorporated society, to any place registered under the law for the practice of vivisection." This, of course, implies that there is a distinct law in Massachusetts against vivisection, which is not the case. There is a law against vivisection in the public schools, but no other. The practice of animal experimentation in Massachusetts is covered by the general laws against cruelty to animals, which are of the most severe kind and the existence of which has made it possible to prevent the passage of the annoying restrictive measures that have been attempted 3 times in the last 5 years.

CORRECTION.

To the Editor of AMERICAN MEDICINE:—Your reporter for the neurologic section of the American Medical Association evidently confused me with someone else. He represents me as endorsing the special pleading of Dr. Lambert Ott for the railroad claim agent. I was not present at the reading of the paper; had I been I should have strongly emphasized the position taken by Drs. Moyer and Craft.

JAS. G. KIERNAN, M.D.,
Chicago, Ill.

CONGRESS ON TUBERCULOSIS.

To the Editor of AMERICAN MEDICINE:—I would like, through your journal, to call the attention of members of the profession to the important Congress on Tuberculosis, which will be held in London from July 23 to 26. It is much to be desired that a large contingent from the United States should participate in the work. Many prominent physicians have signified their intention of joining the Congress. Members of the profession wishing to do so should send their names, enclosing \$5, to Dr. St. Clair Thomson, 20 Hanover Square, London, W., England.

W. OSLER,
Baltimore, Md.

PAY HOSPITAL FOR CONTAGIOUS DISEASES.

BY

J. MADISON TAYLOR, M.D.,
of Philadelphia.

The managers of the proposed Pay Hospital for Contagious Diseases have secured by purchase an excellent site just out the city limits, near Narbeth, on the Pennsylvania Railroad. The lot is bought and paid for, and the buildings will be erected as soon as possible. There is likely to be local opposition on the ground of supposed danger of infection, but the plans are made by Mr. Herman Miller, an architect who has distinguished himself already by his originality and practicality in hospital construction, and includes a novel method of ventilation by which all the air from the pavilions, etc., is carried by pipes directly to the smoke shaft of the furnace and acts as draught to the fires, which are kept going night and day—nothing escaping into the surrounding atmosphere. This will guarantee absolute disinfection and immunity, hence there will be no safer place to live than in the immediate vicinity of this hospital. A copy of their plans will be published at an early date in this journal.

The hospital is a most imperative need for all physicians who enjoy equally full privileges of attending their own patients, and for all people of such means that they prefer to,

and are able to pay for accommodations, and thus escape being sent to the Municipal Hospital.

The success of this most invaluable institution will depend upon the consistent support of the physicians themselves. It is particularly important that they support the management at this time, while organized opposition is arrayed against the projectors.

A SUCCESSFUL PORROCESAREAN SECTION

BY

JOHN R. COOK, M.D.,
of Fairmount, West Virginia.

Mrs. H. C., aged 24, Welsh, was admitted to my private hospital, February 20, at 2 p. m., sent by Dr. F. W. Hill, who had been called to attend her. At the time of admission she had been in labor 48 hours. The water had broken and os was considerably dilated, but the head could not enter the superior strait because of a pelvis deformed through an injury received when the patient was 6 years old.

On examination, the conjugate diameter was found to be 2½ inches, and the os patulous, well dilated. In fact it was difficult through the narrowed canal to reach the head of the child. It seemed more dangerous to attempt craniotomy than to open the uterus from above. As soon as the patient was thoroughly cleansed, with the assistance of Drs. Hill and Howard, I made an incision 7 inches long—3 inches above and 4 inches below the umbilicus—delivered the uterus, packed gauze around the abdominal incision, and opened the uterus by a longitudinal incision. I then took hold of the feet and removed an 8 pound male child. I lost no time in removing the afterbirth, but clamped the cord. Leaving the placenta in the uterus, I proceeded to remove the organ, which was amputated at the cervix. I pushed a piece of gauze through the cervix into the vagina to give more thorough drainage and, turning the stump in, walled off the abdominal cavity, washed out the clots, and closed the abdomen with silkwormgut. The patient was removed from the table with a pulse of 100, but with infusions of salt-solution rallied, and has made an excellent recovery.

It has been just 3 weeks since the operation, and the mother is sitting up, and has sufficient milk for her child.

GONORRHEAL OPHTHALMIA IN THE NEWBORN.

BY

H. A. BRAV, M.D.,
of Philadelphia,

Clinical Assistant in the Polyclinic Hospital of Philadelphia.

In the latter part of December, 1900, N. A., an Arabian, residing in the southern section of this city, came to my office suffering from an acute attack of specific urethritis. According to the usual method of treatment, I prohibited sexual intercourse; when he told me that he had had connection twice with his wife before consulting me, he not having been aware of the contagious nature of the disease. His wife was at that time in the sixth month of pregnancy, and knew nothing of her husband's malady. I warned him of the danger to the child, especially when delivered by a midwife, and advised him to engage a doctor for the confinement, but both husband and wife refused to have a man attendant on religious grounds. In the beginning of April, 1901, about 2 weeks after the birth of the child, they sent for me. I quickly responded, having been told by the messenger what the nature of the illness was; and I found a baby, well-developed for its age and evidently in good health, suffering with ophthalmia neonatorum of the most virulent form. There was great swelling of the mucous membrane, edema of the lids, and free secretion of thick, creamy pus. Although I knew the history of the case I made a microscopic examination and found the gonococci of Neisser in abundance.

I was told that the disease started when the child was 3 days old, but as the midwife said it was harmless and would disappear in a few days, they neglected to send for me. I ordered cold-compresses to the edematous lids, and an antiseptic eyewash to be used every 15 minutes. Once a day I touched the swollen mucous membrane of the everted lids with a solution of silver nitrate, 10 grains to the ounce. This treatment was continued for 2 successive weeks, and also the instillation of a weak solution of atropin at great intervals. At the end of the second week the grave symptoms subsided, but a slight discharge continued which lasted for a few days. At the end of the third week the child was perfectly well. I therefore stopped the nitrate of silver applications but ordered the mother to use the eyewash every 2 hours for 3 more weeks.

The interesting features of this case in my estimation are the escape of the mother from symptoms of gonorrhoea and the comparatively short time it took for the disease to yield to treatment.

ORIGINAL ARTICLES

THE TREATMENT OF ABDOMINAL AORTIC ANEURYSM BY A PRELIMINARY EXPLORATORY CELIOTOMY AND PERITONEAL EXCLUSION OF THE SAC, FOLLOWED AT A LATER SITTING BY WIRING AND ELECTROLYSIS, WITH THE REPORT OF 2 HITHERTO UNPUBLISHED CASES.¹

BY

RUDOLPH MATAS, M.D.,

of New Orleans, La.

[Concluded from page 546.]

In attempting to establish the limitations of the Moore-Corradi method let us first briefly consider the conditions that are usually met in practice. It is of prime importance that we should first recognize that the cure of aneurysm does not rest solely upon the successful coagulation of the blood or the arrest of the blood-current in the sac. Such a result, it is true, may mean the cure of the aneurysm itself; but, in abdominal aneurysm, the result, even when most successfully obtained, may precipitate an untimely end and the patient may die *because his aneurysm is cured*. This conclusion, paradoxical as it may seem, will be readily understood when we reflect that some of the most important visceral arteries—*e. g.*, those given by the celiac axis, the superior and inferior mesenteric branches, and the renals—often take their origin from the aneurysmal portion of the artery. Hence it is obvious that if the circulation in the sac is arrested and the openings leading into these branches are blocked by the aneurysmal thrombus, the viscera supplied by them—in view of the absence of a sufficient collateral supply—will necessarily starve and undergo fatal necrotic changes. That this is not an idle or theoretic fear is well and abundantly shown by the fatal results of coagulation caused by other non-aneurysmal conditions in which the intestinal arterial supply is blocked by thrombosis of the mesenteric vessels. A few reported cases of abdominal aneurysm in which this fatal form of mortification has been brought about by the sudden obstruction of the large visceral branches given off from the aneurysmal sac will suffice for illustrative purposes. The case reported by Lunn and Benham in the *Medico-Chirurgical Transactions*, London, 1885, vol. lxxviii (*British Medical Journal*, April 18, 1885, vol. i, p. 783) is particularly interesting:

An abdominal aortic aneurysm in a male patient, aged 30 years, could be felt in the epigastric region. The dimensions of the tumor were 6 to 7 inches from side to side and 5 to 6 inches from above downward, and extended anteroposteriorly from the vertebral column to the anterior abdominal wall. On October 31 distal compression was applied to the aorta with Corte's compressor for 4½ hours, under chloroform and ether alternately. The following morning all the physical signs of aneurysm were less marked. The tumor was smaller, harder, and pulsation less marked. The patient continued to improve for 7 days. On the eighth day, however, persistent vomiting set in, and on the twelfth day he died, with marked peritoneal symptoms. *At the necropsy the aneurysm was found to be cured, but there was gangrene of 2 feet of the jejunum.* The superior mesenteric artery which originated in the sac was completely blocked. In the discussion that followed the report of this case, Mr. Bryant stated that he believed that in one of his cases of abdominal aneurysm in which he had applied distal compression, death had occurred from the same cause.

By inquiring into the records of the 15 cases of abdominal aneurysm treated by wiring and electrolysis, I find only a few which furnish clearly defined evidence bearing on this point, but these few are sufficiently sig-

nificant when we consider that in many others death followed too quickly after the operation to exhibit this distinctive mode of termination.

In 12 fatal cases out of the total 15 reported, the causes of death are stated as follows: In Loreta's case death occurred on the ninety-second day, from rupture of the aorta below the coagulated and cured sac; Lange's patient died on the twelfth day after wiring, from pneumonia and exhaustion; the aneurysm had partially ruptured before the operation and had remained active, and was uninfluenced by this procedure; Stevenson's patient (superior mesenteric artery involved) lived only 27 hours after the operation, death being caused by direct hemorrhage following the operation; Stewart's abdomino-thoracic case (No. 1) was fatal in 9 days, from rupture of the sac; Stewart's second abdominal case terminated fatally on the fifth day, from hemorrhage and other complications resulting from perforation of the aorta with wire; Parham's patient died 45 days after the operation, from exhaustion, hemorrhage, and the effects of penetration of the wire into the thoracic aorta and left ventricle of the heart; Reeve's case ended in death 24 hours after the operation, from interference with the circulation caused by penetration of wire into the thoracic aorta up to the aortic valves; my patient died 19 days after wiring and coagulation of the sac, from rupture of a secondary diverticulum or pouch in the sac, which yielded after the main cavity had been filled with clot. The remaining 3 fatal cases (Halsted's, Finney's first abdominal case, and Pringle-Morris's) have points directly bearing upon the influence of the topography of the aneurysm and the origin of visceral branches from the sac, in its relation to the prognosis of abdominal aneurysm.

In Halsted's patient celiotomy was performed and the tumor exposed; 17 inches of No. 27 silver wire was first introduced and a galvanic current applied for 12 minutes; then a larger canula was introduced, and 38 inches of No. 25 silver wire was also introduced; to this the anode of a galvanic current was applied and a current of varying strength from 30 to 100 milliampères was passed and continued for 85 minutes. The patient lived 40 hours after the operation, and died with symptoms of sudden internal hemorrhage. The autopsy showed that a tumor extended from the diaphragm to the renal veins. An opening was formed in the dome of the sac leading into the pleura, which contained an immense quantity of blood. The aneurysmal opening leading to the aorta was very large—almost as large as the vertical diameter of the sac itself. "The chief abdominal vessels were found to arise from the lower portion of the sac, the celiac axis and superior mesenteric coming off within the sac, while the renal arteries sprang from the dilated aorta just at the mouth of the sac." In this case, as Dr. Hunner remarks, "when we consider the position of the origin of the celiac and the superior mesenteric vessels from the wall of the sac there can be no doubt that the patient's death would have been even more precipitous had there been a formation of an obliterating clot during the operation."

Finney's first abdominal case is also instructive on this point. This patient died on the twentieth day, from hemorrhage and exhaustion. Five feet of silver wire was passed through a fine insulated aspirator needle. The wire was alloyed with 0.0075 of copper and drawn from No. 8 to No. 27. The galvanic current was begun at 30 milliampères and increased 10 milliampères each 5 minutes until 70 milliampères was reached, where the current was kept 1 hour. The effect upon the tumor was marked. The thrill ceased, no expansile pulsation could be determined, the sac was firm and decidedly smaller. After closing the abdomen nothing but a communicated pulsation as of a solid tumor lying on the aorta, could be made out. The success of the operation seemed assured; but, on his recovery from ether, the patient complained of excruciating pain which increased until, within a few days, morphin was being given in ½ grain doses every 2 or 4 hours. Pulsation in the sac returned on the fifth day, and continued to increase until death. On the nineteenth day there was bleeding of about 300 cc. of bright red blood in the wound. He died on the twentieth day, 7 hours after the hemorrhage from the external wound.

At the autopsy, upon dissecting the aneurysm, it was found, among other very interesting conditions, that the celiac axis originated from the upper border of the sac. It was also found that the aneurysmal orifice corresponded with the origin of the superior mesenteric artery, of which artery the aneurysm was a dilation. It was evident that the wire had entered this portion of the sac and that blood had coagulated within the sac and almost filled it with solid antemortem clot. In connection with this involvement of the superior mesenteric and celiac axis it is interesting to note that at about the transverse portion of the duodenum there was an irregular area measuring 4.5 by 6.5

¹ Condensed from complete paper which is published with appendix containing report of published cases in Transactions of the Southern Surgical and Gynecological Association, for the meeting held in November, 1900.

cms., over which the mucosa was exceedingly hemorrhagic and partially necrotic. The jejunum, as well as the duodenum and upper portion of the ileum, was of a dead chocolate color, and on being opened these were found to contain considerable bloody fluid. In the light of these postmortem findings it would appear that in this case, as in Dr. Halsted's, the almost complete obliteration of the aneurysmal portion of the superior mesentery was largely responsible for the necrosis of the bowel.

In Pringle and Morris's case, in which death took place on the fifth day from traumatic delirium and asthenia, the post-mortem findings explain to us how it happens that in some cases of aortic aneurysm which involve the celiac axis recovery is possible after coagulation and obliteration of the sac without bad consequences as regards the visceral and intestinal circulation. In the necropsy of this patient the aneurysm, which was seated in the celiac area, was undergoing coagulation and was apparently in process of cure. It was noticeable, however, that the opening leading into the sac was situated in the posterior and lateral wall of the artery opposite the origin of the celiac axis. This sufficiently accounts for the absence of untoward results, as it was possible, under these conditions, for the aneurysm to consolidate without affecting the circulation in the celiac branches.

Stevenson's patient, in whom the aneurysm was found at the necropsy to have involved the superior mesenteric artery, would, no doubt, have shared the same fate had he survived longer the effects of the hemorrhage from the puncture. The patient died 24 hours after the introduction of 2 yards of "the finest steel wire."

In the 3 cured cases (Morse, Langton and Noble) the evidence bearing upon the exact relationship of the important visceral branches to the sac is, for obvious reasons, difficult to determine with any degree of accuracy, and consequently is not specified. In Morse's case, no information can be obtained as to the exact location of the tumor except that it occupied the upper epigastric region; therefore, presumably, the celiac area was involved. In Langton's case, it is distinctly stated that the aneurysm was situated in the front of the aorta below the superior mesenteric artery. Consequently it was situated in the second division of the aorta, which would account for the success of intervention. In Noble's case, it is stated that the sac was adherent to the lower border of the stomach and to the transverse colon, and this would suggest, with other facts, that the tumor originated below the celiac axis and the superior mesenteric artery. The comparatively low origin in these 2 cases would, therefore, tend to bear out the conclusion that aneurysms which originate low down on the abdominal aortic tract, especially below the superior mesenteric, all other conditions being equal, are much more favorable for attack by this method than those seated higher up in the celiac area.

* * * * *

In accordance with these facts we may classify the sacculated aneurysms of the aorta into 3 categories. The first group includes all the aneurysms which originate in the infradiaphragmatic portions of the aorta, extending from the diaphragm to and including the origin of the renal arteries; this is the most important anatomic division of the artery, because it gives birth to the celiac axis, with its gastric, hepatic and splenic branches, the superior mesenteric and renal arteries. It is the most important pathologic section of the abdominal aorta, because it is the most frequent seat of aneurysm. Lebert demonstrated long ago that 50% of abdominal aneurysms originated in this part of the aortic tract—(52 out of 92 cases). It is also unfortunate that this division of the artery is comparatively short—scarcely more than 2 to 3 inches—the entire length of the abdominal aorta from the diaphragm to the bifurcation being only 15 cm., or about 6 inches. Therefore it is almost impossible for an aneurysm to develop in any part of this division without involving the origin of one of these all-important visceral branches; unless, as in Pringle and Morris's case, which must be a very rare occurrence,—the aneurysm begins in the posterior or lateral aspects of the aortic circumference. Consequently, from the prognostic point of view, aneurysms of the first or celiac division are of the gravest and most forbidding character.

The second division extends from the origin of the renals to and including the origin of the inferior mesenteric; this division includes only 1 vessel of great importance, the inferior mesenteric, but as this anastomoses very freely with the superior mesenteric and the inferior hemorrhoidal, it is probable that the occlusion of the vessel at its origin would not be followed by gangrene of the colon to which it is distributed; aneurysms in this division are much less frequent, but should they origi-

nate here their prognosis is better than in the first division.

The third division of the abdominal aorta extends from the inferior mesenteric to the bifurcation of the aorta. It is the longest division of the artery, and as it gives birth to no branches of visceral importance (lumbar and sacra media), it is the safest of all the divisions in a topographic and prognostic sense. Aneurysms here, unfortunately, are the most infrequent, and for this reason the comparatively favorable disposition of the artery at this level is of little help practically, except in the very few cases in which aneurysms originate within its boundaries.

It is also most unfortunate for both surgeon and patient that a knowledge of these divisions, which are of great pathologic interest, is of little avail practically, because it is impossible for the operator to determine, with any degree of precision, the exact site of the aneurysmal orifice, no matter how freely he may explore the abdomen. The tumor in all cases overlaps the point of origin of the sac; the peritoneal investment and overlying viscera, which are usually adherent to the sac, make all efforts at precise exploration futile and impracticable. It is therefore only by approximation and guessing that the relative position of the aneurysmal sac can be made out or even suspected.

In view of our powerlessness to make an accurate diagnosis of the site of the aneurysmal orifice, and also of the practical certainty that all aneurysms involving the first or celiac portion of the abdominal aorta involve one or more visceral branches of vital importance; and in view, also, that 50% of the aneurysms of the abdominal aortic tract are seated in this division of the artery, we must conclude that in all such cases it will be wise to abstain from attacking such aneurysms by the Moore-Corradi or any other method which aims at cure by coagulation. While it is not denied that an occasional cure can be effected even in aneurysms of the celiac region by this method, it is evident that a favorable termination will be the result of a happy chance, a mere accident due probably to posterior position of the orifice of the sac, which is extremely rare and which the surgeon has no logical or reasonable means of recognizing or anticipating.

* * * * *

If we eliminate the aneurysms of the upper or celiac division of the aorta as distinctly unfavorable to the mode of treatment under discussion, we will find its field of application restricted to a very small number of selected cases in the middle and lower divisions of the aortic tract; but even in these, when the anatomic objections are removed, there are other serious dangers to be considered which must imperil the life of the patient and militate against the success of the operation.

Foremost among these dangers is the possible rupture of the sac in multilocular aneurysms from unequal distribution of the clot during the process of coagulation. The danger is well illustrated in my case, in which, after apparently arresting the circulation in the main sac, a secondary diverticulum developed rapidly a few days after the operation, leading to its final and fatal rupture on the nineteenth day. That this accident will occur in spite of a good technic, applied under the most favorable conditions and after the success of the operation has been apparently secured, is amply demonstrated by several well-recorded thoracic and abdominal cases.¹

¹ Dr. Hunner, in his paper, l. c., p. 276, calls attention to this grave danger in the following paragraph:

"One of the greatest dangers in this procedure, particularly in the large multilocular aneurysms, is the development and rupture of a secondary sac due to the rapid filling of the main sac by coagulum and the shunting of the blood-stream against a portion not receiving a special strain before. Apparently, this occurred in the cases of Donnellville, Cayley, Ransohoff, Hulke, Barwell and in Stewart's first case." [Thoracic cases.]

"Loreta's unique case of rupture of the aorta at its junction with the base of the former aneurysm was probably caused, as he suggests, by the lack of nutrition to the wall due to changes in the circulation brought about by contraction of the organizing sac. General arterosclerosis would weigh against the operation."

Another unavoidable but rare accident is that which results from extension and detachment of clot from the aneurysmal orifice into the main trunk, leading to embolism and thrombosis of the aorta, with gangrene of the lower extremities. This possibility is well shown in a case reported by H. Morris to the Medico-Chirurgical Society of London, April 14, 1885 (*British Medical Journal*, 1885, vol. i, p. 784), in which an aneurysm of the subdiaphragmatic portion of the aorta had undergone spontaneous cure, with the formation of a clot which extended to the bifurcation of the artery, blocking up the iliacs.

Another danger inherent to the wiring process is the escape of a wire through a large aneurysmal orifice into the aorta, from which it may sometimes migrate to the heart itself. This accident is likely to occur whenever the orifice of the sac communicating with the artery is large. It necessarily follows in all cases in which a fusiform aneurysm is mistaken for a saciform formation. In the latter case it is avoidable, at least in abdominal cases, but as no one can positively diagnose the size of the aneurysmal orifice, *intra vitam*, it is evident that such accident is unavoidable when conditions favoring its occurrence exist.

The following case, kindly communicated to me by our Fellow, Dr. F. W. Parham, is worthy of special attention in this connection. The operation was performed in 1896, in the Charity Hospital of New Orleans, and I copy the observation in full as written by Dr. Parham:

History of a Case of Abdominal Aneurysm; Exposure of the Sac by Opening of the Peritoneal Cavity in the Median Line; Introduction of 26 Feet of Fine Steel Wire Through a Canula; Death in 45 Days; Wire Found Extending Along the Abdominal and Thoracic Aorta Even Into the Ventricle of the Heart.—James B., white, male, aged 46 years, was admitted into Ward 19, Charity Hospital, service of Dr. J. H. Bemiss, March 30, 1896. Patient was a man of very dissolute habits, being addicted to drinking immoderately for many years. At the age of 19 he contracted syphilis which, he says, manifested itself in the form of eruptions at various times. There is no family history bearing upon his present disease.

In July, 1895, while pursuing his occupation as fireman, he suddenly felt an intense pain in the lumbar region of the back, which gradually extended until it spread across the back. For about 2 weeks this kept him from working, and when he did go back he attended to his work with great difficulty, feeling very weak and complaining often of dizziness. He lost weight, and after December, 1895, was compelled to give up his work. When admitted to the hospital he was able to lie comfortably only on the right side with his left leg drawn up. If he lies for any length of time on his back he suffers intense pain, and he is almost unable to lie on the left side at all.

Physical examination by Dr. Bemiss showed lungs normal, as likewise the heart, except that the apex-beat was slightly displaced to the left. A distinct pulsation was observed, synchronous with the first sound of the heart, just below the ensiform cartilage, very close to median line. Palpation showed marked thrill, and expansion of the mass was made out. Auscultation revealed 2 sounds at the site of pulsation, the first being very prolonged, the second shorter. Liver-dullness was normal. The urine was not examined at this time.

The treatment pursued was potassium iodid in gradually increasing doses up to toleration in conjunction with sulfate of morphin when required to relieve pain.

He was admitted to my service on April 21, the conditions being practically unchanged. The medical treatment having failed, he was admitted to the surgical service with the hope that surgical interference might accomplish something.

Accordingly, on April 23, 1896, under chloroform, I opened the abdomen in the middle line, the incision about 5 inches in length, lying entirely above the umbilicus. The sac was easily found and uncovered of overlying tissues. It was an aneurysm of the abdominal aorta about the size of the fist, lying just above the umbilicus. A small trocar was inserted and the canula withdrawn. Some little difficulty was experienced in managing the canula, which was too short for the purpose, the adhesions preventing the tumor from being appreciably lifted from its bed. Some blood was lost from the canula, but a gauze pack being placed around it there was no further serious difficulty on this account. Very small steel wire, very resilient, so springy, indeed, that when it was once loosed from its spool it would fly off with a sudden jerk into space; about 26 feet were introduced in 2 sections.

The wound was only partially sutured, being left open, with gauze pack about the aneurysm. The patient was returned to the ward very much depressed, but nothing striking had occurred during the operation.

For 3 days strychnin and digitalis were given at frequent intervals, with an occasional dose of morphin to relieve severe pain, of which he complained. This pain was referred to the lower region of the thorax. After the third day no further stimulation was required, and the last dose of morphin was given on the fourth day. The diet consisted of hot water in small quantities until the afternoon of the second day, when he was allowed peptonized milk to which was added panopeptone on the next day. These were gradually increased in quantity. On May 5 pure milk was given, and this was alternated with panopeptone. May 11 he was allowed soft boiled eggs and soda cracker. After this he seemed to be doing well, and only occasional notes are recorded.

Later I find the following notes in the clinical record:

May 14, complains of slight pain in the lower part of chest, left side; is very restless.

May 15, rested well, but sleeps very little.

June 5, suffering from slight pain in lower part of chest and upper region of abdomen; nauseated. The pain passed off during the afternoon.

June 6, p. m., feels very well, but complains of a pressure in the chest and cannot bear the weight of any cover.

June 7, a. m., passed a very good night, sleeping a little, but complains of nausea, and of pain in both sides; feels very much depressed; 9 a. m., vomited; taken with a violent pain in the center of thorax, over region of the heart. At 9.45 a. m. tried to get out of bed, and while being restrained fell into collapse, losing consciousness, covered with a cold perspiration; pulse very weak. 12.30 a. m., resting and seems better; vomited. 12.50 p. m., taken with a severe pain; again collapsed, with loss of consciousness.

He died June 7, 1896.

The temperature and pulse records are of especial interest, and are here appended for study in connection with the post-mortem findings.

TEMPERATURE AND PULSE RECORD.

April 23, 1896, returned from the operating room at 12.45 p. m.

April	Hour.	Temp.	Pulse.	Respiration.
23	1 p. m.	99½	80	.
"	23 5 p. m.	100½	100	.
"	24 8 a. m.	102½	123	33
"	24 5 p. m.	101	.	30
"	25 5 a. m.	101	106	22
"	25 1 p. m.	100	107	26
"	25 5 p. m.	99½	93	23
"	26 5 a. m.	99½	80	20
"	26 5 p. m.	99	80	19
"	27 8 a. m.	98	79	18
"	30 6 a. m.	98	80	18
May	2 6 p. m.	98	70	18

Findings at the Autopsy.—The abdominal wound had completely healed, the site of the operation being marked by cicatrix. There was some difficulty in reaching the cavity owing to the adhesions. The parts about the wound were firmly matted together, but there was no evidence anywhere of pus. The liver was adherent to the abdominal wall at the median line; on its convex surface a bloody serum was observed. There was edema about the aneurysmal sac, and there was extravasation in the omentum. Some clots were found in the pelvic cavity, but nowhere below the level of the umbilicus was there any sign of any inflammatory exudate. On the superior wall of the stomach was a large adherent clot. The pancreas was adherent to the duodenum. There was a general matting together of the tissues in the neighborhood of the aneurysmal sac. There was no hemorrhage in the pleural cavity. The organs weighed as follows:

Kidneys, left, 6½ ounces; right, 5½ ounces.

Spleen, 9½ ounces; *liver*, 3 pounds, 1 ounce.

Lungs, left, 9½ ounces; right, 10½ ounces.

The aneurysmal sac was of the size of the fist and apparently as soft as at the time of the operation. The wire could be felt plainly coiled in the sac, but, strange to say, it could be traced up the aorta throughout its whole length until some of the strands could be found entering the heart itself, where some could be actually seen in the ventricle of the heart. The aneurysmal opening, situated in the anterior aortic wall opposite the seat of puncture, was large enough to admit the tip of the index finger. A point of wire could be felt protruding through the wall of the descending aorta just below the arch. There was also a solution of continuity of the wall of the sac at its lower part to the left and slightly behind. The wire had apparently undergone no change in the sac, and the aneurysm was not visibly affected by its presence. The aorta where the wire came through seemed practically unchanged, and the impression was that it had only recently pushed its way through. The wire in the heart also seemed to have caused little disturbance. The specimen was not more closely examined at this time, but was removed for further study and was subsequently exhibited before the Orleans Parish Medical Society. I thought at first that the wire might have been pushed up in the manipulations of the autopsy, but careful examination did not confirm this suspicion, and the general opinion of those present was that the migration of the wire was entirely ante-mortem. Unfortunately, the specimen was subsequently lost by decomposition, and the more minute changes could not be further investigated.

Dr. Parham's case is certainly very remarkable in this respect: The long survival (45 days after the migration of the sac into the aorta and heart), and in spite of the actual perforation of the aorta in one place, is certainly a revelation. It is still a question, however, whether the wire actually migrated out of the sac into the aorta and ventricle at the time of the operation or whether this happened subsequently; and that death only occurred later when, owing to the elastic spring of the steel wire, it escaped out of the aneurysmal orifice and suddenly reached the heart. The fact that the aorta was practically unchanged and that there was no thrombus, supports the impression produced at the time that the wire had only pushed its way through shortly before death. Whatever the interpretation of this occurrence, the case is another most striking illustration of the remarkable tolerance of foreign bodies by the aorta as well as of the dangers of the method. Of the other cases in which this migration of wire out of the sac, has occurred only 2 (Reeve's and Stewart's) are abdominal cases, Ransohoff's and White and Gould's being thoracic. In Reeve's case a silver-plated, soft, copper wire, 0.016 inch in diameter, was used and 7 feet introduced. As shown at the autopsy, the wire, irregularly twisted, occupied the center of the sac; one end, together with a double loop of wire, passed up the aorta, the looped part reaching about 10 inches, and the single strand quite up to the aortic valves of the heart, where it left a spot of ecchymosis. Yet in this case, as in Parham's, the conditions were the best calculated to prevent such an accident, as the aneurysm was distinctly sacculated, "the opening from the aorta into the sac being not over 1 inch in diameter."

In Stewart's case "fine silver wire (10 feet) was used. It was passed into a sacciform aneurysm and thence into the dilated aorta." In Ransohoff's case (aneurysm of ascending arch) 8 feet of flexible wire was passed through a canula. Nearly fatal syncope occurred after the introduction of the first 4 feet. At the autopsy (1 month after operation) it was found that 1 loop had passed through the aortic opening and rested just above and in close contact with one of the lunules of the aortic valves.

It is evident from the occurrence of this very serious accident in at least 3 out of 15 reported abdominal cases (20%) that it is not an insignificant element of danger, no matter how much the use of fine, properly drawn and snarled silver wire may have diminished this danger, which is especially inherent to coiled steel wire.¹

Rupture of the sac by penetration of its walls with a stiff wire is another accident which is recorded; rupture of a thin sac by overdistention with too much and too stiff wire has been the cause of failure in a few instances; this can be usually avoided by following Stewart's instructions and not wiring with more than 10 feet of very fine, highly drawn wire. There is a risk of cauterization and ulceration of the sac by applying too strong a galvanic current, and, finally, there is the risk of sepsis and shock, which are less likely to occur if the operation is performed in 2 sittings, as in the writer's case.

To summarize, then, the objections to the Moore-Corradi method:

1. The cure of the aneurysm may lead to the death of the patient by obliterating the orifice of important visceral arteries; this is most likely to occur in dealing with aneurysms of the upper or celiac division of the abdominal aortic tract—*i.e.*, in about 50% of the cases.

2. Secondary rupture of the sac from the strain put upon weak portions of the sac in multilocular aneurysms, after partial coagulation of the contents has taken place,

¹Hunner in referring to this dangerous migration of the wire, speaks also of White and Gould's case of fusiform aneurysm of the ascending arch in which the wire (22 feet of fine steel wire) escaped out of a more superficial sacular aneurysm into a second fusiform dilatation of the aorta. The great danger of the escape of wire from an external sacular secondary aneurysm through a large opening into a primary fusiform aneurysm of the aorta is certainly not to be overlooked in thoracic aneurysm.

(particularly likely to occur in subjects of general endarteritis with atheroma).

3. Escape of wire through a large aneurysmal orifice into the lumen of the aorta, with migration upward into the heart leading to perforation, traumatic endarteritis, endocarditis, with the formation of secondary thrombi and emboli.

4. Danger of perforating the sac by stiff wire or by overcrowding the sac with too much wire.

5. Danger of extension of clot from the coagulum in the aneurysm to the main artery, leading to fatal blockade at the bifurcation, with gangrene of the lower extremities.

6. Danger of rupture of sac from sudden withdrawal of abdominal support and displacement of adherent organs in the course of the exploratory laparotomy.

7. Danger of mistaking a fusiform for a sacciform aneurysm.

8. Danger from emboli and thrombi following incomplete coagulation of the blood in the sac (a very rare and practically unknown occurrence in abdominal cases).

9. Danger of shock.

10. Danger of sepsis.

In the presence of this formidable array of dangers which beset the application of this method we ask ourselves what are the conditions, if any, which are favorable to its successful application? Theoretically possible, but clinically rare, are the following conditions: (1) The aneurysm should be saccular; (2) it should be unilocular; (3) it should be provided with fairly strong, resisting walls; (4) the patient should be young or middle aged, fairly healthy, and free from general endarteritis and atheroma; (5) the aneurysmal orifice communicating the sac with the lumen of the parent artery should be small; (6) the aneurysmal sac should spring from the lower, inframesenteric division of the artery, preferably between the origin of the superior mesenteric and the bifurcation; (7) if given off from the celiac region the orifice should be situated on the posterior or lateral wall of the aorta.

With these ideal conditions, and with a perfect technique, the chances of permanent cure would be immensely increased and the operation could be undertaken with great probability, almost certainty, of success. But as the most important of these conditions can never be ascertained *intra vitam*, and we are thus unable to differentiate clinically between the favorable and the unfavorable cases, we are forced to conclude that the Moore-Corradi method as at present applied, and in spite of the undoubted improvements that have been made in its technique, is a most dangerous procedure, essentially lacking in the elements of that scientific precision and knowledge of avoidable perils which are necessary to elevate it out of the plane of empiricism and surgical experimentation. Its chief recommendation now rests upon the naked fact that in 3 out of 15 recorded cases (20%) it has actually arrested the progress of aneurysms and saved life. Apart from this clinical fact, it can claim but little else in its favor except that in the presence of almost certain death from the disease when allowed to follow its natural evolution, even a remote possibility of survival by operation is better than no chance at all.

In studying this subject purely from the point of view of results, we should bear in mind that the facts upon which we have based our conclusions are only those furnished by published cases, and that in this connection, as in so many others in medical literature, there are probably many failures with the method which are never recorded. It is more likely that the successful cases have found their way to the press, but we doubt that this is true of the failures. Were all the cases published so as to make them available it is more than probable that the preponderance of fatalities would be even greater than is at present recorded.

Returning to the question with which we began our inquiry—*viz.*, to what extent have the advances made

in the purely technical phases of this procedure improved the patient's prospects of relief and his chances of survival?—we would say that, after analyzing this question from every point of view, we are compelled reluctantly to admit that little if any advantage has been gained in the statistical results. Thus we find that in 15 abdominal cases 7 were treated by wiring alone, and of these 2 recovered (Morse, Langton) or 28 $\frac{1}{2}$ %; 8 were treated by the combined method of wiring and electrolysis (Moore-Corradi method), viz., Stewart, 2; Reeves, 1; Halsted, 1; Noble, 1; Matas, 1; Finney, 2. Of these only 1 was permanently cured (Noble's case), or 12.50%. If we were to add Finney's second patient, who was subjectively improved and was probably living when the case was reported, we would have 25% of recoveries by this method, but in this case the aneurysm was active when the patient was discharged.

In conclusion, I would state that in the light of present experience we should restrict our recommendation of the combined method to that small group of comparatively favorable cases in which the aneurysms are confined to the inframesenteric portion of the aorta, and then only after other safer methods of treatment had been tried and failed. In aneurysms situated in the upper part of the aortic tract, the boundaries of which cannot be even approximately determined, I would regard this procedure in the light of a pure experiment—a veritable surgical adventure—which would be justified solely by the imminent danger of death from rapid progress of the disease with threatened rupture of the sac, and associated with great suffering. Even then the operation could not be recommended, but should be undertaken solely at the urgent solicitation of the patient after a thorough understanding that the chances would be no less than 70% against his recovery from the operation.¹

PERSISTENCE OF THE THYROGLOSSAL DUCT.²

BY

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of Philadelphia.

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The patient whom I have the honor of showing to you this evening is a Scotchman, aged 56, married, a mason by occupation. He came to the Dispensary of the University Hospital in the beginning of February of this year, complaining of peculiar pains radiating from the nuchal region to the front of the head. In the course of my examination I found a moist dimple in the median line of the neck, concerning which he gave the following history:

Thirty-eight years ago (he remembers the date exactly; it was 2 days before the wedding of the Prince of Wales, now the King of England), while playing with another boy, he struck the front of his neck against the other boy's knee. There was no bruise-mark; but on the same day a swelling developed, which opened and discharged a week later. Caustic was applied several times, but the opening never closed from that day to this.

There is more or less constant discharge of fluid, which is usually thin and whitish or milky; sometimes, however, it is thick. He has to wipe the area continually to remove the drop

¹Dr. Hunner in his careful compilation of the reported cases (i. e., by combining the statistics of the thoracic and abdominal cases, has collected 14 in which Moore's method of wiring alone was followed; of these 14 cases, 8 were thoracic and 6 abdominal. Two of these, abdominal cases, resulted in cure—14 per cent. of recoveries.

With the combined method (Moore-Corradi) there have been 23 cases, 17 thoracic and 6 abdominal. Four of these, or 17%, recovered, 3 thoracic (Rosenstein, Stewart, Kerr) and 1 abdominal (Noble).

By combining the statistics of the 2 methods, and adding to Hunner's list 2 recent thoracic cases, one of which was cured and the other improved, reported by Freeman (Denver), and the 2 fatal abdominal cases reported in this paper (Parham and Matas), we make up a total of 41 cases of aortic aneurysm thus treated, with 8 recoveries (2 abdominal and 6 thoracic) or 19 $\frac{1}{2}$ % total recoveries.

Hunner also refers to 9 cases, or 3% in which there was an amelioration of symptoms and prolongation of life. He very properly cautions that "we must not be too sanguine on this point, for in any given case we cannot prophesy as to the patient's length of days or degree of suffering if there be no operative interference."

²Read before the University of Pennsylvania Medical Society, April 13, 1901.

of fluid, which, as a rule, is the size of a pinhead; occasionally, especially when he catches cold, it becomes larger, and may then be as big as a pea. As I have said, the discharge continues all day long, but during the night a crust forms at the bottom of the cavity. The depression is funnel-shaped; 5 mm. transversely and 8 mm. vertically. It is situated in the median line of the neck, above the thyroid gland, and corresponds to the middle of the hyoid bone. The bottom of the cavity is red and moist, and is covered with a mucopurulent discharge, which on microscopic examination consists of fat-drops, a few granular cells, and some epidermal scales. There appears to be a single small opening, into which, however, I was unable to introduce a probe for any distance. The cavity is surrounded by a firm infiltration, measuring 15 mm. in all directions. At the bottom, the depression is attached to the deeper structures; it can be pulled sideways to a limited extent, but cannot be drawn forward, as the skin of the neck and chin can be normally. That the tissues of the depression are adherent to the hyoid bone, is most clearly realized when the patient swallows; the funnel is then seen to deepen markedly, and the surrounding structures are sucked in and drawn up with the hyoid bone, so that the integument below the chin form a transverse fold over the top of the deepened funnel. During swallowing the depression is nearly 3 cm. in width. There is no pain, and no tenderness to ordinary pressure, but when I picked up the dense tissues around the depression with the forceps and tried to draw them forward, the patient experienced considerable pain. I applied some strychnin to the bottom of the cavity, thinking that the fistula might communicate with the mouth or the pharynx: but the patient did not taste the drug.

The continued discharge, lasting incessantly for 38 years, suggests that we are dealing with a minute fistula, of the length of which we can form no definite idea. It seems, however, that it extends as far as the hyoid bone.

This is the second case of the kind that I have seen. A few years ago there was a student in one of my classes in the laboratory (he is now a practising physician in Pittsburgh) who had a fistula similarly placed. It had been cauterized and incised without any benefit, as it would always recur. Eventually, it was, I think, removed. I have not heard whether there has been any return of the discharge.

There can be but little doubt that in our patient the traumatism produced by the blow against the neck was only an incidental cause of the fistula. We may confidently assume that a blind tract of congenital origin existed, the distal end of which was near the surface of the skin. The blow merely served to remove the slender partition-wall that separated this tract from the exterior.

The embryologic studies of His have shown that fistulas in the median line of the neck are usually the remains of the thyroglossal duct of the embryo. The formation of this duct, and the fistula to which it gives rise, can be better understood by a brief account of the development of the thyroid gland. In nearly all vertebrate animals this organ is formed from a central, unpaired rudiment or *Anlage*, and 2 lateral rudiments. The former appears first, and is an outgrowth from the endodermic epithelium of the ventral wall of the primitive pharynx, in the neighborhood of the visceral arches. It is surrounded by the ridges that are destined to form the base of the tongue, and in its descent remains for some time connected with the root of that organ by a canal, called the thyroglossal duct or canal of His. After its descent it unites with the lateral thyroid masses, which are primarily hollow outgrowths from the endodermic lining of the fourth visceral furrows. The thyroglossal duct begins to undergo atrophy at the fifth week, and by the eighth, is entirely obliterated, its upper extremity being, however, permanently indicated by the foramen cecum, on the dorsum of the tongue.

In some cases the primitive canal does not entirely disappear, and then various anomalies may result. Thus, the canal from the root of the tongue to the hyoid bone—the so-called ductus lingualis—may remain, and may reach a length of 2 $\frac{1}{2}$ cm.; or there may be a persistence of the lower portion—the ductus thyroideus—which then extends as an epithelium-lined canal from the thyroid gland to the hyoid bone. In that case, the gland is usually possessed of a middle horn, from the apex of which the ductus thyroideus arises. This horn may not

be situated in the median line, but in every instance the upper extremity of the duct has a mesial position. In the case studied by His, the 2 ducts, although approaching closely to each other (within 5 mm.), were not united, the hyoepiglottic and thyrohyoid ligaments acting as a partition-wall. According to some authors, the thyroglossal duct bifurcates at its lower extremity; this explains the presence, in some cases of thyroglossal fistula, of a double opening on the front of the neck. This was true in 2 instances reported by Durham.

The thyroglossal fistulas are lined with ciliated columnar epithelium, which is replaced by squamous as the lingual portion of the duct is reached. The opening may be anywhere, from a little above the hyoid bone to the level of the sternum; but in every case the aperture is strictly in the median line. Fistulas opening laterally, or fistulas with median apertures and lateral tracts, are probably to be considered as of branchial origin. They have recently been studied in an exhaustive manner by Coplin.

Thyroglossal fistulas move, as in our patient, with the hyoid bone on deglutition, having, therefore, the same characters in this respect as tumors of the thyroid gland. Sometimes the fistula is permeable to injections up to the foramen cecum; this, however, is rare in the adult, since, as already indicated, the continuity of the duct is interrupted at the thyrohyoid membrane. Thyroid-gland follicles, and even accessory thyroids, are often intimately connected with the duct. Accessory thyroid glands may, however, be found independently of a persistent canal; and may be situated above, in front of, behind, below, or even within the hyoid bone. Sometimes the upper portion of the thyroglossal duct persists and is transformed into a tumor composed of true thyroid tissue, springing from the base of the tongue. About 2 years ago, Dr. H. L. Williams showed me a section of a growth that had been removed from the root of the tongue. On examination I found it to be composed of typical thyroid follicles. Dr. Williams subsequently reported it in conjunction with another case of the same kind.

There is another possible source of cervical fistula, as pointed out by Durham: This is a persistence of the sinus praecervicalis—a cleft formed by the sinking in of the lowermost arches, and disappearing in later embryonal life by a coalescence of its ridges. Its persistence gives rise to fistulas lined with squamous epithelium. A distinction between these 2 forms of fistula, in the present stage of our knowledge, is to be considered as a refinement; although it is a point of importance that these latter fistulas sometimes communicate with the esophagus.

There are other interesting congenital anomalies associated with vestigial remains of the thyroglossal duct, such as mucoid and dermoid cysts; but it is unnecessary to discuss them at this time.

Regarding the treatment of thyroglossal fistula, it is evident that only a complete extirpation of the canal with its epithelial lining can bring about a permanent cure.

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Ice for the Poor.—The Baltimore Association for the Improvement of the Condition of the Poor is distributing free ice to the sick and aged poor. The sick diet, consisting of milk and eggs, which the association furnishes to the sick poor, makes the furnishing of free ice a necessity in order that the milk may be kept sweet and fresh until used. Physicians are requested to report cases known to be in need.

MYOMECTOMY OF 9 MYOMAS DURING PREGNANCY AND DELIVERY AT TERM.¹

BY

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of New York.

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Pregnancy in the myomatous uterus is always an interesting subject, because it is of sufficiently frequent occurrence to come within the range of each of us, and because its indications are various and involve the life or death of the fetus and sometimes of the mother as well.

Gutierrez, quoted by Delagènière, maintains that of 295 myomatous women, 51 become pregnant. If these statistics are accurate, it would represent the proportion of about 17 pregnancies in every hundred cases of myomas. Durkee, quoted by Howard Kelly, makes this proportion only 2.03%. Fortunately, however, no such proportion even as this latter one presents practical difficulties to the gynecologist or obstetrician, for it is an established fact that many myomatous uteri carry their pregnancies to term and through delivery without difficulty. The myomas in these cases are either pedunculated at the time of conception or become so during the pregnancy, as a rule, but a number of cases are on record of subperitoneal, sessile tumors in or near the fundus which have presented no serious difficulty at term.

All authorities—prominently among these Howard Kelly, of Baltimore; Delagènière and Dolèris, of Paris, give the following general rules regarding the indications of the various forms of this condition: Small myomas and those situated at or about the fundus, or even lower in the body of the uterus frequently, do not interfere with normal pregnancy and delivery, if these tumors are pedunculated. Sessile tumors are likely to cause abortions, but if situated at or near the fundus they need not do so. When myomas are situated at the junction of the uterus and its cervix, or in its lower third, myomectomy is justifiable and indicated, because these tumors will probably interfere with the descent of the uterus into the pelvis and present a serious obstacle to delivery.

These data divide myomas of the pregnant uterus into 3 classes, both in regard to prognosis and in regard to indications. The first division consists of pedunculated myomas which are not likely to interfere with normal pregnancy and delivery, unless they block the pelvis from their size or situation, and do not call for surgical interference, per se. The second class, embracing subperitoneal and interstitial tumors of the body, frequently prevents the completion of pregnancy, but, on account of the liability of abortion to follow their removal, surgical interference is not indicated as an elective measure. The third class embraces sessile or partially pedunculated or completely pedunculated tumors so situated that they will interfere with the descent of the uterus and with delivery, and thus necessitate either cesarean section or the death of the fetus, and possibly that of the mother, from attempted delivery through the natural passages. During pregnancy, subperitoneal and interstitial tumors are likely to increase very rapidly, owing to the greater supply of uterine blood, while the pedunculated do not share, to anything like the same extent, in this increased nutriment.

The form of surgical interference always indicated—where surgical procedure is indicated at all—is, I think, without question, myomectomy. The excuse in these cases for hysterectomy, which has been largely practised, is founded on the erroneous belief that myomectomy, owing to the violence done the organ and the consequent uterine contractions, is nearly always followed by

¹Read before the American Gynecological Society, June 1, 1901, Chicago, Ill., and published synchronously by courtesy of the American Gynecological and Obstetrical Journal.

abortion. Reliable statistics, extending over more than 20 years, or from the dawn of aseptic surgery to the present day, give no foundation for this current belief, and my own experience testifies to what extensive use myomectomy, when employed with adequate precautions against undue violence, may be applied without loss of the fetus.

R. H. Turner, of Paris, in a monograph published in that city in 1900, gives the following statistics of myomectomy during pregnancy: Between the years 1874 and 1890, 33 of these operations were reported, with 61% of fetal mortality and 36% of maternal mortality, but between the years 1890 and 1900 the reported operations are 44, with only 21% of fetal mortality and 9% of maternal mortality. Of the 79% of pregnancies in the latter series, or 34 children which survived the operation, 25 went to term; 2 went to 8½ months; 2, 7½ months, 3 are reported as having "continued,"² and the result in the 2 cases is uncertain.

From the year 1900 to April, 1901, I can find but 5 cases of successful myomectomy during pregnancy, including the one am now about to report. Dolèris reports a large pedunculated myoma removed, but though he reports recovery without abortion, he does not state time of delivery. Lewis reports removal of a subperitoneal tumor followed by normal delivery. Muir Evans reports removal of pedunculated myoma. The patient was in her eighth month and doing well when reported. My patient was operated upon April 24, 1900, and was delivered at term. Gemmel reports removal of 3 myomas in early pregnancy with delivery at full term.³ In the case which I am about to report I removed 9 myomas, all sessile, and 1 of which was deeply interstitial. This case presented the following history:

Mrs. T., aged 30; twice married; first marriage, 3 years ago; second marriage about 2 years ago. American born; occupation until 2 years ago that of a saleswoman. Admitted to the Woman's Hospital in the State of New York, April 16, 1900. She first menstruated at 15; has always been somewhat irregular, period usually occurring every 5 weeks, flow scanty, duration 3 days, with severe pain on first day. No previous pregnancies. Last menstruation January 17, 1900. Previous history otherwise, as well as family history, negative. On admission she complained of almost continual backache; bowels constipated; breasts somewhat enlarged with darkened areola; slight nausea in the morning for the past month. Vaginal examination showed a large uterus filling the pelvis and os retroverted. Several myomas can be felt in the body of the organ. No distinct objective symptoms of pregnancy, owing to presence of tumors. A diagnosis of multiple myomas with probable pregnancy was made.

Operation.—On April 24, 1900, with the assistance of Drs. Sweeney, Barfield and Spalter, internes at the Woman's Hospital, I opened the abdomen by a large median incision. The patient was put in Trendelenberg's posture and the intestines covered and pushed up with a large flat sea-sponge. The uterus was grasped with the hand and brought upward out of the pelvis and was found to be studded with myomas varying in size from that of a hen's egg to that of a pea. The majority were situated in the neighborhood of the fundus and more were pedunculated, though several were subperitoneal for ¾ of their caliber. Two of the largest and most prominent of these were situated just above the cervix, 1 in front and the other at the back of the uterus. The position and size of these 2 myomas decided me to perform myomectomy, even at the risk of abortion, for I was convinced that these tumors, largely increased in size as they would be at term, would make normal delivery impossible. It seemed to me also that it gave the woman a better chance and would not materially increase the immediate risk of interrupting the pregnancy if I removed all the myomas which the uterus contained, for if I succeeded in accomplishing this it would contract evenly. I was not aware how many myomas the organ contained until I had removed the most prominent ones, and then I was able to discover several more imbedded in the body of the uterus and not distinguishable at the first examination. One of these was quite large and could not be felt from the surface of the organ; I discovered it only after the removal of a prominent one lying in its immediate

neighborhood. Two small myomas I removed through the same incision in the peritoneum, breaking down a thin layer of interstitial tissue which separated them. I continued to remove the tumors until I had obtained 9, closing each peritoneal incision with continuous catgut ligature. In several instances my suture was carried deep down into the interstitial tissue. Having carefully examined the uterus, I was convinced by its symmetric shape and decrease in size that I had at last found and removed every tumor which it contained. Nine tumors had then been removed through 8 incisions. Bleeding had been inconsiderable during the operation, and finding that the slight oozing which followed the closure of each incision had practically ceased, I dusted aristol powder freely over the site of each line of sutures to prevent the formation of adhesions with the intestines, removed a few small blood-clots from the *culdesac* behind the uterus, allowed the intestines to fall down and fill the pelvis behind the uterus, and then closed the abdominal incision with through-and-through interrupted sutures of silver wire.

The patient bore the operation well, and beyond a small abscess in the connective tissue of the abdominal wall at the lower angle of the wound, which was drained and carefully dressed as soon as discovered, her convalescence was uneventful. During the first 3 or 4 days after the operation the patient received 2 opium suppositories (U. S. P.) daily to obviate, so far as they might, any tendency to uterine muscular contraction.

The most important points, I think, in the technic of this operation, were, first, that the uterus was supported and held steadily by the hand of my assistant grasping it posteriorly, great care being used to avoid jerking or handling the uterus unnecessarily; secondly, that in enucleating each myoma I avoided drawing the tumor up out of its bed, but, holding it in situ, pushed back the peritoneal and interstitial tissue which enclosed it, either with my fingernail or the handle of the scalpel, until I had reached the bed of the tumor and freed it. This method was slow, but it reduced excitation of the uterine muscle to a minimum and allowed very slow and gradual contraction of the bed of the tumor. Bleeding was reduced to a minimum and the lines of suture greatly shortened. I am convinced I owe it to this consistent effort to avoid, by every possible means, excitation of the uterus, that abortion was obviated.

The great lesson to be learned from this case is, in my opinion, the fact that hysterectomy may and should be avoided in all cases of myomas complicating pregnancy. If pregnancy can continue after so prolonged and irritating an operation as a 9-fold myomectomy, I cannot believe that myomectomy may not always be practised with equally as careful technic as was exhibited in this case. If the statistics which I have here collected and the history of my case shall save a proportion of fetal lives, by showing that we should not hesitate to give the patient and her child the chance which myomectomy offers, great good will have been accomplished.

I have searched all records most carefully for all the cases of this condition which have been reported up to date, beginning with Turner's report in 1874 and ending my researches with the month of April, 1901. As Turner's monograph is an elaborate and evidently carefully compiled work, and is acknowledged as trustworthy by all who have written upon the subject in question I have accepted his statements as correct, but from 1900, when his statistics end, until April of this year, I have searched and verified myself the reference to all cases reported.

LABOR AND SUBSEQUENT HISTORY.

After convalescence the patient returned home and remained remarkably free from all pain and nausea. Owing to the great kindness and appreciation of the authorities of the Woman's Hospital, to whom I represented the very unusual importance and scientific interest of this case, and that she was unable to provide for herself fittingly at home, I was enabled to place this patient in the hospital for her accouchement. Although a free patient, she was given a private room and special nurses and she and her baby were most carefully tended until I judged her fit to return home. I cannot say too much in appreciation of this action of the Visiting Committee of the Board of Governors and of the superin-

² Howard Kelly, in his "Operative Gynecology," states that he has had 3 myomectomies during pregnancy which continued to term, and gives the details of 1 case, but 1 of the other 2 has evidently not been reported, because I can find reference to but 2, either in Turner's statistics or in the subsequent literature.

³ Ford, of Utica, reports 5 cases of uterine fibroids complicating pregnancy. In 1 case he reports spontaneous delivery of intrauterine fibroid 6 months after delivery, but in none of these cases does he report myomectomy followed by delivery at full term.

tendent through whom I urged my request. All rules and precedent of the hospital were suspended and this labor case was ungrudgingly admitted, not on grounds personal to me, but solely from a generous interest in the success of a case of unusual importance.

Several days passed beyond the date of her expected confinement with no symptoms of labor, until about 1 a. m., on November 2, the patient awoke with a violent pain of long duration, followed almost immediately by a second, and with this pain the head was born with great force. The entire duration of the labor, from the time the head engaged until the birth, was 20 minutes. In the course of a half-hour the placenta and secundines came away spontaneously and intact and the uterus contracted firmly. There was no hemorrhage, but owing to the rapidity and force of the uterine contractions the cervix was deeply lacerated and the posterior vaginal wall was torn extensively, almost down to the sphincter ani. I had been notified at my house, a mile away, by messenger, on the occurrence of the first pain, and arrived at the hospital 45 minutes later. The patient was so exhausted then that I determined to put off any attempt at repair until later in the day. When I then placed her under anesthesia and thoroughly examined the lacerated posterior vaginal wall—I did not intend to operate on the cervix—I found that it was so contused, edematous and friable, that I judged it best for the patient not to attempt operative repair but to endeavor, by strict asepsis and approximation of the parts, to obtain the best results possible. To this end her legs were kept tied together and hot creolin douches with a Davidson syringe were given, by an experienced nurse, every 3 hours. Milk appeared on the third day abundantly. I kept the patient in bed for 3 weeks. At the end of that time normal involution had taken place in the uterus and cervix and the posterior wall had healed and lay well up in contact with the anterior. She left the hospital with her baby, a well-developed, healthy girl, on November 27, 1900, feeling entirely well.

Her convalescence from her labor was uneventful and when I last examined her, before she left, the abdominal wall was firm. A month ago she came to my office to report and I found a small abdominal hernia at the lower angle of the wound where the abscess had been. She confessed that as soon as she left the hospital she began to do heavy housework, including the family washing, and about a month thereafter she became conscious of a "weakening" at the lower angle of the wound. The uterus now is less than 3 inches in length, freely movable, and in normal position, while the cervix is cleft but is small, not everted and soft. There is no pathologic laceration there. The fascial tension of the floor of the pelvis is apparently intact, for the patient is entirely free from all subjective symptoms referable to this cause.

Shortly after my return to New York I shall operate upon the abdominal hernia, in my service at St. Vincent's Hospital, and expect to find no difficulty in effecting a cure.

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University of Pennsylvania.—The 1876 class of the Department of Medicine held its first annual banquet at the University Club, Philadelphia, at 7 p. m. on Alumni Day, June 11, and effected a permanent organization for the benefit of its Alma Mater. The following officers were elected: President, Charles A. Oliver, A.M., M.D.; vice-president, William H. Klapp, A.M., M.D.; secretary, Francis M. Perkins, A.M., M.D.; treasurer, Benjamin F. Baer, M.D., with an executive committee of 12 members, who will meet at the call of the president.

American Climatologic Association.—The following delegates have been appointed to represent the American Climatologic Association at the British Congress on Tuberculosis: Dr. Edward O. Otis, Boston; Dr. Judson Daland, Philadelphia; Dr. Henry L. Elsner, Syracuse, N. Y.; Dr. Charles E. McGahan, Aiken, S. C.; Dr. Thomas D. Coleman, Augusta, Ga.; Dr. Carroll E. Edson, Denver. Dr. Guy Hinsdale, Philadelphia, has received a notice of his appointment as honorary member of the Congress.

SUBTROCHANTERIC OSTEOTOMY FOR THE DEFORMITY FOLLOWING HIP DISEASE.¹

BY

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The natural cure of hip disease, if untreated, inevitably results in a characteristic crippling deformity, with marked flexion and abduction. Even in the treated cases, if neglected during the convalescent stage, this deformity frequently results.

It is not necessary to give in detail the history of the development of the operation for the correction of the deformity as the facts are well known, and Gant's operation is an accepted procedure. The object of this paper is not to present what is new, but to call attention to some of the practical details of an operation which is most satisfactory in its result, not difficult of execution, but, unfortunately, not as generally employed by the surgical profession as is desirable. The following case will serve as a type.

A young man of 18 suffered from hip disease when a boy of 4. The usual course of abscesses and sinuses followed, but after a number of years all finally healed and he was left with a right angle deformity of the thigh with severe adduction. He was able to walk with 1 crutch, but was unable to place the whole foot upon the ground. There were many cicatrices of old sinuses about the hip, subluxation, and an actual shortening of 1½ inches. Subtrochanteric osteotomy was performed and the limb corrected in the manner hereafter described. The recovery was uneventful; the correction of the deformity has been maintained without recurrence for 12 years until the present time. He is now able to walk with perfect freedom without crutch or cane, with no practical shortening of the affected limb.

It is unnecessary to give the histories of similar cases varying but little in detail. It may be, however, of interest to consider the best manner of conducting the operation and after-treatment.

The subject for convenience may be limited by describing the procedure only in its application to the deformity following hip disease, where there is ankylosis at the hip, either osseous or firmly fibrous, with or without subluxation. Osteotomy for coxa vara will not be considered here. There are various methods suggested for the division of the bone, but only 3 need to be mentioned, transverse osteotomy, oblique osteotomy and wedge-shaped section. Of these, transverse osteotomy will be found satisfactory in the cases of flexion without adduction, and is readily performed. In ordinary cases no preliminary incision through the skin is necessary, as the osteotome can be driven to the bone through the skin with a slight blow of the mallet. The place for the entrance of the osteotome is at the level of the lesser trochanter, or slightly below this, that is, below the insertion of the psoas and iliacus tendons. It is evident that where osseous ankylosis has taken place there is little danger of recontraction whether the insertion of the tendon of the psoas and iliacus is below or above the break, but even under these circumstances the point of election for the division of the bone will be found just below the lesser trochanter, on account of the greater ease of the division of the bone at this point, narrower here than higher up on the femur.

The osteotome is driven directly to the bone through the skin with the broad axis of the osteotome parallel with the axis of the thigh. When the bone is reached, the osteotome is turned in the hand of the operator and driven directly through the outer layer of the bone to the medullary layer. After the osteotome is well engaged in the bone, the direction should at each blow

¹Read before the American Surgical Association, at Baltimore, May 7, 8, 9, 1901.

be turned to the right and left, so that it will cut in an excursion wider than the width of the osteotome and to diminish the danger of the hemorrhage. The division of the bone is continued, working from the cortical layer to the medullary layer, the difference being recognized by the difference in the resistance to the blows of the mallet. The femur should be divided from $\frac{1}{2}$ to $\frac{3}{4}$ of its thickness, and the rest of the division performed by the fracture. It will be found to be easier to fracture the remaining portion of the femur by first moving the femur by adduction and flexion rather than by abduction and extension, though after the bone is fractured the limb should be moved in the direction of abduction and extension to stretch the contracted soft parts.

The width of the osteotome is a question of judgment, some operators preferring a narrow osteotome and others a wider one. The corners of the osteotome should be rounded to prevent any sharp projection, and if carefully used the operation is without danger of hemorrhages.

In some instances it will be necessary to perform tenotomy or open incision of contracted tissues, but usually, especially in children and adolescents, these tissues can be readily stretched. It is manifestly a neater operation if the osteotome should not be reinserted, but that all the cutting by the osteotome be performed while it is still in the wound; but a reinsertion of the osteotome can be easily made if a sufficient amount of the bone has not been divided to make the fracture easy. It is manifestly an advantage to leave a certain amount of the bone uncut to be fractured, as the uncut periosteum helps in the needed subsequent union of the fragments.

OBLIQUE OSTEOTOMY.

In place of transverse osteotomy the bone may be divided obliquely, entering the osteotome slightly below the greater trochanter directed to below the lesser trochanter, from without inwards and from above downwards. This is advised for the purpose of increasing the length of the limb, employing forcible traction for the purpose at the time of the operation or during after-treatment. The amount of lengthening gained in this way is, however, limited by the fascia and shortened muscles which can be stretched, and by the lack of elasticity of the uncut periosteum. If the periosteum were entirely severed, firm union is apt to be delayed or interfered with, a complication to be avoided.

Oblique osteotomy has, over linear osteotomy, the advantage of furnishing, in the obliquity of the fragments, an obstacle to the slipping inward of the lower fragments if the limb is thoroughly abducted. Experience enables the surgeon to determine by the sense of touch the correct position of the edge of the instrument, and with ordinary care there is no danger of hemorrhage or undue injury to the adjacent tissues. Wedge-shaped resection of the femur near the trochanter has no practical advantage over oblique osteotomy, and though mechanically correct, is surgically unnecessary.

POSITION OF THE OSTEOTOMIZED LIMB.

In cases with adduction or where there is much subluxation, oblique osteotomy is preferable to linear, but after either has been performed the question of the position in which the limb is to be placed is of the greatest importance, as the success of the operation naturally depends upon the position in which the fragments of the bone are placed for reunion. If the periosteum is but little injured, it is well known that union of broken bones takes place finally, even if the axis of the fragment differs greatly from that of the original bone.

Nature's fault in the union of neglected fractures serves as a precedent in the correction of the deformity. In the simplest cases the contractions of the soft parts are readily overcome after the osteotomy by manual

effort. If the deformity is not great and that chiefly of flexion without much actual shortening, all that is necessary is to place the limb in a position nearly parallel to the normal bone, and allow union to take place. If flexion is severe the fragments do not remain in contact after correction, in their whole cut surface, but this in no way prevents a firm union with the upper or lower fragments, forming an angle instead of a straight line, the callus giving sufficient solidity for future use.

Whether the limb is to be placed in a position in a plane with the long axis of the trunk or slightly flexed will depend upon the amount of flexibility in the lumbar spinal column. If the latter is rigid, the patient will find difficulty subsequently in sitting comfortably if the flexion is completely corrected. Ordinarily, however, especially in adolescents and children, an exaggerated amount of flexibility has been developed in cases of this sort, and this can be relied upon to give sufficient amount of change in the position of the thigh relative to the axis of the trunk, for the different positions incident to sitting, standing and walking. To avoid the danger of this it is, however, desirable in older patients to place the thigh in a position of slight flexion; not more than 15° will be required for this. Where the limb is adducted, as well as flexed, it is necessary to place the limb in an abducted as well as a straightened position, the amount of the abduction depending upon circumstances, especially the amount of actual shortening of the limb. It is to be borne in mind that in cases of severe distortion after hip disease with flexion and adduction, tilting of the pelvis takes place, the affected side being abnormally raised. This adds a practical shortening of the limb, measuring from the umbilicus to that given by the flexion of the limb, and to the actual shortening from subluxation. If this abnormal tilting of the pelvis is corrected, the practical shortening is diminished, and if this tilting of the pelvis is over-corrected, so that the pelvis is tilted in the direction opposite to its former position, a practical lengthening can be secured. The amount of this practical lengthening depends upon the amount of possible tilting of the pelvis in the corrected direction. This again is dependent upon the lateral flexibility of the spinal column. In adolescent cases, a practical lengthening of from 2 to 3 inches can be frequently secured in this way, which is frequently enough to overcome the shortening from subluxation and also from arrest of growth, unless this is unusually great.

The operation (if done without preliminary incision down to the bone) is practically a subcutaneous one, and the dressing required is small if proper aseptic precautions are observed. It is usually unnecessary to disturb the wound until several weeks after the operation.

In selecting the means of fixing the limb after osteotomy, the decision is influenced by the ease with which the correction has been obtained. Where there are few contractions of the soft part and the fractured limb can be placed easily in the desired position, it will be found most serviceable to place the patient in a plaster-of-paris spica, with the affected limb strongly abducted, if the previous adduction has been great. The sinking of the mattress at the buttock is usually sufficient to allow for a slight amount of flexion, which is ordinarily desirable. The advantages in a plaster-of-paris bandage consist in the fact that the patient is placed in a position which he cannot escape from. There is less danger of misplacement of the fragments in changing the patient's position. The disadvantages of plaster-of-paris bandages lie in the discomfort caused if imperfectly applied, and in the fact that the position of the limbs cannot be readily changed. Where complete correction is not possible, and it is desirable to stretch the contraction of the soft parts, a traction appliance can be used, the ordinary weight of the pulley being the most convenient.

The amount of abduction to be given the limb varies with the amount of practical lengthening desired. An

abduction of 45° will be found not excessive in cases of severe distortion, and will be of advantage in securing practical lengthening.

It is evident that where the limb is placed in an overcorrected position after severe deformity, it will be necessary to allow considerable time before expecting complete solidification, and under these conditions some retentive apparatus is advisable. Plaster-of-paris furnishes a suitable support for this purpose, but as a substitute a stiffened leather splint laced upon the trunk and thigh will answer. It is not safe ordinarily to allow the patient to bear weight upon the limb until 10 weeks after the operation, and in larger patients where the deformity is great 3 months of protection is preferred. Locomotion by aid of crutches should be permitted after 8 weeks.

It is evident that where the ossification is not rapid danger of relapse exists. This should be prevented by obliging the patient to wear retentive apparatus for a long period, even after locomotion with crutches is allowed. The amount of time that is necessary for retentive treatment depends upon conditions not easily defined, and is a matter of judgment.

It is desirable that the operation should not be done on too young or on rapidly-growing patients. The yielding character of growing bone, and its inability to resist deforming pressure in sitting and standing, may cause a recurrence of the deformity—a danger which does not exist in older patients. An unusual complication may be mentioned—namely, the coexistence of severe knock-knee, with severe adduction and the flexion of the thigh, following hip disease, requiring after the operation at the hip a second osteotomy at the knee, but with a successful result in the end.

In fine, the operation may be considered as most satisfactory to both patient and surgeon, correcting the deformity and diminishing a humiliating disability, with but little discomfort to the patient and no greater risk than that following a fracture. The demand upon the surgeon consists simply in the exercise of skill and judgment easily acquired.

THE HALLUCINATIONS OF DIGITALIS.—DOES DIGITALIS CAUSE HALLUCINATIONS, DELIRIUM OR INSANITY UNDER CERTAIN CONDITIONS?

BY

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The physiologic action and so-called cumulative effects of digitalis are subjects which have engaged the attention of many of our great medical writers from time to time. The fact that in the textbooks on therapeutics scarcely any mention whatever is made of hallucinations or delirium as physiologic effects of the administration of digitalis, even in toxic doses, would lead one to conclude that these effects were not attendant upon the use of that drug. Dr. Hare,¹ in speaking of the effect of digitalis on the nervous system, says:

"The action of digitalis upon the nervous system is only manifested when poisonous doses are used. Small toxic doses decrease reflex activity by stimulating Setschenow's reflex inhibitory centers in the medulla, and finally by depressing the spinal cord. Convulsions are sometimes seen as a result of the action of decomposition products of digitalis—namely, toxiresin and digitalresin. Finally, the motor nerve-trunks themselves are depressed and the muscles are paralyzed."

Dr. Butler² on the same subject says: "No effect is produced by medicinal doses of digitalis on the nervous system. Immoderate doses, however, occasion headache and vertigo, together with lessened reflex activity,

by stimulating Setschenow's inhibitory center, and depressing the motor nerves. The muscles themselves may be paralyzed, the sensory nerves being unaffected."

It is possible that only in rare instances has this effect been noticed or been attributed, if noticed, to the use of digitalis, and yet is it not also possible that where delirium or hallucinations have occurred in connection with the administration of digitalis, these symptoms have been attributed to the disease from which the patient was suffering, and not to the medicine prescribed? In other words, are the symptoms which manifest themselves during treatment always attributed to the right cause? May they not frequently arise from the medication employed and not from the disease?

Dr. E. G. Janeway,³ in his discussion of the valuable paper read by Dr. H. A. Hare before the Association of American Physicians, on the subject of the cumulative action of digitalis, used these words: "Do we always attribute sudden death, even when disease is present, to the right cause? I have had cases come to autopsy without finding a satisfactory cause of death, unless we investigated the medication as well as the disease with which the patient was afflicted. In certain cases where patients have dropped dead suddenly on going to the closet, it was ascertained that for some time these patients had taken large doses of digitalis. So that, failing to find a satisfactory explanation of the sudden death as a result of the conditions of disease present, we must ascribe it to the associated medication."

The nature of the disease for which digitalis is usually prescribed being one in which sudden death is likely to occur more or less frequently, it naturally would prevent the attending physician from looking elsewhere for the cause of death. Possibly if digitalis were the remedy usually prescribed for disease of some less vital organ than the heart, sudden death or unusual symptoms, such as delirium, occurring during its administration, might lead to closer investigation. It was in following out this line of reasoning that I was led to inquire as to the medication in the case referred to below.

If it were possible, it would be exceedingly interesting to have before us the clinical history of a large number of patients treated by digitalis in order that we might observe what proportion of them were, during the administration of the drug, subject to hallucinations or delirium. So far as I have observed, the French writers are the only ones who have called particular attention to the above symptoms as physiologic effects of repeated doses of digitalis. Trousscau has pointed out that full doses produce hallucinations, delirium, and a slow pulse of 32, and in this statement he is endorsed by Peter.⁴

But the one author who seems to have made a careful study of digitalis as a cause of delirium is Dr. P. Duroziez. In a lengthy article by him published in 1874, he gives a list of 20 cases in which delirium or death accompanied the administration of digitalis and, as he believed, was caused thereby.

Before giving a review of these cases reported by Duroziez, I may say that I was led into an examination of the physiologic effects of digitalis, in connection with and as a result of the illness and subsequent death of a friend who for several weeks prior to death was subject to strange hallucinations, which finally terminated in acute mania. The most expert neurologists who were called in consultation, among them the late Dr. Godding, were unable to explain the cause of the mental disturbance. The patient was a woman between 30 and 40 years of age, the mother of 4 living children. She was of robust build, and of a happy and cheerful disposition, unusually so, and had never had any serious illness. The sickness from which she was suffering on this occasion was attributed to some derangement of the liver, and she was treated for congestion. I am unable to speak with any degree of certainty of the earlier stages of her illness or symptoms, as I was not made acquainted with the

clinical history of the case. It ran along in the usual course for several weeks, and then it began to be reported that she was "out of her mind" at times. At these times she would have strange hallucinations. For example, she would say to the nurse, "I am now going to die," and then she would compose her limbs, close her eyes, and begin to breathe slowly and more slowly, and finally appear to cease breathing altogether, until the attendants would almost believe she had actually died. She would remain in this cataleptic state a short time, and then come to and report what she saw while "dead." Sometimes she would say she had been to heaven, at other times to hades, and would minutely describe the persons she saw there. She would frequently spring from the bed and attack the nurse and try to drive her from the room. These attacks gradually grew more frequent and violent, and after consultation with Dr. Godding and other neurologists, it was decided that she must be removed to an asylum, but before any move could be made she grew rapidly worse with acute mania, and soon died from exhaustion.

The whole course of her illness was so singular and unaccountable to those who had known her from childhood, that I was led to suspect that possibly some drug might lie at the bottom of her trouble. Her physician, a very dear friend of mine, and one of the best and most expert and honored practitioners, of large practice, was very much perplexed over the case. He had known his patient from infancy, and he was unable to attribute any cause for her singular mental disturbance. He called in experts in mental diseases to assist him in diagnosing the case, but they were unable to find any apparent cause for the strange hallucinations and violent delirium. She had not yet reached the climacteric, and none of her medical attendants, so far as I know, attempted to explain her peculiar mental condition by attributing it to uterine changes or disease.

Having, in the absence of other satisfactory explanation, entertained the suspicion that some drug might have produced the strange symptoms, I at once made inquiries as to her treatment, and was informed that several weeks prior to the onset of the mental disturbance, some heart complications had set in, and for some considerable time she had been taking digitalis daily. What the dose was, or how often administered, I was unable to learn. At that time, and until her condition became dangerous and alarming, no nurse had been employed, and the administration of the medicines was entrusted to her children, or whoever happened to be present at the time. Knowing something of the nature of digitalis, I concluded that it might be the offender, and at once began a research through the literature of the subject in the Library of the Surgeon General's office, with a view of ascertaining if any writers on the subject spoke of delirium or hallucination as physiologic effects of repeated doses of this drug. I examined hundreds of articles on the subject of the physiologic effects of digitalis, and of the bad effects of accumulated or toxic doses, but no one mentioned delirium as one of the effects of the drug until I came across the paper by Duroziez, "Du délire et du coma digitaliques,"* which confirmed me in my suspicion that in the case referred to above, the hallucinations and delirium were possibly the result of accumulated doses of digitalis. Of course I may be mistaken, but the fact that no satisfactory explanation of the mental derangement could be arrived at by her expert medical attendants, added to the fact that one at least of the learned writers on the subject had observed no less than 20 cases where delirium followed the administration of digitalis, it would naturally be supposed that I had some foundation for my suspicions. The very first sentence of Dr. Duroziez's paper is this: "Digitalis, does it produce delirium oftener than is supposed? We think so." He then goes on to say that "the delirium either passes unobserved or is attributed

to the disease. We believe, at least, that the question cannot be disposed of immediately, and that there is enough doubt to warrant a further study of the subject. Digitalis is not an indifferent drug. You must take account of its action. In the first cases which follow it was certainly to blame for the trouble. Error is impossible." The following cases are then given in detail:

CASE I.—An asthmatic patient, 72 years old. July 2, pulse 80-84, regular and fairly strong; feeble respiration; exaggerated vocal resonance; loud, sibilant râles. Gave alcoholic extract digitalis 5 gr. July 3, pulse 84, regular; gave alcoholic extract digitalis, 5 gr. July 4, pulse 84; gave extract digitalis, 5 gr. (30 centigr.) July 5, pulse 84, regular; gave extract digitalis, 5 gr. July 6, no digitalis given. July 7, pulse 80, regular; gave alcoholic extract digitalis, 40 centigr. July 8, pulse 80, regular; gave 40 centigr. alcoholic extract digitalis. July 9, pulse 88, regular, fluctuating and moderately strong, great pressure; delirium during night; no digitalis. July 11, pulse 80, regular, fairly strong; 40 centigr. of alcoholic extract of digitalis. July 12, pulse 84, regular, fairly strong; gave 40 centigr. digitalis. July 13, delirium during the night. July 14, pulse 84, vibrating, regular and strong. July 15, pulse 90, weaker, but regular; delirium during night. July 16, pulse 84; delirium during night. July 17, delirium ceased. July 24, pulse 84 and some colic. August 2, pulse regular and strong.

CASE II.—B., aged 65, entered hospital July 13, left August 31. Aortic insufficiency; abdominal and general dropsy. From July 19 to August 5, took 20 and 30 centigrams of powdered digitalis in infusion; sweats and faintness. August 5, in evening, pulse regular, fairly strong; had to sit up to breathe; very weak; no nausea; urinated frequently, but small quantity; gave alcoholic extract of digitalis, 30 centigrams. August 6, more agitated last night than at any other time; jumped out of bed crying "fire," but in the morning is calmer. Have stopped digitalis; in the evening, pulse 88 and regular; feels better. August 8, pulse 76, normal.

CASE III.—Age 71, entered hospital May 24, died August 20. Dilatation of aorta and mitral insufficiency; took 4 and 5 granules of digitalin and 30 centigrams of powdered digitalis during the month. On June 25 had been out of his head for 3 days; pulse 36 and dicrotic. Stopped the digitalis June 26; dry tongue and dicrotic pulse. June 28, mind does not wander so much; no more hallucinations, but he sees dead people standing about him; later on gave 30 and 40 centigrams of digitalis. He died 2 days after the medicine was stopped.

As it would take too much space to give the full details of the 20 cases, I will summarize them in the form of a table, giving merely the form of the drug, the dose, the length of time administered, and result:

No. of Case.	Form of Drug.	Dose.	No. of Doses.	Result.
1	Alcoholic ext. of digitalis.	30 to 40 centigr.	6 doses.	Delirium.
		40 "	2 "	" and death.
2	Alcoholic ext. of digitalis in susp.	20 to 30 "	18 "	"
3	Digitalin.	4 to 5 milligr.	1 month.	"
	Powder of dig.	30 centigr.	1 "	"
4	" "	30 to 40 centigr.	1 "	Death.
5	Dig. in maceration	20 "	42 days.	Delirium and death.
6	" "	1 gram.	4 "	"
7	" "	1 "	1 day.	"
8	" "	1 "	2 days.	Death.
9	" "	1 "	4 doses.	Hallucination.
10	Alcoholic tincture	1, 2, 3 and 4 grams.	20 "	Death.
11	" "	40 grams.	4 days.	Delirium.
12	Wine of Trousseau.	27 "	9 "	" and death.
13	Dig. in maceration	15, 50 and 60 centigr.	17 "	"
14	" " soup.	1 gr. and 1 gr., 50 "	4 "	Death.
15	" "	20, 40 and 60 "	3 "	Delirium and death.
16	" "	40, 60 and 30 "	3 "	" " "
17	" "	60 and 80 "	4 "	" " "
18	" "	1 gram; 1 gram.	1 "	Death.
19	" "	1 "	1 "	Sudden death.
20	" "	30, 40 and 50 centigr.	10 days.	Death.
21	" "	1 gram.	5 "	Delirium and death.
22	" "	15 and 20 centigr.	13 "	" " "
23	Digitalin & wine of Trousseau.	1 gram and 50 centigr.	1 "	Death.

In 3 cases of cirrhosis of the liver, digitalis caused delirium and death, and the author states that "digitalis is especially dangerous in albuminuria, in aortic insufficiency, in cirrhosis and in anemia. And if my interpretation is just, which I do not undertake to affirm, moderate doses of the drug have produced death."

I shall be amply repaid for the trouble I have taken in preparing this paper, and my object will have been

accomplished, if its publication may lead to a more careful observation of the symptoms, particularly of a mental or nervous character, attendant upon the administration for a protracted period, of this most valuable drug. If any members of the medical profession have observed in their practice symptoms of delirium or hallucination, however slight, in connection with or during the administration of digitalis, I shall be glad if they will make it known through the columns of your Journal. In fact, if all physicians who meet with idiosyncrasies in the use of any drug would make it known to the profession at large, the result would be beneficial.

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THE TREATMENT OF CONGENITAL DISLOCATION OF THE HIPJOINT.

BY

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Until within recent years a hopeless deformity, increasing with the age of the patient, and condemning her to the life of a cripple, congenital dislocation has now been stripped of most of its terrors, and yields to treatment as few other serious deformities do. The improvements in treatment are of recent date, and it is most important that the general practitioner should know what they are, for he is the one who sees the patient during the only time that complete recovery is possible. If he consult his textbooks he will probably make up his mind that little can be done,¹ but if he has had the opportunity to observe the results of proper treatment, it will seem highly reprehensible to allow these cases to go untreated.

I shall in this paper presuppose a thorough knowledge of the morbid anatomy of the deformity, and shall merely mention the important fact that we have to deal with an acetabulum that is often little more than a shallow indentation, and with a femur head that is more or less altered, depending on the age of the patient.

Three methods of treatment are before us: (1) The closed method, that is, without the aid of the knife; (2) the open method with slitting of the capsule and reposition of the head in the acetabulum; (3) the open method with opening of the capsule and deepening of the acetabulum. The first is generally known as the Lorenz method, and of the third the most ardent champion is probably Hoffa, of Würzburg. Of the 3 the best operation is the first, but it is applicable only to young children, and requires an accurate technic for its successful performance. Probably many of the adverse criticisms which have been made upon it are due to an ignorance of this fact. In the opinion of this or that operator some point seems unessential, and he ventures to introduce an "improvement" of his own, thereby upsetting the entire operation. Again, a difference in method may exist not from intention but from ignorance.

The Lorenz method, briefly, is: To put the head of the femur where it belongs and to keep it there in such a way that the weight of the body and the constant mus-

cular tension may press it into the socket. Lorenz calls it the Belastungsmethode, or "loading method." The first item is often quite easy of performance. Anyone who has ever tried the reduction under ether in a young child will bear out the truth of this statement. The crux of the treatment is keeping the head where it belongs and "loading" the body upon it. There are those who deny that this will deepen the acetabulum, and, until a sufficient number of cases be brought to the autopsy table, they cannot be proved wrong. We know that the dislocated head often makes for itself one or two shallow sockets on the dorsum of the ilium, and, reasoning from analogy, it would seem that the acetabulum should be deepened by the constant pressure of the head against it, though perhaps never reaching its normal size. However, those who have seen Lorenz's results are willing to leave theory to others and content themselves by adopting his methods. How convince a man that a thing is impracticable when he has seen it done?

In the first place, it is necessary to state that the age of the patient has an important bearing on this operation. In single luxation the chances are good up to 10 years, and then grow rapidly unfavorable. In double dislocation we cannot look for good results much after the seventh year. It is well not to attempt the operation in either case before the end of the second year.

No preparatory treatment is necessary in very young children, but, as we near the age limit, it becomes more advisable to subject the patient to a preliminary extension, or to a tenotomy or several of them followed by extension. No hard-and-fast rule can be laid down for these procedures. If the soft parts are yielding, and if by manipulation the head can be brought down to the region of the acetabulum, we may omit preliminary treatment.

The treatment of single dislocation in a young child, that is, a case in which reduction is comparatively easy, receives first attention. Two assistants are necessary besides the anesthetist, and one or two others are advisable if they can be procured. The first maneuver is the breaking down all resistance in the adductor group of muscles, and this is accomplished in two ways, *i. e.*, by forcible abduction intermittently applied, and by a species of massage with the ulnar border of the hand upon the adductors close to their insertion to the pelvis—a sawing motion, back and forth. Too much stress cannot be laid upon the thorough execution of these procedures, for on them depend, not only the comfort of the patient after the operation, but also in great measure the success of the operation itself. They are usually only half done.

The next step is the forcible extension, after the perineum has been well protected from harm. One assistant grasps the leg, and 2 others prepare to make counter-extension, one with his hands on the perineum, the other steadying the trunk. Traction is then rhythmically done, and often the hand of the surgeon, held during this maneuver upon the trochanter, feels the head slip in and out of the socket.

Having overcome the resistance of the extensors the operator turns his attention to replacing the head over the posterior border of the acetabulum. Grasping the thigh, flexed at right angles to the trunk and rotated slightly inward, just above the knee, with one hand (the left leg with the right hand, let us say for example), and placing the thumb of the other hand upon the trochanter, the fingers on the vulva, the surgeon makes strong traction with the right hand in the direction of the thigh, that is, at right angles to the body, at the same time abducting the thigh forcibly and pressing the trochanter inward with the left thumb. This is repeated until the reduction takes place, as it usually will in a young child with decided, palpable shock as the head slips in.

Should this not succeed, we place a cushioned wedge under the trochanter, and, with the pelvis held firmly in place by an assistant, we slowly and forcibly abduct

¹ "Of the reduction of such a dislocation, in the usual sense of the term, there can, of course, be no question [*sic*] for the normal structure of the joint does not exist, and the most that can be attained is to diminish the deformity and functional disability."—American Textbook of Surgery 1899. "A number of different methods of treatment have been recommended, but none of them have been entirely satisfactory."—Morris, Orthopedic Surgery, 1898. Other authorities give various opinions, some favoring operation, some discountenancing it.

the thigh flexed at right angles to the body. This abduction, applied intermittently, is carried just beyond the plane of the body, and, in order to avoid fracture of the neck, the greatest care is requisite in its execution. It is not as satisfactory a way of reduction as the first, because not nearly as safe; but often, in children over 4 years of age, it is the only practicable method. If this also fails we may try forcible abduction of the extremely flexed thigh, also on the cushioned wedge. If again we do not succeed, we must have recourse to the knife, of which more later.

Let us suppose that in one of these ways the head has been replaced. In traumatic dislocation our work would then be about ended. Not so in congenital luxation; this is merely the beginning. The next problem which confronts us is to keep the head where it belongs, and we do this first by repeatedly pressing the head of the femur into the acetabulum, the thigh being in extreme abduction, accompanying this motion by an outward rotation—a boring motion repeated again and again. We shall probably find then that we have in this way increased the stability of the joint, and that it will not be so easily relaxed when brought to the most unfavorable position, namely, flexion and adduction.

The position in which we shall now put up the limb will be that in which relaxation backward is least apt to occur, and that will be, in the ordinary case, where the stability is not exceptionally great, extreme abduction carried slightly behind the plane of the body. It will be retained there by a plaster-of-paris spica, and if we are wise we will apply this spica as Lorenz directs. The writer has seen many spicas, but until he saw Lorenz apply one he never knew what a spica should be. The main points are these: It reaches from just above the iliac crests to just above the knee. It is snugly molded on the crests and allows free motion in the knee. It is applied over a carefully-made padding, under which is a layer of shirting, and inside this again are 1 or 2 strips of bandage with which to scratch the skin during the long time the spica will be on. The bridge across the pubes is narrow—about 3 inches—but very thick—about 1 inch. The finger is inserted under the plaster after it has been trimmed out, and the edges bent slightly out over the spines of the ilia, in order to avoid undue pressure. The child is then put to bed, and the first stage of the treatment is over.

During the next few days the child may be more or less restless, and may have some pain, but except perhaps to bandage the leg if edema exists, nothing need probably be done. After this period the patient should be encouraged to go about and use the leg. It is astonishing to see with what success this will soon be done. Children learn to walk, and even to hop and move rapidly about. At first the leg is held in flexion, and any extension is resisted as painful. By persistence the patient learns to extend it, except in rare instances of paralysis of the anterior crural nerve; and, in case of her refusal to make the necessary effort, the surgeon must himself do passive motion as gently and as slowly as possible. In this way alone can succeeding contractures be avoided. The sole of the shoe on the affected side should be raised 2 or 3 inches.

Thus encased, the little patient spends the necessary 4 or 5 months of the first plaster spica quite comfortably. She may be taken home, and only one thing is required from the parents, namely, the most scrupulous cleanliness. If the spica has been properly applied, excoriations are hardly to be expected, but if they do occur, the plaster may be slit up a little and pressure in this way relieved.

At the end of this first period of fixation, which varies in duration, inversely as the stability of the primary reduction, between 3 and 6 months, the plaster is removed and the skin carefully cleansed.

Now comes a procedure in which the greatest skill is necessary, the correction of the extreme posture and the

securing of one characterized by moderate abduction and slight flexion. The danger of a relaxation backward is small, but of one forward and upward, very real. No force is to be used. The patient should herself make as much of the correction as she can, and should be assisted very gently by the hand of the operator. Another spica, similar to the first is then applied. It will be found that with this the raised sole on the affected side will not need be as high as with the first, or may not be needed at all. Indeed, if the abduction has been pretty well corrected, the tilting of the pelvis and consequent apparent lengthening of that leg will necessitate a raised sole on the sound side.

With this spica the child is even more at ease than with the first. It should usually be left on 5 or 6 months, or 1 or 2 months longer than the first. After it has been removed the joint is treated by massage and active and passive movements, especial care being given to secure good abduction and extension. The foot at first will be in extreme outward rotation, but this will, to a great extent, disappear, and in the meantime the deformity is usually compensated by a rotation of the pelvis, a pushing forward of the affected side.

This is in brief, the Lorenz method for single dislocation. In double luxation the joints may be replaced at the same time or separately, and the technic in either case is so similar to that of single dislocation that it needs no separate description.

In case of failure with the bloodless method our next choice is the open operation with slitting of the capsule. This will be necessary not only in those cases which have passed the age limit for the bloodless operation, but also in some cases within the limit where contraction of the capsule presents an insuperable obstacle to reduction by this method.

This operation is performed by various operators in somewhat different ways. Perhaps the best is the following: The thigh must first be so loosened in respect to the pelvis that the head of the femur can be brought down to the level of the acetabulum or near to it. Some operators say that the long muscles resist this, and cut their tendons, others cut those of the short ones, but it will probably be necessary to divide the adductors. These tenotomies may be done some weeks before the operation and be followed by systematic daily extension in bed. Sometimes prolonged extension will be sufficient, and the tenotomies may be omitted. At the time of the operation a final thorough extension may be done with a sheet on the perineum.

The incision may be from the anterior superior spine downward and backward along the outer border of the tensor vaginae femoris (Lorenz), or from the trochanter directly downward (Hoffa). It is continued down to the capsule, and care is exercised to avoid cutting muscular tissue, by retracting the tensor vaginae femoris and the gluteus. If the iliopsoas lies upon the front of the capsule it also is drawn aside. The capsule is then slit longitudinally, and the finger of the operator in this opening feels for any constricting bands. These must be cut, and forcible traction on the limb by one or two assistants is then begun, counterextension being afforded by a sheet over the perineum. As traction is thus made, the pelvis tilts down on the affected side, and so the limb is brought into extension and abduction. As the head nears the acetabulum other tense bands of the capsule will be felt and must be divided, the finger being all this time kept in the wound, and the traction being intermitted in order to guard against injury to the perineum. The head should finally slip in with a snap, and often may be helped over the ridge of the acetabulum by the pressure of the other hand of the operator, exerted on the trochanter. Instead of dividing the constricted portions of the capsule, Whitman inserts a dilator and stretches them.

The wound is then closed or left with drainage, according to the operator's confidence in his asepsis, and

the limb is put up in plaster in extension, moderate abduction and marked inward rotation. This last element in the attitude is secured by including the slightly flexed knee in the spica; that is, by running the plaster to the ankle.

The after treatment is similar to that of the closed method, but less care need be taken in returning the limb to the "indifferent" or normal attitude, for the position in which it is put up is much nearer it.

If the surgeon is not convinced of the stability of his reposition, he has recourse to the third method. This differs from the preceding in that after the capsule has been opened, the acetabulum is deepened by means of a scoop. Inasmuch as considerable oozing is to be expected, provision must be made for drainage. The great disadvantage of this method is that it requires long, persistent, and very tedious after-treatment. Passive motion must be practised daily in order to prevent ankylosis in a flexed and adducted posture. If this deformity occur, the last state of the patient is perhaps worse than the first. Gentleness must be combined with force in every manipulation, and, in addition to the passive abduction and extension done by the surgeon, the child should be encouraged to practise these motions voluntarily. Massage will also be of assistance.

Such are in brief the 3 operations. None of them presents anything startling, and all of them are based on sound common sense. Everything is to be gained, and little can be lost. It is a curious fact, already pointed out by Lorenz, that these patients are, as a rule, unusually beautiful and attractive children. The sex is, in the great majority of cases, female. What the untreated deformity means to them need not be emphasized.

PREVENTION OF DISEASE INFECTION BY MICRO-ORGANISMS THROUGH THE MOUTH AND NASAL CAVITIES.¹

BY

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The study of the life-history of microorganisms has thrown great light on the causes of many of our infective diseases and their proper treatment; many of them are composed of small particles of germinal matter, or protoplasm, without either the nuclei, cell walls, or cell contents, that are found in what are ordinarily known as cells, in living organisms. Before our eyes and on the stages of our microscopes, we can study them to our heart's content. We can watch them multiply either by the development of ova (or eggs), by gemination (or budding), by fission (or division), or by the production of alternate or successive generations.

The first question to be answered concerning these microscopic organisms is the natural query: Whence came they? To this question we can give no answer.

Just as impassable as it was before the invention of the microscope, is the yawning gulf that divides living protoplasm from dead matter. We can start on our argument today with the axiom, *Omne vivum ex ova* (every living thing comes out of an egg), with just as much assurance of its truth as when it was first enunciated by the great philosopher. Yea, even more so, for time and increased knowledge have only accumulated evidence of its truth.

When the biologist of today makes a pure culture of a living organism, and places it with the proper precautions, in a pure medium or soil fitted for its growth, he invariably finds, and expects to find, the same organism growing under his eyes, or on the stage

of his microscope. He no more finds, or expects to find, a different organism resulting than a horticulturist would expect to find grapes growing upon an apple tree, or thistles upon a plum tree. In regard to the theory of spontaneous generation, or the spontaneous formation of living organisms, from dead matter, it is only necessary here to say, that it is almost universally abandoned by all biologists of any eminence. This theory has been destroyed by the labors and investigations of many scientists, more especially by the elaborate and long-continued experiments of Professor Tyndall, of England, Professor Pasteur, and others.

The life-history of microorganisms when considered with regard to their rapidity of multiplication, presents an interesting field of study. It is very probable, and indeed very certain, that the study of a bacterium and its progeny for a few days gives us a series of generations more numerous than have existed among the higher classes of animals since the earth was fitted for their habitation. The rapidity of the growth and multiplication of bacteria is as far beyond the capacity of the human mind to conceive as it is to attempt to measure the distances of the stars in the heavens or to count their numbers.

Professor Buckner, of Germany, states that the time usually required for one microbe or germ to become two, by the process of division, is 15 minutes. At this rate it is computed that a single microbe would produce in 24 hours a million times the present human population of the earth. Professor Law estimates that a single bacterium dividing and redividing would produce in 48 hours, if undisturbed, 281,900,000,000, which in bulk would fill a half-pint measure,—all produced in 2 days from a single germ measuring the $\frac{1}{1500000}$ part of an inch.

Pathologic bacilli are just as numerous when found, and divide as rapidly. Professor Böllinger states that a cubic centimeter (about $\frac{1}{4}$ of a fluid dram) of tuberculous sputum (from a case of pulmonary tuberculosis) contains from 810,000 to 960,000 tubercle bacilli.

In an ordinarily copious expectoration the tuberculous patient deposits nearly 1,000,000 bacilli into his cup, and on an average in one day he throws 30,000,000 or 40,000,000 of these microorganisms into the world. Thus at a low estimate, 10,000 tuberculous patients now living in New York City, daily expectorate some 300,000,000,000 tubercle bacilli.

The bacilli which cause diseases therefore exist in every breath of air we draw, in the articles of food we consume, and in much of the water we drink. Uncounted myriads of them are to be found in the digestive apparatus of persons who seem to be in all respects perfectly healthy. How then do we escape the attacks continually made upon us by these destructive bacilli and bacteria?

It must be perfectly apparent that the fluids or tissues of the body must have the power to destroy and render inert these poisonous microorganisms; otherwise none of us could live. Where does this power reside? Metchnikoff thought he had discovered where when he elaborated the doctrine of phagocytosis, or the destruction of bacteria and other microorganisms by the leukocytes or white corpuscles of the blood. Nutall, Buckner, Lubarsch, and in this country, T. Mitchell Pruden and many others, have shown conclusively, however, that the power of destroying the bacteria, etc., resides not only in the leukocytes, but in the blood serum. This preservative power of blood serum explains why it is that the human body is able to resist the destructive action of the innumerable poisonous microorganisms which continually surround us. There exists, however, two conditions which have a most powerful effect in increasing or diminishing the power of the blood serum to destroy these poisonous microorganisms. The first of these here to be mentioned is the high or low condition of the health of the individual at the time of receiving the infection. If the individual is in a high state of health, his blood serum is then capable of destroying an

¹ Read before the Medical Society, Washington, D.C., April 17, 1901.

immense number of these pathogenic organisms, and he is thus rendered immune to the disease.

Any condition, however, which impoverishes the condition of the blood and tissues of the body, impairs this protective power. Thus anemia or any malnutrition existing in children from improper diet or bad hygiene, renders them an easy prey to the onset of infecting microorganisms.

The indiscriminate and too abundant use of candies and cakes by children cannot be too greatly deprecated. We all know that pure sugar, moderately used, is not only harmless but wholesome as an article of food. But when mixed with injurious and sometimes poisonous coloring matters, such as are found in colored candies, its use should be absolutely prohibited to children. The admixture of glucose with the sugar used in candies is also indirectly an element of danger on account of the possibility of its producing arsenic poisoning. Of course no arsenic is ever intentionally mixed with glucose, but it has been found to exist as an impurity in the sulphuric acid which has been employed in the manufacture of glucose.

Probably all of our readers are aware of the large number of deaths which have lately occurred in England, and which have been found to be cases of undoubted arsenic poisoning, due to the contamination of the glucose used in that country in the manufacture of beer.

Pure sugar is perfectly harmless to the teeth of children, but when given to them in the form of candies it produces an acid condition of the fluids of the mouth which rapidly produces decay of the teeth. A mouth filled with decayed teeth is always in a septic condition. These septic fluids of the mouth have not only lost their bactericidal power, but are continually being swallowed and passed into the stomach and aid in infecting the stomach and intestinal canal. Many cases of chronic dyspepsia and gastrointestinal catarrh are due to the chronic infective condition of these organs thus produced.

All of us are familiar with the horrible odor of the breath of persons who have a mouth full of decayed teeth. These persons come to us suffering from aggravated forms of dyspepsia or gastrointestinal catarrh. We often cure them not so much by medication as by sending them to seek the aid of a dentist. After the dentist has extracted the roots and furnished properly fitting teeth, the cure of the patient is generally credited to the improvement in his mastication. It is not so much due, however, to that cause as it is to the destroying of the flow of microorganisms which have been poisoning the stomach and intestinal canal.

The second condition which greatly influences the fatality of every infectious disease due to the presence of poisonous microorganisms, is that the deadly effects produced depend upon the number and kind of bacilli introduced into the body at the time of receiving the infection. Experiments upon animals with many varieties of poisonous bacilli show a very close analogy to the phenomena produced by other poisons; such, for instance, as opium, etc. If the dose of the poisonous bacilli is large, the animal dies; if it is small, his blood serum may destroy this limited number, and he may recover. How, then, can we diminish the number of these bacilli in our patient and thus prevent him taking into his system a deadly dose of these poisonous germs? It becomes, then, self-evident that if we wish to minimize the danger of infection, the first thing to be done is to procure and preserve a healthy condition of the mouth and nasal cavities, through which these germs enter the body. It should be remembered that this bactericidal property (or power of destroying poisonous microorganisms) is only found in the fluids of the body when healthy. For instance, it has been shown by Wurtz, Lemoyez and others that a large number of microorganisms are found at the external orifice of the nose, and are entangled and retained by the vibrissae (or the thick hairs which line the nostrils). Farther up the nostrils

the number diminishes, and in the upper part of the nasal cavities they are entirely absent, for the healthy nasal mucus is sterile and does not contain any microorganisms. If, however, we have any acute or chronic inflammation of the nasal cavities, whether due to catarrh or the presence of polypi, adenoid tumors, or other morbid growths, this power of destroying microorganisms possessed by the nasal mucus is lost, and the system is left in a condition which renders it an easy prey to the attacking organisms.

This fact is a weighty argument to be added to the long list that might be adduced in favor of breathing through the nose. Mouth breathing in fact is always a symptom of disease, and shows that there is in the nasal passages some obstruction to the free entrance of air into the lungs. One of the most frequent causes of mouth breathing is chronic enlargement of the tonsils. When these are enlarged it shows that they are diseased, their protective power has been destroyed, and their crypts and follicles afford resting places for the lodgment of pathogenic bacteria, and bacilli, and the distribution of their poisonous products of the system.

Chronic enlargement of the tonsils therefore requires prompt and thorough treatment, and in most cases demands their removal. Another evil effect of this condition is the imperfect development of the chest, which is produced by their interference with the process of respiration. Patients afflicted with enlarged tonsils are compelled during sleep to breathe with their mouths open. This produces unhealthy dryness of the mouth, favors the entrance of infecting microorganisms, and produces a nasal snuffling tone of voice, which is quite characteristic.

Adenoid and polynoid growths in the posterior nasal spaces, and pharynx, also produce the same effects and should always be promptly removed. The epithelial cells of the mouth, the saliva and fluids of the mouth, also possess bactericidal power, though in a much less degree than the nasal mucus. In regard to the proper method of keeping the mouth and nasal cavities in a clean and sanitary condition, it is scarcely necessary to dwell here at length.

The use of the tooth brush and cleansing the teeth with some mildly antiseptic solution three times a day should be enjoined upon our patients. If they object to this, urge them to cleanse them at least twice a day, in the morning and before going to bed. It seems scarcely necessary here to give formulas for this purpose, but a dilute solution containing glycerol of carbolic acid, listerin, or camphophenique will do what is required. For a tooth powder there is nothing so good as precipitated chalk, which moreover is perfectly harmless and cannot injure the teeth as some of the more active tooth powders do.

It is the opinion of many eminent men of our profession that the regular and systematic cleansing of the teeth of children with some mild antiseptic solution or dentifrice, would not only prevent decay of the teeth but would greatly diminish the number of cases of scarlet fever, diphtheria, measles, tuberculosis, typhoid fever, and in fact all the other infective diseases which kill so many of our children every year.

Dr. Jacobi¹ in a paper read before the New York Academy of Medicine says: "The bronchopneumonia of children is often caused by *Bacterium coli communis*, which has been conveyed to the mouth from soiled and dirty fingers. He says further that if the respiratory organs are healthy there is no ill effect produced, but if catarrh of the respiratory passage exists, then the bronchopneumonia (which is so fatal to young children) is developed."

Dr. William Hunter² says: "The condition of the mouth associated with the presence of decayed teeth and rotten fangs, is one of profound sepsis or poisoning, differing from ordinary sepsis in that all the pus organisms are continually being swallowed. It is also a sepsis con-

nected with diseased bone. The gastric juice has fortunately a great capacity for killing poisonous microorganisms, but this capacity is not complete in the intervals between the taking of food. It should be remembered that when the stomach is empty, little or no gastric juice is secreted, and hence the bactericidal power of the stomach, which chiefly lies in the gastric juice, is for the time almost entirely lost."

Cases of gastric catarrh are liable to become septic catarrh; septic absorption from the decayed teeth and gums must be considerable, and there is also the danger of infecting the tonsils, with the consequent farther danger of tonsillitic, pharyngeal and eustachian tubes infection. The treatment Dr. Hunter recommends³ in these cases consists in the removal of all diseased stumps and roots, or if that be not possible, in the direct application to each diseased tooth of carbolic acid, 1 in 20, or 1 in 40, rubbed in by means of a camel's hair-brush, or a piece of cotton wool. In the *New Surgery*, 1897, edited by Dr. Roswell Park, we find on page 312, the following, of interest to the dental surgeon: "The study of the bacteria of the mouth is of great interest to the surgeon. The relationship between mouth bacteria and local lesions of the teeth and jaws and mucous membranes, of secondary gastric disturbances and the study of the mouth as a first point of infection for both local and general diseases, is a wide subject. Suffice it to say, that, normally, the mouth contains scores of varieties of bacteria—saprophytic usually, but including also common pathogenic forms, which may be found as normal inhabitants of the mouth without injury to the individual—but if the vitality of the tissues is lowered to a sufficient degree, these pathogenic germs may find a favorable breeding-ground for the production of disease. The mouth furnishes a point of infection for most pathogenic germs, *e. g.*, those of diphtheria, erysipelas, actinomycosis, the oidium albicans of thrush, tubercle bacillus, and the virus of syphilis."

To those who are interested in this subject we would refer them to the investigations of Professor Vicentini, translated and published in the *International Journal of Microscopy*, April, 1894, and running through several numbers; he gives plates showing 54 different species of bacteria he found in the human mouth; an article by Dr. Arthur D. Hugenschmidt,⁴ entitled "Experimental Study of the Different Modes of Protection of the Oral Cavity against Pathogenic Bacteria"; a paper by Dr. G. V. I. Brown,⁵ entitled, "Disinfection of the Mouth a Potent Factor in the Treatment of La Grippe"; and a very exhaustive article by Dr. J. Leon Williams, entitled, "A Contribution to the Bacteriology of the Human Mouth."⁶

But it is needless further to multiply quotations from authors on this subject. In recapitulation, I only wish to say that I share in the opinion expressed by others: that if we preserve and maintain by good hygiene the health of our children, and keep their mouths and nasal cavities healthy and aseptic, the lives of many thousand now sacrificed through bad hygiene, would be saved to bless and adorn our homes.

BIBLIOGRAPHY.

- ¹ Medical News, November 18, 1900.
- ² Practitioner, December, 1900.
- ³ Dental Cosmos, December, 1897; page 1037.
- ⁴ Dental Cosmos, October, 1896; page 707.
- ⁵ Dental Cosmos, September, 1896; page 739.
- ⁶ Dental Cosmos, April, 1899; page 317.

College of Physicians and Surgeons, Baltimore.—Dr. William Royal Stekes, city bacteriologist, has been elected a member of the faculty and has been given the chair of pathology.

Practised Without License.—John A. Taff and Chalmers Prentice, of Washington, were arrested recently for practising medicine without a license. Prentice claims to be a specialist in nervous diseases and has been in the city 3 months. Taff claims to be a specialist in women's diseases.

PRACTICAL THERAPEUTICS

Under the charge of

A. A. STEVENS,

Assisted by

L. F. APPELMAN.

Treatment of Acute Rheumatism by Aspiration.—Zagato (*Gazz. degli Osped.*, February 10, 1901), reports the case of a young man suffering from acute rheumatism of the right knee and foot in which the usual treatment failed to relieve the intense pain. On the tenth day, the knee being extremely swollen, instead of giving an hypodermic injection of morphin as was his first intention, the author introduced the needle several times into the joint, withdrew in all about 60 cc. of clear, olive-colored fluid. A 2% solution of carbolic acid was then injected. Pain ceased at once, and in 3 or 4 days the patient could move the knee freely, and without pain. A few days later the left knee became affected, and the same treatment was repeated with similar good results. No bad results followed the aspiration.

Treatment of Paralysis Agitans by Systematic Exercise.—J. M. Taylor (*Journal of Nervous and Mental Diseases*, March, 1901), suggests a plan of treatment intended to counteract the rigidity and impairment of movement. His treatment consisted in regulated exercises for the muscles, beginning with massage and passive movements. The muscles least used (those of the neck, hips and back) showed in one patient, an artist of sedentary life, a tendency to contracture, and felt dense and hard, while the overlying skin was dense and dry. Treatment consisted at first of passive movements and massage of the skin with oil inunction; passive movements of the limbs, back, neck, and jaws were practised to overcome the tendency to contracture; a special and graduated system of voluntary extensor movements followed, namely, extending spine after stooping, stretching out of the arms and legs to the greatest extent, and deep breathing to overcome the rigidity of the chest; suspension, as in tabes, was a valuable adjuvant to these exercises; the tissues became more elastic, "tinglings and burnings" were felt in these parts as though they "went to sleep," and it was necessary to practise deep massage to overcome the agony thus caused. This was absent when contracture was slight or absent. A severe frontal headache was usually present during and for a time after the exercise; this, some weeks after, gave place to a pleasurable sensation, and later, the patient experienced a "glow of satisfaction during and after the movements." It is important to continue the exercises daily after improvement is established, the most important movements to overcome the tremor being slow, full, forcible expansions and the attainment of normal attitudes. Full thoracic capacity should be developed by deep breathing exercises. Several cases are reported in which marked improvement followed this system of treatment.

Safe Administration of Anesthetics.—Luke (*Scottish Medical and Surgical Journal*, May, 1901) writes as follows: There is as yet no perfect anesthetic. There is no absolutely safe anesthetic. Deaths from anesthetics are most frequent in operations for trivial cases, when the administrator is liable to be off his guard, and the friends are certainly least prepared. So-called deaths from anesthetics really fall into certain groups: (a) Deaths due to the anesthetic which has been carefully administered. (b) Deaths due to the anesthetic which has been carelessly, often hurriedly administered. (c) Deaths due not so much to the anesthetic as to some disease present in the patient, or, more rarely, to his mental condition. Two golden rules should be remembered: (1) While enough of the anesthetic should be given to insure complete insensibility before the surgeon commences, and while he is operating; (2) care should be taken that the patient has no more of the anesthetic than is absolutely needed. While neglect of the first rule causes great inconvenience and waste of time, neglect of the second is sometimes responsible for loss of life, and more often for prolonged vomiting and malaise, which often interferes with the after-treatment.

Eucain in Spinal Analgesia.—Jedlicka (*Die Therapie der Gegenwart*, April, 1901) states that he had tried cocainization of the spinal cord in 7 cases, and has had unpleasant experience with the drug. He therefore replaced it with eucain (alpha eucain hydrochlorate). This he employed in 93 cases of laparotomies of various kinds, operations on the lower extremities, perineum and scrotum, and in various gynecologic operations with excellent results. He believes that this method of inducing analgesia is of inestimable value in patients suffering from heart and lung disease to whom ordinary narcosis would be extremely dangerous.

The Treatment of Pneumonia.—J. K. Crook (*Boston Medical and Surgical Journal*, February 14, 1901) states that not a single dose of medicine should be given simply because pneumonia is present; the indications should be watched for sweat. The old-time poultice is being relegated to a well-deserved oblivion, and the use of icebags and sponge-baths is happily becoming almost universal. The author favors the use of opiates, not as a routine measure, but discriminately, to meet such indications as obstinate insomnia, intense nervous excitement or delirium. The same is true of alcohol. While it is usually indicated in chronic alcoholics and in old people, it is rarely required in others if the pulse-rate keeps below 110. Digitalis is losing favor and caffeine is becoming more popular, while strychnin is generally admitted to be the most useful heart tonic in this disease. The serum treatment, the author believes, has not made much progress, the chief difficulty being the inability to prepare an antitoxin of uniform and staple quality.

Neuralgia.—S. Solis Cohen (*Merck's Archives*, May, 1901) states that the following formula is very useful in intercostal neuralgia and neuralgic headache:

℞
 Oil of gaultheria } of each 15 minims
 Guaiacol }
 Menthol } 10 grains
 Wool-fat }
 Cerate } of each 2 drams.

Sig.—Dispense in a tin tube. A small quantity (about the size of a pea) to be well rubbed in over seat of pain, night and morning.

Tetranitrol.—Huchard (*Bull. de l'Acad. de Med.*, No. lxxv, 1901) has used tetranitrol as a vasodilator in 120 patients, and has found it free from the unpleasant effects of nitroglycerin—headache, throbbing of temporals, etc. He also holds that it does not affect the hemoglobin like other nitrates. It has the great advantage of mild prolonged action. Its action is manifest in from 15 minutes to ¼ of an hour, and if continued in from 1 to 2 grain doses, 4 or 5 times a day, it keeps the vessels in a state of reduced tension. It is indicated when there is increased arterial tension, as in arteriosclerosis, in coronary angina, in dilation of the heart from peripheral vascular constriction, in uricacid dyscrasia, in tabetic crises, and in interstitial nephritis.

Clinical Observations on Protargol. Reichmann (*Medicine*, May, 1901) gives a review of the literature upon the use of protargol in gonorrhoea, and cites 16 cases in private practice which demonstrate the value of the drug. Treatment in each case was begun with a ½% watery solution, which was injected 4 times daily for 3 days. The fluid was retained in the urethra for 5 minutes at the morning, noon and afternoon injections, while in the evenings 2 successive injections were to be taken, and each retained 10 minutes. At the end of 3 days a 1% solution was ordered, to be used once a day, provided the microscope revealed no gonococci. In 15 cases the gonococci disappeared entirely in from 3 to 9 days; nevertheless, 1 daily injection of a 1% solution was continued for 2 weeks. In 1 case the author was compelled to stop the treatment on account of the occurrence of complications; but even in this case protargol finally gave satisfactory results, though the treatment had to be continued for a longer time.

The Physiologic Relation of Scopolia Carniolica to Atropa Belladonna.—H. C. Wood, Jr. (*Therapeutic Gazette*, April 15, 1901), after a comparative study of these drugs, concludes that scopolia carniolica in its physiologic action so closely resembles atropa belladonna as to be practically indistinguishable. Like belladonna, scopolia raises the blood-pressure, paralyzes the pneumogastric nerve, is primarily a stimulant of the respiratory center and in fatal dose kills by asphyxia. In the frog it is a paralyzant to the spinal cord and to Setchenow's center, and when brought in direct contact with a motor nerve, lessens its function. The dominant alkaloids of the 2 plants, however, are probably not identical, since we find the scopolia apparently a little more depressant to the spinal cord, and distinctly more toxic.

The Blood-pressure-raising Principle of the Suprarenal Glands.—Takamine (*Therapeutic Gazette*, April 15, 1901) gives a preliminary report of an active principle which he has isolated from the suprarenal glands, termed "adrenalin." This is a light, white, microcrystalline substance showing a slightly alkaline reaction on moistened litmus paper. It is with difficulty soluble in cold water, and more readily in hot water. From the hot, saturated aqueous solution the crystals separate after cooling. The colorless aqueous solution of adrenalin is easily oxydized by contact with the air, its color changing from pink to red, and eventually to brown. Adrenalin is very soluble in acids, and forms salts which are crystallizable with difficulty. The author has made 3 kinds of salts—hydrochlorates, sulfates and benzoates. The physiologic activity of adrenalin is exceedingly powerful. A fraction of 1 drop of a 1 to 10,000 aqueous solution of adrenalin or its salt blanches the normal conjunctiva within 30 to 60 seconds. When given intravenously the drug exerts a powerful influence upon the general muscular system, but especially upon the muscular walls of the heart and bloodvessels, resulting in an enormous rise of blood-pressure. A comparative test of strength of the adrenalin with that of the fresh extract of suprarenal gland shows that adrenalin is 625 times stronger than suprarenal extract. The sample of adrenalin used for this experiment contained some mineral impurities, so that pure adrenalin would be over 1,000 times stronger than an extract of the fresh gland. When locally applied, adrenalin is the most powerful astringent and hemostatic known. It is nonirritating, nonpoisonous, noncumulative and has no injurious properties. It may be used in all forms of inflammations, in nasal hemorrhage, hay fever, asthma, diseases of the heart, diseases of the nose and throat and many other conditions with excellent results.

Gastric Ulcer.—Sir Lauder Brunton (*The Medical Press*, May 1, 1901) states that in a large number of cases of gastric ulcer the pain can be stopped almost to a certainty by the administration of sodium bicarbonate, provided the drug be given in sufficient dose. The author's plan is to dissolve a teaspoonful of soda, the patient to sip the solution teaspoonful by teaspoonful until the pain is gone. The best way to dissolve the soda is not to add it to water, but to lime water, flavoring with a little spirit of mint. The reason assigned for using lime water is that the bicarbonate of sodium in plain water might possibly soften the tissues to too great a degree, and thus predispose to hemorrhage. A case is reported in which this apparently occurred. To lessen the constipation caused by the lime, fluid magnesia may be given along with the bicarbonate of sodium. An alternative formula to the above is:

℞
 Spirit of peppermint 1½ drams.
 Prepared chalk ½ dram.
 Light magnesia carbonate 1 dram.
 Sodium bicarbonate 1 dram.

A teaspoonful of this preparation should be stirred up in half a tumbler of water or more and slowly sipped, a teaspoonful at a time until the pain is relieved.

Intraarachidian Injection of Cocain.—At a recent meeting of the Academy of Medicine (Paris) Tuffier (*Medical Press*, May 1, 1901) said that, having up to the present time operated

on 400 patients after practising the cocain injections, he considered it necessary to say a word on his *modus operandi*. As to the instrument, a needle should be used and not a trocar; the extremity should be but slightly beveled so that none of the liquid should escape outside the medulla. The solution he employed was 1 in 50. The consequences of that method of producing anesthesia were never in his hands such as to discourage the operator. He had never had an accident during the operation, and of the 5 deaths, postoperandum, reported, none of them could be directly traceable to the cocain.

Treatment of Pulmonary Tuberculosis in Children by Muscle-Serum.—Josias and Roux (*Bulletin General de Therapeutique*, February 23, 1901), report that the administration of raw meat juice in the treatment of tuberculosis in children is attended with good results, even in the most advanced cases, although the best results are obtained when the malady is still in its early stage. Administered in one case of intestinal tuberculosis, with severe diarrhoea, the improvement was very great; the diarrhoea ceased, the weight increased and the tubercular process in the lung became quiescent. The juice should be freshly prepared, and in summer it should be placed on ice when not wanted for immediate use. The authors administer on an average 1 pint a day.

The Aperient Action of Persulphate and of Metaranadate of Soda.—Robin (*Bulletin General de Therapeutique*, February 8, 1901), finds that the persulphate of soda is an excellent aperient, it having given good results in half the cases in which it was employed. The author uses it in a solution of 30 grains of persulphate in 10 ounces of water, of which a tablespoonful is given twice a day before the chief meals. Good results have been obtained in cancer of the stomach, in hyperacidity of the stomach and in simple or tuberculous dyspepsia. The metaranadate of soda is used in the same conditions in the dose of $\frac{1}{16}$ of a grain taken one-half hour before the 2 chief meals. The administration is not continued for more than 4 days consecutively.

The Prevention of Nausea and Vomiting during Anesthesia.—Hirschman (*New York Medical Journal*, December 15, 1900) recommends that chlorotone be given to patients $\frac{1}{2}$ hour before anesthetization, in doses of 10 grains to women and boys under 16 years, and of 15 grains to men. The patient has little or no excitement during the induction of anesthesia and needs $\frac{1}{2}$ to $\frac{1}{4}$ less of the anesthetic. A betterment of 70% in vomiting is noted, as compared with patients to whom chlorotone has not been administered.

Pyramidon and its Salts.—Bertherand (*Bulletin de Therapeutique*, February 23, 1901), mentions a case in which the nitrogenous coefficient of excretion was increased 10% after the administration of pyramidon in 5-grain doses for 8 days. Used in a case of diabetes in the same dose the sugar excreted was raised from 30 or 45 grains a day to between 225 and 300 grains. As an antipyretic the drug tends to induce profuse sweating, especially in tuberculous patients. In order to avoid this the author uses the bicamphorate of pyramidon, which acts as an antipyretic without causing sweating. In sciatica good results were obtained by the hypodermic injection of a solution containing $1\frac{1}{2}$ grains of pyramidon. In the pain of rheumatism the results obtained were less conclusive although the author considers pyramidon equal to other drugs in combating this symptom, and it may be given in smaller doses than are necessary with other drugs with equally beneficial results.

Formaldehyd.—Young (*Treatment*, April, 1901) finds that 1 to 100,000 solutions of formaldehyd will destroy the less resistant germs quite readily, while the more resistant ones are destroyed by a solution of 1 to 1,000, though this has no appreciable effect on the living human skin, even when the hands are immersed in it for a considerable time. The author has had excellent results from its use in fistulas, and in various growths and pathologic conditions of the skin, especially indolent

ulcers of the lip and face. In a severe case of bromidosis the application of a 10% solution at once stopped the sweating and so far as known there has been no return of the affection. Internally the author has used the drug in the treatment of gastric ulcer in the dose of 2 minims every 4 hours well diluted. Recovery was rapid. Similar good results followed its employment (in the dose of 1 minim mixed with egg-albumen) in dysenteric diarrhoea in a child. In scarlet fever daily sponging with a 1 to 1,000 formaldehyd solution from the appearance of the rash, shortens the stage of desquamation and renders the scales innocuous, so that the period of convalescence is hastened, and security from infection attained.

Flatulence.—(*Merek's Archives*, March, 1901).

R

Spirit of cajuput.
Aromatic spirit of ammonia.
Spirit of chloroform of each 4 drams.

Sig.—One teaspoonful in a wineglassful of water every $\frac{1}{2}$ hour or every $\frac{1}{4}$ of an hour, until relief is obtained.

Reports on Influenza (*Public Health Reports*, Nos. 6, 7, 8, 9, 10, 11, 12 and 13) show that in Cairo, Illinois, 15% of the population has had influenza during the past winter. In the majority of the cases the type of the disease has been mild; the nervous, respiratory, circulatory and digestive systems being attacked most frequently in the order named. The treatment consists in placing the patient in bed where he is kept until the fever subsides. Calomel and a saline purge is given early. Diet is restricted and consists principally of milk. Sodium benzoate, 5 grains every 3 hours. Strychnin as a respiratory stimulant when needed. Bromid acetanilid and caffen comp. are used for hemicrania. Ammonium salicylat has given satisfaction in a few cases. The effect of quinin is not constant, being of marked benefit in some cases and inert in others. Cold sponging is practised when the temperature passes 103° F. In Unity, Illinois, 150 mild cases of influenza are recorded, with a mortality of 3%. The use of quinin and whiskey is emphasized in the treatment of the disease. Considerable stress is laid upon general sanitary precautions in those cases of influenza treated at St. Mary's Hospital, Hoboken, New Jersey, and in St. Francis' Hospital, Jersey City, New Jersey. Patients are isolated in large, well ventilated rooms. Excretions are received in disinfecting fluids. All cloths are sterilized which have been in contact with the patient. After the patient has recovered the room and its contents are thoroughly fumigated with formaldehyde gas. Internal medication consists in the administration of quinin and salol, combined with coal-tar products. The bowels and kidneys are regulated by the use of proper remedies. The diet includes milk, eggs, meat juices and broths.

Treatment of Hyperacidity of the Stomach.—Hewes (*Boston Medical and Surgical Journal*, November 29, 1900) aims to reduce the acidity of the stomach by the administration of proteid food substances which combine with large quantities of acid, and by alkalies which neutralize the acid present. The patient is given a diet containing as high a proportion of proteid foods as comfortable for the individual. Six meals a day should be ordered, the constituents of each being prescribed. Starches should be limited and carbohydrate foods, sugars or predigested starches, dextrinized flours, used as much as possible since starch digestion in the stomach is impeded in these cases. For the distress or eructations, some proteid, as a raw egg, is to be taken. Sodium bicarbonat in half teaspoonful doses or 15 grains of magnesia hydrate, may be taken in addition to food or in place of it, for the relief of symptoms. Careful attention should be given to baths, exercise, the bowels and the general manner of living. Nux vomica should be given if debility exists. Anemia is to be overcome by the administration of iron. Marked improvement occurs from this treatment in the majority of cases; less than 10% of the author's cases being unrelieved. In these obstinate cases lavage proved a useful adjunct to treatment. Silver nitrate was also used in some of these cases with success.

THE WORLD'S LATEST LITERATURE

British Medical Journal.

June 8, 1901. [No. 2110.]

1. Some of the Anatomic Associations of the Kidneys, from a Surgical Point of View. EDMUND OWEN.
2. Skiagraphy and Fractures; Especially in Their Medico-Legal Relations. C. H. GOLDING-BIRD.
3. Oblique Fracture of Tibia and Fibula with Skiagraphs Showing Repair. BENJAMIN DUKE.
4. Cervical Rib. T. E. GORDON.
5. Effect of the Röntgen Rays in a Case of Chronic Carcinoma of the Breast. ANDREW CLARK.
6. Pathology of Toxic Amblyopias. J. HERBERT PARSONS.
7. Paralysis of the Cervical Sympathetic. PURVIS STEWART.

1.—See abstract of *Lancet*, June 8.

2.—Goldingbird on the employment of the x-rays in the case of fractures, takes up especially their use in criticism of the results obtained by the surgeon. He believes that skiagraphy should only be employed as a subsidiary agent to diagnosis and then its evidence in cases of doubt should be received with caution, and only after due interpretation by someone whose experience warrants his speaking with authority. Its use in the judgment of results is a limited one for it has been proven that a skiagram may show a fracture where none exists; that it is possible to miss seeing a fracture; that it is possible to show a fracture as still existing though long united, and that distortion may be produced in several ways. In contemporary literature, especially American, are to be found many cases where patients have or might have made use of skiagraphs in order to prove malpractice against the surgeon. The question as to how the profession is to protect itself is discussed.

4.—Gordon reports a case of cervical rib. The patient was a laborer, aged 32. The first symptom was an attack of pallor and numbness in the fingers of his right hand in the mornings. Gangrene supervened. Examination had shown the presence of a cervical rib, which was removed. This rib was in some way the cause of the arterial obliteration. The subclavian was not obstructed. If the rib acted directly on the artery it must have done so in some way upon which present pathology throws no light. It may have acted indirectly on the artery through the nerves, which lesion is capable of causing gangrene or structural changes in the bloodvessels. The absence of clear signs of a peripheral neuritis is a striking argument against the theory of nerve origin. The case resembles the local phenomena of Raynaud's disease. [C.A.O.]

5.—Clark reports a case of carcinoma of the breast, with axillary glandular involvement, occurring in a woman, aged 60 years, who also suffered with glycosuria—she having already lost 2 toes with diabetic gangrene—and who presented 2 ulcers of the leg that were ascribed to syphilis. The carcinoma of the breast was extensively ulcerated and firmly adherent to the subjacent muscles and bony structures. Under the application of the x-rays for 15 minutes, for 5 days of each week, continued for a little over 2 months, marked improvement occurred. The area of ulceration decreased, the glandular enlargement lessened, pain diminished and the general condition of the patient became improved. [A.O.J.K.]

6.—Parsons, in a note on the pathology of toxic amblyopias, refers to the prevalent views on the subject, details some histologic investigations of his own, and concludes that the action of nicotin may reasonably be supposed to be twofold: (1) Vascular, causing vasoconstriction of the arterioles, which would explain the selection of the sparsely supplied macular region; (2) paralytic, upon the synaptase either of the cone fibers, or of the inner granules, or of both. [A.O.J.K.]

7.—Stewart reports a case of paralysis of the cervical sympathetic, that of a soldier, aged 30 years, who was shot, the bullet entering the left side of his neck $1\frac{1}{2}$ inch below the mastoid process, and coming out through the seventh right interspace in the posterior axillary line. Originally the entire brachial plexus of the right side was involved, there developing immediately total paralysis of the limb. The practically complete recovery of power, however (save in the opponens pollicis), together with absence of muscular atrophy, shows

that the damage to the greater part of the plexus did not amount to more than a contusion. A few fibers appear to have been permanently interrupted, since there remained slight analgesia of the areas to which the posterior roots of the eighth cervical and the first and second thoracic nerves are distributed, together with slight weakness of the small muscles of the thumb, which are innervated by the first anterior nerve root. In addition to these, there occurred a total paralysis of the cervical sympathetic, narrowing of the pupil of the right side, together with absence of dilation when shaded, or when the skin of the side of the neck is pinched; narrowing of the palpebral fissure, a form of pseudoptosis due to paralysis of the non-striated muscle of the eyelid (the upper eyelid can be elevated to the full extent voluntarily by the striped portion of the levator palpebrae muscle); and enophthalmos, ascribed to paralysis of the orbital muscle of Müller. There was also anidrosis of the right side of the face, scalp, neck, trunk, and the whole of the right upper limb. This area was sharply limited by the median line, and it extends as low as the third rib in front and the third dorsal spine behind. [A.O.J.K.]

The Lancet.

June 1, 1901. [No. 4057.]

1. Acroparesthesia, Erythromelalgia, Sclerodactylia and Other Angioneurotic Disturbances; with an Attempted Classification of Angioneurotic Disorders of the Extremities. THOMAS D. SAVILLE.
2. Arterial Hypertonus and Arteriosclerosis; Their Relations and Significance. WILLIAM RUSSELL.
3. The Bacteriology of Sporadic Cerebrospinal Meningitis. WILLIAM HUNTER.
4. On the Operative Treatment of Corneal Astigmatism. A. BREUER.
5. A Further Note on the Technic of the Quantitative Estimation of the Bactericidal Power of the Blood, and (Incidentally) on the Possible Application of Such Estimations to the Standardization of Bacterial Vaccines. A. E. WRIGHT.

1.—Saville states that acroparesthesia, erythromelalgia, and sclerodactylia are terms applied to symptoms which belong to the same category as Raynaud's disease. About 90% of cases occur in female patients. Vasomotor conditions are due to some inherent and often inherited tendency. Many of them, particularly of the vasodilator kind, are amenable to treatment by bromids. A clinical classification is given which shows that these varieties correspond to the different varieties and phases of Raynaud's disease. [A.G.E.]

2.—Russell studied the arteries in 16 cases which he had observed during life, and gives his conclusions. Atheroma and arteriosclerosis are stated to be entirely different. Much confusion has arisen among writers by failing to recognize the difference in the changes occurring in the arteries inside and outside the kidney. In the former the changes are most marked in the intima; in the latter, in the media. Hypertonus, or a diminution in the lumen of the vessel, occurs in normal and sclerosed arteries. Cases are cited. This condition may occur without an increase of blood-pressure. Treatment to relieve the spasm is effective. Recurring or continued hypertonus leads to hypertrophy of the media. [A.G.E.]

3.—Details of the studies of 10 cases of meningitis are given. Fluid obtained by lumbar puncture was examined with the following results: In all cases a diplococcus was found; this diplococcus had the same biologic and morphologic characteristics as Weichselbaum's *Diplococcus intracellularis meningitidis*; in some cases, other organisms, as *Bacillus of influenza* and *Bacillus tuberculosis*, were present. [A.G.E.]

5.—Wright presents his third communication. New instruments are described, and the technic elaborated. A future paper will deal with the application of the method to the standardization of bacterial vaccines. [A.G.E.]

June 8, 1901. [No. 4058.]

1. Some of the Anatomic Associations of the Kidneys, from a Surgical Point of View. EDMUND OWEN.
2. Retention of Urine. CHRISTOPHER HEATH.
3. An Early Experience Concerning the Therapeutic Virtues of Iodid of Potassium in Asthmatic Affections. W. T. GAIRDNER.
4. Rat Plague: A Preliminary Communication on an Outbreak of Disease in Rats at Cape Town. ALEXANDER EDINGTON.
5. Alcohol and Arsenic in the Etiology of Alcoholic Neuritis. FARQUHAR BUZZARD.
6. An Explanation of the Vulnerability of the Apices in Tuberculosis of the Lungs. E. H. COLBECK.
7. The Surgical Treatment of Ulcers of the Stomach which are or have been Complicated with Severe Hemorrhage. C. B. KETLEY.

8. *Vitally After Severe Injury.* W. H. CLAYTON GREENE.
 9. *The Morbid Anatomy and Origin of the Various Presystolic Murmurs Heard at the Apex.* C. C. GIBBES.

1.—Owens discusses the **nerve and vascular associations of the kidney** and associations with the colon, calling attention to the frequency of unusual pain symptoms not especially referred to the kidney in connection with renal diseases. [M.B.T.]

2.—Heath discusses the various causes of **retention of urine** at considerable length and quite satisfactorily without adding anything especially new to the subject. [M.B.T.]

3.—Gairdner writes a brief note on an **early experience concerning the therapeutic virtues of iodid of potassium in asthmatic affections.** The experience was an interesting one that occurred at about the middle of the past century and was doubtless the beginning of the therapeutic use of the iodids. [A.O.J.K.]

4.—Edington, in a preliminary communication on an **outbreak of plague in rats at Cape Town,** details the results of his personal investigations and concludes that there occurs in rats a disease that is communicable to guineapigs but not to rabbits, and to which rabbits are also refractory even after it has passed through the guineapig; moreover, since inoculation of the rabbit with this rat bacterium in its virulent form gives no protection against a subsequent inoculation with bubonic plague, it seems clearly proved that this rat plague cannot be bubonic plague. The peculiar susceptibility of pigeons to the rat disease also indicates the difference between that malady and bubonic plague. It is stated that in future steps will have to be taken in case of rats being affected with a disease simulating plague to inoculate other animals than guineapigs. The experiments undertaken show that the rabbit is probably the best animal to use in conjunction with guineapigs. [A.O.J.K.]

5.—Buzzard, in a study of **alcohol and arsenic in the etiology of alcoholic neuritis,** calls attention to the different opinions that recently have been advanced in regard to the relationship of alcoholism to neuritis: (1) That ethyl alcohol per se cannot produce neuritis; (2) that "alcoholic neuritis" occurs in beer drinkers only, and not in pure spirits drinkers, and (3) that alcoholic neuritis is really a misnomer and that the causal factor in those cases to which we have been accustomed to apply the name may be arsenic. Buzzard investigated the case. Histories of 120 cases of alcoholic neuritis, with special reference to the age and sex of the patients, their habits with regard to alcohol, the changes of a nutritional, vasomotor or pigmentary nature in the skin, hairs or nails, and the results of treatment with arsenic. He concludes that alcoholic neuritis is more often found in the sequel of spirit-drinking than in other forms of alcoholism, and that clinical evidence is antagonistic to the idea that arsenic is the cause of alcoholic neuritis. Of 24 cases treated with arsenic, 3 were cured; 12 were greatly improved, and 9 were improved. No case was unfavorably influenced, as one might expect were arsenic the cause of the affection. [A.O.J.K.]

6.—See editorial.

7.—Keetley reports 4 cases of **gastric ulcer.** In the first case a woman of 20 had suffered from 3 attacks of severe hematemesis in one of which she vomited a pint and a half of blood. Upon opening the abdomen a gastric ulcer was found which was adherent posteriorly to the diaphragm and the pancreas. These adhesions were separated, the ulcer was scraped and sutured and a good recovery followed. The patient remained well for some months when she was again troubled with pain and tenderness in the epigastric region. A second celiotomy was performed and anterior gastroenterostomy was done with a Murphy's button with an apparently perfect result, the patient feeling well and attending to her usual duties. In a second case a woman of 32 had been suffering from severe gastric hemorrhage. Her condition was so bad that she fainted 5 times in 24 hours. The patient was treated by rectal feeding and rest, operation not being undertaken. Death resulted on the twelfth day and it is thought that even in such a desperate case the patient's life might possibly have been saved by operation. In a third case a woman of 39 had a long history of chronic gastric disturbances with severe hemorrhages. Celiotomy was performed and Loreta's procedure of stretching the

pylorus was carried out. The patient recovered from the operation and remains well a year later. In a fourth case, a military officer of 40 had suffered from severe hematemeses. Death resulted before operation could be performed and at the necropsy a duodenal ulcer was found which had perforated the pancreato-duodenal artery. Keetley mentions as a difficulty in **operations for chronic gastric ulcers** that the ulcers are situated on the posterior wall in a region where they are not readily accessible. Such ulcers have been frequently treated by ligature en masse or by cauterization with disastrous results. In spite of the difficulties of the operation he prefers to separate the adhesions, scrape the ulcers thoroughly and close it by suture. [M.B.T.]

8.—A man of 49 years was admitted to the hospital with a history of having fallen from a ladder, **impaling himself on a railing.** His pulse was imperceptible, the heart could be faintly heard, and his clothing was soaked in blood. A large gaping wound was found in the left hypochondriac region. An exploratory operation was undertaken, but the injury was found so extensive as to render intervention useless. At the necropsy it was found that there was perforation of the stomach, diaphragm, pericardium, and heart, with fracture of 5 ribs and other severe injuries. The interesting feature of the case was the **remarkable vitality** shown by the patient, who, after this severe injury, lived 9 hours. [M.B.T.]

9.—See editorial.

Medical Record.

June 22, 1901. [Vol. 59, No. 25.]

1. *Hernia of the Urinary Bladder.* W. S. CHEESMAN.
2. *The "Nauheim Treatment."* H. NEWTON HEINEMAN.
3. *On Nephrorrhaphy with Flap Fixation.* ARNOLD STURMDORF.

1.—Cheesman, in reviewing the literature of **hernia of the urinary bladder,** finds records of 180 cases. He classifies them as follows: (1) Cases discovered at autopsy; (2) cases in which the bladder was found in a hernia, but was recognized and not wounded; (3) cases in which there were symptoms of vesical hernia; (4) and cases in which the bladder was wounded, intentionally or unintentionally, during operations for hernia. Of the latter some 93 cases are reported, including 1 by the writer. He says the principal cause of bladder hernia is direct traction exercised through the peritoneal coat by the weight of the hernial mass, or by pulling on the sac during ligation in operation for radical cure. In 16% of the cases symptoms occur sufficient to arouse suspicion, sometimes amounting to certainty, of the existence of the abnormality. In about 25% of the cases it may be possible during operation to recognize the bladder and avoid injuring it; and after 1 hernial sac has been found, any structure resembling a second should be regarded as bladder, till proved otherwise. When the bladder is wounded, the best procedure is immediate suture by 2 layers of catgut, and closure of the hernial wound by Bassini's method; a small drain only being left leading to the bladder suture line. The bladder wall, when thinned, may be freely resected preparatory to closure. The catheter *a demeure* is not essential to primary union of wounds thus closed. Urinary fistula nearly always closes spontaneously, and injuries of the bladder have been directly responsible for death in only 10% of the hernia cases in which they have occurred. [C.A.O.]

2.—For **successful treatment in cardiac cases at Nauheim,** as elsewhere, there must be complete freedom from mental annoyances. It has been shown by various writers that excitement produces cardiac dilation. The hospital patient must know that his family is being cared for; the private patient must be relieved of business worries and often separated from his family. The different grades of baths are described, their stimulating qualities being due to their natural warmth, their alkaline and metallic salts, the large quantity of carbonic acid, and a certain quantity of electromagnetism. The indications for the temperature, length and frequency of the baths are given. The effect in decreasing the pulse-rate and contracting the heart, in increasing the hemoglobin and red cells, and the systolic electric discharge, and the effect on metabolism, are considered at length. The technic and physiology of graded exercises, including massage, deep respiration, resistance

movements and hill and stair climbing, are next described. Dietary rules are given in detail. In 25% of the cases immediate improvement follows; in 50% only the physician's examination can determine that improvement has occurred, as the patient may feel temporarily less strong. Over 90% find some improvement, decided in most cases, in the winter succeeding their treatment. The indications and contraindications for this treatment are named, and it is emphasized that it is only by the utmost painstaking and by many different avenues that the Nauheim treatment produces its effect. Several cases are reported. [H.M.]

3.—Sturmdorf describes a method of **anchoring the kidney by the formation of flaps** which is similar to that described by Dr. Robert T. Morris, who makes use of a single flap of fibrous capsule in addition to the adventitious tissue produced to secure permanent fixation and omits the usual transparenchymatous sutures. Sturmdorf forms 2 flaps by slitting the capsule laterally at each end of a longitudinal incision and passes 2 silk-worm retention sutures through skin, superficial fat, the tendons of the abdominal muscles, the cut and trimmed edges of the perirenal fatty capsule, the fibrous capsular flaps, and the parenchyma of the kidney at a depth of $\frac{1}{2}$ of an inch from the surface and leaves them untied for the time being. Slits are then made through the adjacent muscular tissue, the flaps drawn through and secured by a catgut suture. Interrupted sutures of chromicized gut are then passed so as to embrace muscle and kidney substance at a level with and equidistant from the silk-worm sutures and tied. The final suture includes skin, superficial fat and fascia. The silk-worm sutures are then drawn taut. [C.A.O.]

New York Medical Journal.

June 15, 1901. [Vol. LXXIII, No. 24.]

1. An X-Ray Study of the Causes of Disability Following Fractures Involving the Elbow Joint. SAMUEL LLOYD.
2. A Modified Urethral Dilatorhandle. FERD. C. VALENTINE.
3. Hyperacidity (Superaecidity, Hyperchlorhydria, Superaeciditas Chlorhydrica); A Clinical Study. H. ILLWAY.
4. Penetrating Wounds of the Abdomen. RUSSELL S. FOWLER.
5. Paramyoclonus Multiplex. L. J. MORTON, Brooklyn.
6. A Case of Cerebellar Apoplexy, with Autopsy. LEONARD WEBER.

1.—Lloyd discusses the subject of **fractures involving the elbow joint** and presents a series of pictures of cases coming under his observation because of limitation of motion. Of these cases 3 had been supracondyloid fractures of the humerus, 1 shows the good results that may be obtained in a similar case by a careful reposition of the fragments, and others represent separation of the lower epiphysis of the humerus with dislocation of the radius and ulna; in others the olecranon is also involved. The pictures here shown illustrate forcibly the fact that the bony lesions, displacements and callus cause most of the disability. Lloyd has operated on 21 cases and in each motion has been gained. The essential point in the whole operation is the removal of all bone or callus that in any way interferes with the proper motion of the joint. [C.A.O.]

2.—Valentine has modified the handle of the Oberlander and Kollmann dilator. The improvement consists essentially in having the dial at the top of the instrument and 2 heavy metal projections for the easy grasp of the operator's left thumb and index finger. [C.A.O.]

3.—In the third installment of his paper on **hyperacidity**, Illway refers to the following factors as the most important in causing the condition: (a) constipation; (b) alcoholic liquors; (c) smoking; (d) food of a very heavy or rich character, and (e) disturbances of the nervous system (hysteria, neurasthenia, etc.). The diagnosis is based on the high total acidity, the large percentage of free HCl with gastralgic paroxysms, burning sensation, etc. The most frequent complications are atony and gastropnoia. He divides the treatment into either (a) removal of the cause or causes and (b) the cure of the ailment itself. With regard to the former he formulates the following set of rules: (1) All alcoholic liquors of whatsoever nature are prohibited; (2) all smoking of tobacco in whatsoever form (pipe, cigar or cigaret) is strictly prohibited; (3) all acid or acidulated drinks are forbidden; (4) all foods or condiments prepared with vinegar or lemon juice are forbidden; (5) all

sharp condiments (pepper, black or red, ginger, the various sauces) are strictly prohibited. Under the second group he considers diet as the principal form of treatment, confining the entire cuisine to the nitrogenous foods (eggs, milk, meat, etc.). As medicinal remedies he recommends vichy water—half a glass between 10 and 11 a. m., 4 and 5 p. m., and just before retiring—and Fowler's solution 3 times a day. [H.H.C.]

4.—Fowler, in discussing **penetrating wounds of the abdomen**, says there is one rule in the treatment of abdominal injuries in civil life which should be a law—explore. Everything should be ready to proceed with a laparotomy before the wound is explored in any manner. Identify each layer and examine thoroughly. If there is the slightest evidence that the peritoneal cavity has been invaded, make an exploratory laparotomy. The technic of preparing the patient and of operation are given. [C.A.O.]

5.—Morton reports a case of **paramyoclonus multiplex** occurring in a young woman, 26 years of age. The condition was brought on by muscular overexertion and mental worry, and first manifested itself by clonic spasms of the muscles of the right arm and leg, which then passed over to the left side and finally to the neck and lower face. Morton outlines his treatment of the case as follows: "Tonics, rest and fresh air are necessary, but in this individual case the prescribing of remedies has not been an easy task. She cannot tolerate cod-liver oil in any form, iron produces headache, strychnin causes intense irritability, and sodium bromid cannot be taken for any length of time, owing to its depressing effect on the heart. To overcome obstinate constipation, she takes a pill composed of aloin, compound extract of colocynth and belladonna. I urge her to try to be cheerful and hopeful, and avoid as much as possible all depressing influences. Galvanism and my favorite remedy for all ills, *i. e.*, living out of doors in the sunshine and drinking large quantities of good spring water, have proved very efficient in her case, and her appetite has improved." [H.H.C.]

Medical News.

June 22, 1901. [Vol. LXXVIII, No. 25.]

1. Psychic Epilepsy, with the Report of a Case. J. W. COURTNEY, M.D.
2. The Medical Expert Evidence in the Case of the Davis Bellevue Hospital Homicide. R. L. PRITCHARD.
3. Obstipation. STERLING B. TAYLOR.
4. A Study of Some Complications and Sequels of Typhoid Fever. H. A. HARE and H. R. M. LANDIS.

1.—**Psychic epileptic attacks** are the result of inhibitory or irritative explosions on the cortical territory presiding over psychic processes. The 2 types are the intellectual petit mal and grand mal. In the first the obtundation of intelligence greatly varies in degree. Sometimes the patient sees vaguely the persons about him, but does not hear what is said; at other times he has no sense of what has happened, and in the more prolonged and severe attacks occur those cases of ambulatory automatism lasting for weeks and months. The intellectual grand mal can never be regarded as a first symptom of **epilepsy**. It manifests itself in impulsive and ferocious acts against the sufferer himself or others. After the most brutal act the patient may sink into profound slumber and awake with complete amnesia for the attack. An incoherence or dissociation of ideas is the most essential feature of the picture. If there is marked inhibition of thought, incoherence is substituted by stupor. When incoherence alone is at play, there is marked motor excitation. As a rule, the severe type follows frequently repeated convulsions. When the transitory psychosis follows a single or abortive convulsion, it is probably the result of a postponement by treatment of an attack which would otherwise tend to recur frequently. Complete amnesia usually follows closely insane outbursts; sometimes it is not so deep; or there may be retroactive amnesia which goes back farther than the attack. The relation of alcohol to attacks and the differentiation of raptus melancholicus, transitory mania, and somnambulism and the forensic bearings of the disease are considered. A case of petit mal is reported. [H.M.]

2.—Was the **expert medical evidence** in this case brought out on a full statement of facts? As the medical issues were framed by the District Attorney, did he make clear all the evi-

dence so that reasonable men could read in them only strangulation? The people's witnesses testified that death was due to strangulation, not by relying on postmortem appearances, but by taking into consideration extraneous facts. The defendant's experts excluded from their consideration the same extraneous facts. Even the defendant's experts would have admitted the possibility of the hyoid bone breaking from irregular muscular action, though it was fairly open to doubt whether the injury could follow direct pressure from the sheet. Medical expert testimony is defective, as this case demonstrates, from the mode of its presentation oftener than from an assumed yielding of the expert witness to whatever opinion is desired of him. [I.I.M.]

3.—Obstipation is dependent on mechanical interference in rectum or sigmoid flexure. The form considered is that due to hypertrophy of the normal rectal valves with interruption of the lumen and distortion of the gut above, begetting an atonic state. The valves are described together with conditions that may cause pathologic changes, and also the mechanism of obstruction. The symptoms are chronic irregularity, frequent, partially successful attempts, flattened stools, inordinate desire for defecation, distension of colon with pain over colosigmoidal angulation preceding evacuation, pain in genitocrural nerve from gaseous distension, mucous discharge, evidence of auto-intoxication, fitful appetite and coated tongue. Exploration with Martin's proctoscope is described. Radical treatment consists in division of the free border of the valve down almost to the gut wall. Sutures should be placed in the angle of the wound and I on either side to avoid hemorrhage. A tampon dusted with Monsell's powder may also be introduced. Daily lavage and food that does not produce gas or a solid stool, are the after treatment. The operation is one of the most delicate in surgery. [I.I.M.]

4.—This section of the paper deals with the complications and sequels of the well developed stage of typhoid. Croupous pneumonia is frequent and is supposed to be due to the typhoid bacillus, one holding that the pneumococcus is always present. Diphtheria occasionally occurs. Bronchitis may be called a symptom. Congestion at the base of the lungs is a late manifestation due to cardiac enfeeblement. Pleurisy is no longer rare, its commonest form being fibrinous but when effusion occurs it is apt to be hemorrhagic or purulent. Persistent sub-normal temperature has been observed. Hyperpyrexia as a rule occurs in the septicemic type. Sudden rises usually indicate increased infection. Fever has lasted from 81 to 114 days. Low fever with marked infection is graver than hyperpyrexia. Petechial rashes, boils, scarlatiniform and rubeoliform rashes are described with their significance. Purpura is now not rarely reported; the prognosis is grave. Albumin with granular and hyalin casts occurs frequently. Epithelial and blood casts signify nephritis. Violent delirium may appear suddenly. Neuritis generally occurs during convalescence. Three cases of catalepsy are reported. Convulsions develop without ascertainable cause and rarely indicate hemiplegia. Twenty per cent. of cases are said to show ulceration of fauces and palate. Stomatitis, glossitis, stricture of the esophagus and vomiting are reported. Perforation causes 10% of all deaths. There is now a decided tendency toward surgical interference with favorable results. One case of intestinal hemorrhagic lesions is reported. Absence of these lesions is noted in 24 cases. Disease of the arteries is rarer than of veins. Secondary anemia is usual. Leukocytosis occurs with abscess, phlebitis, peritonitis and perforation. [I.I.M.]

Philadelphia Medical Journal.

June 22, 1901. [Vol. 7, No. 25.]

1. Further Notes of a Case of Pernicious Anemia Reported at the Meeting of the Association of American Physicians in 1900; with Remarks on the Diagnosis of the Disease. FREDERICK P. HENRY.
2. A Case of Severe Anemia with Changes in the Spinal Cord. WILLIAM E. HUOHES and WM. G. SPILLER.
3. The Teaching of Chemical Pathology. ALONZO ENGLEBERT TAYLOR.
4. Theoretical and Practical Considerations on the Treatment of Jacksonian Epilepsy by Operation; With the Report of 5 Cases. JAMES JACKSON PUTNAM.
5. What I Have Learned from 161 Operations for the Relief of Senile Hypertrophy of the Prostate Gland. ORVILLE HORWITZ.

2.—Hughes and Spiller report a case of severe anemia,

which in the postmortem showed marked changes in the spinal cord. The sclerosis was found to be most marked in the upper thoracic and cervical regions, and was greater in the left lateral column than in the right. In these parts of the cord it was diffuse, *i. e.*, not confined to any distinct system of fibers. Posteriorly the degeneration was most noticeable in the ventral portions, the anterior columns being nearer the normal than any part of the white matter of the cord. The only variation in these regions consisted of a slight proliferation of the neuroglia. The crossed pyramidal tracts had degenerated as far down as the sacral region, the left being more abnormal than the right. Below the midthoracic region the degeneration was limited to the crossed pyramidal tracts, while in the lumbar region the posterior column showed a slight degeneration. The right column in the medulla oblongata showed great change, while the left appeared to be nearly normal. Stained specimens of the cervical and lumbar regions showed a distinct abnormality of the nerve cell-bodies, together with marked pigmentation. [I.I.C.]

3.—Taylor, in his paper on the teaching of chemico pathology, gives an outline of the course as taught in the University of California. It includes: (1) The consideration of the relations of the disturbed functions to the lesions. That in many instances we are not able to define such relations is all the more reason for attempting to fix them in all cases; (2) the determination of the relations between the particular functional disturbance and the general metabolism, perhaps the most valuable aspect of the subject; (3) the training in the diagnostic procedures employed in the study of the chemism of disease, and instruction as to their real worth. [I.I.C.]

4.—Putnam, in considering the operative treatment of Jacksonian epilepsy, reports 5 cases. He believes that many kinds of operations are of value and that the beneficial action of these operations are mainly due to the induction of a temporary inhibition of the morbid action of the cortex, which permits of the establishment of a more normal tendency. He says the removal of the apparently normal cortex is rarely advisable. Clinical observation and laboratory experiment seems to indicate that even a simple exposure of the cortex may damage its nutrition enough to cause temporary paralysis of sensation and motion without inducing permanent impairment of function of serious amount. This operation can be repeated if necessary and cortical excision may be done later. He states that the cause of the persistence of the epileptic habit is not to be sought alone in anatomic peculiarities of the brain, but that it shares the vitality and independent endurance of memories in general. [C.A.O.]

5.—Horwitz concludes his article on senile hypertrophy of the prostate gland. He gives concisely the results obtained by means of various operations in 161 cases, and draws conclusions as to the indications for, and value of each of the operations employed. Of the 161 patients, 8 died; 2 deaths following bilateral castration, 2 suprapubic and 4 perineal prostatectomy. Vasectomy is stated to be of little value as a curative measure. Bilateral castration is of value in selected cases, primarily relieves congestion and secondarily causes atrophy, is of no value in fibrous prostates, and is a serious operation in old subjects with extensive disease of bladder and kidneys. Suprapubic cystotomy is indicated where retention cannot be otherwise relieved, and as a temporary palliative means where a more serious operation cannot be resorted to. The most satisfactory method of performing complete prostatectomy is that of Fuller's. The operation is the most dangerous of all that have been recommended, except ligation of the internal ilia. The suprapubic is the safest method, and the operation should be done early. The Bottini operation was performed on 33 patients with no deaths. This method is discussed at length, and the technic detailed. In suitable cases it is the safest and best method thus far advised. It is often efficacious as a palliative measure in advanced cases, and is of especial service early in the disease as a means of preventing catheter life. Pyelitis is not a contraindication, and the character of the prostatic growth has no bearing on the results of the operation. When suprapubic lithotomy is necessary, the stone should be removed and the Bottini operation deferred until a later date. [A.G.E.]

INDEX

- A**bbott, A. C.: The hygiene of transmissible diseases: Their causation, modes of dissemination and methods of prevention, 102
- Abdomen**, contusions of the, 270
- gunshot-wounds, penetrating, immediate celiotomy in, 434
- penetrating wounds of the, 609
- surgical diseases of the, 218
- Abdominal aorta**, aneurysm of, 224, 546, 589
- aneurysm, 589
- embolism of the, 519
- ligation of, 569
- aortic aneurysm, treatment of, 546
- cavity, fluid in, 567
- contusion, two cases of, 336
- gunshot wounds, treatment of, 519
- influenza, an epidemic of, among children, 293
- inspection, 319
- infections, importance of early recognition, 516
- operation for cancer of the womb, 527
- operations, pus in, 432
- pain in typhoid fever, 316
- perforation of the, 568
- pregnancy, 566
- strapping for atonia gastrica and splanchnoptosis, 247
- surgery, general vs. local anesthesia, 411
- tumors, accurate diagnosis of, 176
- viscera, 41
- topographic anatomy of, 128
- wall, dissecting abscess of the, 533
- Abnormality**, dental, 240
- Abortion**, early uterine, ectopic gestation diagnosed, 314
- Abscess**, dissecting, of the abdominal wall, 533
- diopathic, of the kidney, 515
- intracranial, 223
- of liver, 314
- of brain, operative treatment, 514
- neck, obscure hemorrhage, after lancing, 383
- of orbit, 317
- psaos, treatment of, 366
- sphenoidal, amaurosis and operation, 438
- subdiaphragmatic, 90
- subphrenic and splenic, successful operation, 218
- temporosphenoideal, after otitis media, 128
- Absinthe consumption**; 526
- Accumulations**, fecal, 126
- Aceton**, production of, from albumin, 370
- Acid**, boric, and borax, the influence of, 231
- carbolic, coma from application to unbroken skin, 176
- treatment of infected wounds, 195
- chronic, poisoning by, locally applied, 126
- cinnaemic, intravenous use, in tuberculosis, 124
- free hydrochloric, reason for failure, in carcinoma of stomach, 289
- picric, local remedy in affections of the skin, 100
- uric, excessive formation of, in gout, 225
- Acknowledgment**, a word of, 1
- Acne rosacea**, treatment, with suprarenal extract, 172
- telangiectodes, 225
- Act**, anatomy, 1883, 107
- emasculating the, 97
- Actinomycosis**, 12, 314
- Acroparesthesia**, Erythromelalgia, and Sclerodactylia, 607
- Addison's disease**, 247, 571
- Adenocarcinoma**, case of nephrectomy for, 245
- Adenoids**, removal of, 314
- Adrenalin**, 219
- clinical notes on, 382
- Advertising** in the profession, 95
- "something unusual to offer you" in, 145
- Advice** and criticism of editor, 55
- Africa**, German east, malaria in, 151
- African**, South, hospitals question, 237
- Agarius torminosus**, toadstool, poisoning with, 317
- Age**, eczema in relation to, 364
- survival of another, 522
- Aged**, nasal conditions in the, 516
- Ailments**, chronic, due to wrong eating, 219
- Air** as a factor in digestion, 414
- liquid, in medicine, 55
- superheated dry, in treatment of sciatica arthritis deformans and scleroderma, 126
- Air-passages**, disease of the upper, in relation to mental development, 382
- lower; suprarenal capsule in diseases of, 124
- removal of foreign bodies from the, 532
- Akoupnone** and its limitations, 132
- Akromegaly**, 181
- a case of, 481
- treatment with pituitary body, 540
- Ala nasi**, operation for relief of collapse of, 128
- Albumin** of nephritic urine, 224, 317
- production of acetone from, 370
- Albumins**, glycogen formation, when used as food, 369
- Albuminuria**, cyclic, 237
- in infancy and childhood, 596
- with retinal detachment occurring during labor, 465
- with urticaria, 519
- Alcohol** as a disinfectant, 362
- as a cardiac stimulant, 243
- food value of, 209, 258
- Alcohol**, in alcoholic neuritis, 608
- in carbolic acid burns and poisoning, 358
- Alcoholic beverages**, the consumption of, 328
- gastritis and caffeineism, 425
- intoxication, acute, 416
- peripheral neuritis, recurrent, 217
- Alcoholism**, 416
- and disease, suitable nourishment for poor, 423
- from a medico-legal standpoint, 14
- in Moscow, 285
- Alexander operation**, 47
- Algeria**, smallpox inoculation in, 250
- Aliens**, consumptive, denied admission, 326
- Alopecia**, syphilitic, epidemic, taiwan bozu, 152
- Amaurosis** in sphenoidal abscess, operation and, 438
- Ambidexterity**, should it be encouraged, 279
- Amblyopia**, in hysteria, 24, 78
- Amblyopias**, toxic, pathology of, 607
- Ambulance**, equipment of an, 44
- American Association of Pathologists and Bacteriologists**, 326
- Amendment** to medical bill killed, 149
- American Journal of Nursing**, 238
- American Medical Association**, growth of, 146
- delegates, business control of the, 325
- has great possibilities of progress, 424
- local influences at the meetings of the, 233
- need of reorganization of business work, 373
- preliminary report committee on organization, 333
- suggestion as to the, 141
- the reorganization of the, 469
- colleges, association of, 241
- editors' association, meeting of, 28
- MEDICINA**, success of, 101
- professional patriotism, 49
- St. Paul meeting, 469
- soldiers, food for, 473
- Amoebiasis**, localized, a case of, 542
- Amphitheater**, an obstetric, 49
- Amputation**, Fowler's method of, 42
- hipjoint, 98
- for sarcoma, 111
- at the hipjoint, 530
- stumps, 286
- synchronous of both thighs, 510
- Amyotactica**, dysphagia, 322
- Amyotrophic lateral sclerosis**, 542
- Ann Arbor Medical Department**, 149
- Anaerobic bacteria**, a new series of, 206
- Analgesia** from spinal subarachnoidean cocainization, 38
- medullary, tropacocain in, 267
- Anastomosis**, intestinal, instrument for, 135
- intestinal, 90
- ileocolic, 91
- ureterointestinal, a case of natural, 272
- ureterointestinal, pathology and bacteriology, 316, 414
- ureteroureteral, different methods of, 488
- Anatomic treatment** fractures of femoral neck, 533
- Anatomy** act, emasculating the, 97
- of 1883, 107
- the, 472
- and surgery of Meckel's diverticulum, 90
- brain, centralization of the work on, 337
- in relation to art, 14
- of the renal vessels of kidney, 29
- relational, a method for the study of, 486
- topographic, of the abdominal viscera, 128
- Anders**, Howard S.: Practical thoughts on pulmonary tuberculosis, 892
- Adrenalin**, 266
- Anemia**, action of iron in, 125
- an extreme case of, 220
- antiseptic and serum treatment of, 362
- pernicious, 247, 417, 479
- a new light on, 237
- with a leukemic state of blood, 569
- secondary, becoming pernicious, 363
- severe, 610
- splenic, 223
- Aencephalic monster**, 323
- Anesthesia**, by catapnoresis, 316
- complete, Belli's palsy complicated by, 45
- death after local, 197
- ether, lobar pneumonia following, 415
- general, local and spinal, 220
- versus local, in abdominal surgery, 411
- in resection of the upper jaw, 198
- methods of, and their indications, 196
- mixed, 197
- prevention of nausea and vomiting, 606
- spinal, 197, 271
- surgical, by means of spinal cocainization, 515
- tropacocain hydrochlorate for cocain, 132
- Anesthetic**, ether as a, 467
- ether, effect on the blood, 306
- ethyl chlorid as, 94
- nitro, chloron as a, 266
- surgical, nitrous oxid and oxygen as a, 105
- Anesthetics**, death from, 16, 272
- difficulties and danger of, 36
- influence exerted by and upon the administration of, 175
- Anesthetics**, safe administration, 604
- Aneurysm**, aortic, treatment, 89, 171, 336
- abdominal aortic, treatment of, 589, 546, 569
- arteriovenous, of subclavian, treatment, the, 335
- of abdominal aorta, 224, 546, 589
- of ascending aorta, 251
- of the aorta, 518
- of the aorta, treatment of, 227
- of the right carotid artery, 105
- or mediastinal tumor, tracheal tugging in, 108
- ruptured traumatic, of the femoral artery, 133
- thoracic, 105, 318
- indications for tracheotomy in, 174
- treatment of, 172
- Angina** of Bacillus pusiformis, 323
- Angioma**, multiple cirroid, of the sole of the foot, 287
- vevous, of the flexor muscles of the fingers, 133
- Animals** in war, sufferings of, 143
- reason in, 61
- transfusion of blood from, 519
- tuberculosis, in relation to human tuberculosis, 545
- Ankylosis**, a case of almost universal, 514
- of the patella, treatment of, 286
- resection of elbow for, 286
- Annuities** for blind, 104
- Anomaly**, an interesting, 340
- renal, an unusual, 194
- Anopheles**, genus, geographic distribution of, 138
- structure and biology of, 139
- Antepartum examination**, 328
- Antenatal treatment** of hemophilia, 490
- Anterior lobes** of the prostate, removal of, 95
- Anthrax**, serum, 567
- Antialcohol congress**, 242, 285
- Anti-canteen controversy**, 378
- Anticigaret law**, 238
- Antidiphtheric serum** in pneumonia, 409
- Antimalarial campaign**, 476
- Italian red cross, 14
- Antipneumococic serum**, 466
- Antiseptis**, oxycyanid of mercury in, 39
- Antiseptic ad serum** treatment pernicious anemia, 362
- gastrointestinal, calcium iodate as external, 171
- urotropin as a urinary, 50
- Antiseptics**, intestinal, the value of, 166
- Antispitting crusade**, extremism in the, 330
- law, the, 191
- Antistreptococic serum**, successful use of the, 335
- Antitetanus serum**, in tetanus neonatorum 127
- Antitoxic properties** of bile, 377
- Antitoxin** and tetanus toxin, absorption of, 223
- in diphtheria, 198, 365
- in membranous nondiphtherial tonsillitis, 174
- treatment of diphtheria, results of, 52
- Antityphoid inoculations** in Egypt and Cyprus, 363
- Anti-vice committee** of New York, 59
- Antivivisection**, 282
- in Massachusetts, 588
- Aotrum infection**, 385
- maxillary, diseases, symptoms and treatment, 412
- Anus, imperforate, 369
- Aorta**, abdominal, aneurysm of, 224, 546, 589, 518
- embolism of the, 519
- aneurysm of, treatment of, 227
- a rare cause of rupture of the, 337
- ascending, aneurysm of great size, 251
- Aortic aneurysms**, the treatment of, 171
- abdominal treatment of, 546, 569
- insufficiency, murmur of, 563
- regurgitation with Flint's murmur, 105
- valves and arterial duct, endocarditis, 181
- insufficiency, pulsation of the uvula in, 505
- Aphasia**, 269
- Apoplexy** and hemiplegia, 341
- the treatment of, 407
- Apparatus**, demonstration of, for measuring blood-pressure, 290
- Appel**, D. M.: Report of the general hospital for the treatment of pulmonary tuberculosis at Fort Bayard, N. M., for the period ended December 31, 1900, 401
- Appendicitis**, 314, 478
- and perforation, septic peritonitis after, 42
- clinical value of blood examinations in, 292
- complicated, some forms of, 109
- diffuse peritonitis, complicating, 483
- eosinophilia as a sign of, 419
- followed by general septic peritonitis, 91
- perforative, diffuse peritonitis from, 268, 365
- relation to diseases of the uterine appendages, 134
- suppurative, followed by septiceimia, 219
- surgical treatment, 514
- symptomatology of, 466
- the mortality of, 485
- the treatment of, 109, 287
- unusual features of, 485
- with diffuse peritonitis, 417
- with pus, nondrainage in operation for, 95
- Appendix**, vermiform, and cecum, 465
- hernia in conjunction with a cyst of the canal, 123
- situated in a hernia, 516
- Arabinoses**, the three, physiologic relations of the, 337
- Argas megnini**, parasite, in each ear, 313
- Arloing-Courmont serum-reaction**, 138

- Armamentarium, a plea for more uniformity and strength, 498
- Army board, 473
dentists, 238, 282
ration and the post exchange, 435
transport, plague on an, 473
- Arnold's test, 135
- Arrhythmia, paroxysmal, 289
- Arsenic, action in epidemic of arsenic poisoning, 364
elimination of, through hair, 92
in etiology of alcoholic neuritis, 608
in stockings, causing dermatitis, 313, 425
poison in beer-drinkers, 375
question, 226
toxicologic detection, influence of selenium, 42
uses of, 408
- Arsenical poisoning, investigating, 37
- Art in relation to anatomy, 14
- Arteria centralis retinae, embolism of, 131
- Arterial changes to the heart, relation of, 221
- Arteries and heart, diseases and disorders in middle and advanced life, 91, 173
difference in changes in kidney, 607
- Artery, carotid, ligation of, 133
central retinal, embolism of, 106
femoral, ruptured, traumatic aneurysm of, 133
right carotid, aneurysm of, 105
- Arteriosclerosis, treatment of, 419
- Arteriovenous aneurysms of the subclavian, 335
- Arthritis deformans and scleroderma, treatment by superheated dry air, 126
rheumatoid, the pathology and treatment of, 175
- Ascites due to cirrhosis of liver, 38, 52, 126
treatment of, 179
- Asepsis in cervical operations, 417
Aseptic vaccination, importance of, 94
- Ashmead, Albert S.: Hospital abuses in Africa, 384
taiwau bozu: epidemic syphilitic alopecia, 152
- Assistants, clinical, bureau for the engagement of, 187
- Association of medical librarians, 98
- Aspiration, in acute rheumatism, 604
- Aspirin and heroin, therapeutic value of, 273
- Aspheric bulbar paralysis, 143, 234, 269
- Asthenopia and anomalies of the ocular muscles, 132
- Asthma, 515
to relieve, 220
as a result of nasal conditions, 544
- Asylums, lunatic, state in, India, 104
- Ataxia, acute spinal, 180
patients, gait of, 322
- Atmokaussis, 45
and zestokaussis, 418
effects of, upon the mucous membrane of the uterus, 419
- Atmosphere, rarefied, cause of illoess or altered breathing in, 227
- Atonia gastrica and splanchnoptosis, treatment, 247
- Atony of the stomach, splashing sounds in, 369
- Atresia hymenalis, 489
- Atropa belladonna, physiologic relation to scopolia carnioica, 605
- Atrophy can be diagnosed, 176
of left lung, extreme, 228
of the liver, acute yellow, 317
recurring neuritis after, 367
- Atropin, effect of, on the intestines, 410
intestinal obstruction relieved by, 172
in intestinal obstruction, 330
- Atwater's, Professor, experiments and teaching of the food value of alcohol, 258
- Auditory canal, external, furunculosis of the, 514
- Aural and visual qualifications of transportation employes, 542
diseases, 567
- Auricle, operation for prominence of the, 382
- Auscultatory percussion, 228
- Autoinoculation of cancer, 367
- Autointoxication, 219
- Autoplastic suture in hernia and other diastases, 530
- Autopsychorhythmia or repetition psychoneurosis, 268
- Autotransfusion, transfusion, infusion, 263
- Axis-traction forceps, 271
- B**abes horn of tuberculous parents, prevention of tuberculosis in, 539
- Baby Farm ordinance, 192
incubator, feeding of an, 436
- Bacilli, found by Danysz, 418
- Bacillus, colon, neutral red, to detect in water, 218
colon, the toxin of the, 302
influenza, morphology and pathology of the, 181
pusiformis, angina of, 323
tubercle, influence of coal on, 273
unusual or abnormally behaved gonococcus, 245
- Bacteria, anaerobic, a new series of, 206
comma, in [well] waters, and cholera, 268
different races of, partial and mutual reactions of agglutinating serums upon, 230
in modeling clay, 239
morphology of, and their relation to virulence, 567
occurrence of, in normal organs, 231
- Bacteriologic examination of clinical thermometers, 106, 553
laboratory, 123
- Bacteriologists and Pathologists, The American Association of, 326
- Bacteriology and pathology of diphtheria, 229
elementary, laboratory guide in, 102
of acute articular rheumatism, 337
- Bacterium coli, vaginal false membrane due to, 205
- Bandages for nephropoisis, 271
- Barkley, R. G.: Senile menstruation? 339
- Baking powder investigations, 581
- Bassini, clinic of, 270
- Bath, electric light and heat, 465
- Baths and health resorts, invalid soldiers at, 196
evaporation, to reduce temperature, 365
- Bay rum, blindness due to drinking, 543
- Beck, Carl: Metatarsal fracture, 118
- Bedstead, improved, for invalids, 512
- Beer, American, exclusion of, 242
- Beer-drinkers, arsenic poison in, 375
- Beer-poisoning epidemic, selenium compounds in, 128
- Bell practice bills not accepted, 59
- Belladonna, atropa, physiologic relation of scopolia carnioica to, 605
poisoning, 313
- Bellevue Hospital Medical Board Committee, 44
- Bell's palsy complicated by complete anesthesia, 45
- Benedict, A. L.: May a hospital steal cases? 234
- Benzin in seborrhea, 410
- Bergey, D. H. The prevalence of streptococci in cow's milk, 122
- Bergtold, W. H.: Atypical pneumonia and pulmonary tuberculosis, 555
- Bernd, Leo H.: Case of fibromyomas, 340
- Biceps, tendon jerk in locomotor ataxia, 467
- Bicornate uterus, pregnancy in a, 319
- Bilateral, brachial paralysis, 221
- Bile, the antitoxic properties of, 277
power to assimilate food under influence of, 230
- Bilharzia hæmatobia, 174
- Bill, medical, killed, amendment to, 149
oleomargarin, and substitution, 147
pure food, 149
- Billings, Frank: Carcinoma of pylorus, 25
- Billstein, Emma L.: Permanent gold preparations, 511
- Binaural hearing, 272
- Biologic, training in medical schools, plea for, 99
- Bipolar version, relative merits in placenta previa, 233
- Birds, the extermination of, 375
- Birth, paraplegia from, 93
Birth-rate, reduced, 144
Births and deaths, registering, 284
- Bishop, Louis Faugères: The necessity for greater conservatism in the use of vasodilators in certain cases of cardiovascular disease, 249
- Bismuth poisoning, 519
- Blackwater fever, 91, 229
- Bladder, contracted, 567
female, removal, for malignant disease, 432
tumors of, treatment of, 194
double, a case of, 261
contraction of the neck of the, 367
and urethra, partial excision for carcinoma, 245
extrophy of the, 321
stone, symptoms, 514
urinary, hernia of the, 608
- Blastomycetic dermatitis of the gluteal region, 318
dermatitis, syphilis and its relation to, 496
- Blaetomycosis of the skin, 496
- Blind, annuities for, 104
training of the, 192
- Blindness, a cure for, 285
cases of apparently hopeless, 312
due to drinking bay rum, 543
- Blood-corporcules, red study of the granular degeneration of the, 247
- Blood-cultures in diagnosing typhoid, 2
- Blood and lymphatic glands, of syphilitic, parasite, 323
chemic and microscopic examination of the, 479
coagulation of, 137
conditions, in disease, 493
diagnostic value of the freezing point of, 369
examination as an aid to surgical diagnosis, 279
clinical value of, in appendicitis, 292
in relation to surgical diagnosis, 292
in relation to surgery, 292-306
fat in the, methods for the estimation of, 227
human, biologic identification of, 518
experiments on, 418
leukemic state of, in pernicious anemia, 569
pressure, demonstration apparatus for measuring, 290
in the treatment of chronic heart disease, 244
pressure-raising principle of suprarenal, 605
the effect of, either used as an anesthetic, 806
on, of ether used as an anesthetic, 806
the new specific test for, 577
transfusion of, from animals, 519
viscosity of the, and the clinical importance of its determination, 243
- Bloodgood, Joseph C.: Blood examinations as an aid to surgical diagnosis, 306
- Bloody reposition of old dislocations of the hip in adults, 286
- Board of Education of Philadelphia, 190
- Bochroch, Max H.: Rigidity of the spine. (Spondylose rhizomélique), 399
- Bodies, removal of foreign, from the air-passages, 532
- Body fluids, pressure in the, 480
- Boers, the vision of the, 526
- Bogen, L. I.: To improve the hygienic and physical condition of the slums, 293
- Boric acid and borax, the influence of, 231
- Boston, new hospital for, 143
- Botini operation, 246
- Botryomycosis of man, 416
- Bougies, scratch-marks on the waxtipped, in diagnosis of urethral and renal calculi, 434
- Bovine and human tuberculosis, 524
- Bowel, urethral implantation into the, 412
- Boys, gonorrhœa in, 536, 537
- Brain anatomy, centralization of, the work on, 337
abscess of the, operative treatment of, 514
- Brain, foreign body in the, 241
injury, three cases of, 434
immediate and remote effects of, 484
methodical exploration of, for fluid, 484
surgery, a contribution to, 195
sarcoma of the, 217
syphilis of, 497
tumors, 136
extirpation of, 195
localization of, 181
vasomotor nerves in the, 827
- Brains of eminent men, 132
of distinguished men, redundancy of preinsula, 565
- Bradford, E. H.: Subtrochanteric osteotomy for the deformity following hip disease, 596
- Brav, H. A.: Gonorrhœal ophthalmia in the newborn, 588
- Bread, good, cheap, 463
- Breast, carcinoma of, 607
medical aspects of, 17, 63
cases of cancer of the, treated at Johns Hopkins Hospital, 292
cystic affection of the, 464
milk, 270
new method of closing defect following thorough removal of the, 336
- Breathing, deep, curative and preventive measure, 81
altered, and illness in rarefied atmosphere, 227
- Breech presentation, high rate of mortality of children in, 464
- Bright's disease, chronic, clinical aspects of, 127
- Bromids in epilepsy, 89, 172
- Bromin with oil of sesamum, 215
- Brominol, analyses of stools and urine from epileptic patients, 515
- Bronchi, perforation, of echinococcus, liver, cyst, 413
- Bronchitis, treatment of, 311
streptococcus, 517
- Brush massage, 216
- Buboos, the treatment of, 3, 311, 383
- Bubonic plague, 231, 369, 378, 381, 526, 581
study, based on San Francisco outbreak, 243
- Bulbar palsy, asthenic, 143, 234, 269
- Bullet in the brain, mistaken case of, 12
in the kneejoint, removal of, 314
- Bureau, a proposed national, of materia medica, 189
for the engagement of clinical assistants, 187
- Burns, carbolic acid, and poisoning, alcohol in, 358
a series of cases of, 248
in infancy and childhood, treatment of, 124
- Burr, W. H.: Climate and disease, 16
- Business control of Am. Med. Ass'n delegates, 325
- Buttock coccygeal cyst of the, 175
- Button in the lung, 273
- C**acodylate, sodium, toxic action of, 216
carcinoma treated with, 515
- Caffeinism and alcoholic gastritis, 425
- Caffein as a cardiac stimulant, 243
- Calcium iodate external and intestinal antiseptic, 171
- Calcium, renal, a demonstration of skiagraphs of, 193
or ureteral, cases of, 320
- Calculous pyelonephritis, make-up of stone, 366
nephritis and urethritis, indicators for operation, 533
- Calculus, salivary, passage, without symptoms, 174
ureteral, a case of, 492
- California, plague in, 141, 146
southern, some observations on, 503
- Calomel injections in syphilis, 89
- Camphor as a cardiac stimulant, 243
- Camps, mortality in concentrated, 584
- Canada, Chinese in, 150
- Canal, external auditory, furunculosis of the, 514
- Cancer, autoinoculation of, 367
cause of, 470
cutaneous, pathology and treatment of, 495
deaths from various forms of, 464
highseated, of the rectum, new method, 456
mammary and uterine, early diagnosis of, 338
of breast, cases, treated at Johns Hopkins, 292
of larynx, case of, 514
of lip, 93
of rectum, new operation for removal of, 488
new series of operations for, 528
radical operation for, 527
statistics and operation for, 528
and vagina, radical operation, 527
of small intestine and ovarian cyst, 90
of the rectum, 105
of uterus, 283, 319, 431
parasite, new, 110
question, some phases of the, 291
skin, lantern slide demonstration on, 496
status of hysterectomy for, 431
study of, 367
the cause of, 293
the origin of, 565
uterine, methods of operating for, 418
womb, abdominal operation for, 527
- Candy, glass particles in, 334
- Cancerous and other newgrowths, causation of, 53 8
- Canteen, or post exchange in China and the tropics, 435
- Capsule, suprarenal, 316
glutoid, 519
in diseases of the lower air passages, 124
in diseases of the heart, 414
in rhinologic operations, 133
- Carbohydrates of the urine in diabetes insipidus, 318
- Carbolic acid burns and poisoning, alcohol in, 358

Carbolic, disinfection of infected wounds with, 194
 coma from application, to unbroken skin, 176
 treatment of infected wounds, 195
 therapeutic value, in menstrual disorder, 416

Carotid artery, right, aneurysm of, 105

Carcinoma and fibroma in the corpus uteri, 45
 early signs of, 291.
 extirpation of the pancreas for, 237
 inoperable, of the cervix, 40
 inquiries, 463
 of breast, 607
 medical aspects of, 17, 63
 of liver, gallstone, pyrexia in, 40
 of pylorus, 25
 of stomach, leukocytosis in, 40
 of superior maxilla, 318
 of the cecum, 486
 of the nasopharynx, 544
 of the ovary, the origin of, 198
 of uterine, 138
 question, the present status of the, 486
 reason for failure of free hydrochloric acid, 239
 remarks on the therapeutics of, 528
 stricture of duodenum due to, 268
 the parasite of, 236
 the structure, growth, and histogenesis of, 198
 the surgical aspects of, 486
 treated with cacodylate of sodium, 515
 treatment of, 45, 135, 197, 245

Cardiac and vasomotor therapy, 243
 cases at Naumburg, treatment of, 608
 congestions, 243
 disease, peripheral venous thrombosis in, 353
 function, modern heart drugs, 244
 hydrothorax, 518
 lesions as observed in the negro, 483
 stimulants, 243

Cardiovascular disease, necessity for conservatism in
 use of vasodilators in, 249
 of middle and advanced life, 310

Cases, emergency, warning as to certain, 99
 may a hospital steal? 146
 tuberculosis, marriage in, 5

Castration, 246
 for tuberculosis of the testicle, 196

Catalepsy, recurring attacks of, 263

Cataphoresis, spinal anesthesia by, 316

Cataract, 416
 congenital, 107
 extraction, clinical notes on 7 cases, 317
 of hard, without iridectomy, 499

Catarrhal disease of nose and throat, 544
 rhinitis, acute, 39

Catarrhs and tuberculosis, thiochol in, 408

Catheters, sterilizing salt, 514

Catheterization, permanent, 129
 further report, 531

Cattle, diseases of, 57, 191
 in transportation, abuse of, 239

Cause of cancer, 10
 of independent and professional journalism, 1
 of lower mortality-rate, 5

Cecum and ascending colon, extensive destruction, 371
 and vermiform appendix, 465
 carcinoma of the, 486
 case of resection for tuberculous disease, 411

Celiotomy, a plea for immediate, in penetrating gun-
 shot-wounds of the abdomen in war, 434
 and pneumonia, 285

Cell-degeneration, giant, of hematopoietic organs, 290

Cell differentiation, 43

Cells, ganglion, lipochrome of, 224

Cellular fault, diabetes mellitus as a, 133

Centralization of control of charitable and educational
 institutions, 141

Census of tuberculosis, 582

Cereals, place of, in infant feeding, 436

Cerebral diseases of childhood, prognosis of the, 223
 embolism, 400
 hemorrhage, symptomatology of, 497
 involvement in grip-pneumonia, 180
 palsy, infantile, 137
 pressure, operation for, 226
 syphilis, psychoses in, 497

Cerebrospinal meningitis, 222
 cure of suppurative, 19
 germ of, 231
 the spread of epidemic, 290

Cerumen, removal of hardened, 409

Cervical and optic nerves, neuritis of the, 217
 ganglia, sympathetic, first operation for excision
 of, 320
 excision of, in eye disease, 543
 operations, asepsis in, 417
 rib, 607
 sympathetic, pathology of, 607
 removal of, 95, 197
 vertebra, fracture and dislocation of, with fracture
 of the skull, 176

Cervix, a case of congenital hypertrophy of the, 182
 inoperable carcinoma of, 40

Cesarean section, 271, 418, 466
 for placenta previa, 573
 in placenta previa, 536
 technic of, 433
 vs. Porrocesarean, 269

Chaacre on prepucce and furrow, 43
 of the nasal septum, 368

Chancres, extragenital, 541

Charitable annex, 59
 bequests, 239
 institutions, centralization of control, 141
 institutions and partisan politics, 49

Charitable work, the annual money-equivalent for, 325

Charity, bequests to, 526
 new methods in, 95
 plundering and corruption in the name of, 575

Chemical pathology, teaching of, 610

Chemotaxis, 519

Chess, 470

Chest, contusions of, 225
 perforating gunshot-wound of, 132
 venesection for gunshot-wounds of the, 268
 wall, resection of a large part of, for sarcoma, 335

Chicago, schools in, medical inspection of, 240

Chickenpox, 270
 and mild discrete smallpox, 529
 parenchymatous, nephritis complicating, 137

Child-labor, 107, 538

Child, backward, a plea for the, 533
 diagnosis of the, 538
 premature, weighing 2 pounds, survival of, 127
 the proper study of mankind is the, 278

Childhood and infancy, albuminuria in, 536
 burns in, treatment of, 124
 symptoms of typhoid in, 490
 diabetes mellitus in, 536
 prognosis of the cerebral diseases of, 223

Children, epidemic of abdominal influenza, 293
 acute cholera occurring in, 515
 floating kidney in, 219
 heart-disease, systematic movements in, 850
 mental fatigue in, 412
 nephritis of, 275
 physical culture in, 536
 prevention of pulmonary tuberculosis, 491
 speech in backwardness, 537
 the feeding of sick and well, 436

Chilton law, 171

Chin, left posterior, case of, 130

Chinese in Canada, 150

Chloralose, 92

Chloreton as a hypnotic, 89
 as a local antiseptic, 266

Chloroform, action on blood, 14
 and oxygen apparatus, a new, 197

Cholangitis and cholecystitis, with gallstones, 583
 multiple gaugreac, associated, and in typhoid,
 fever, 490
 obliterative, with hepatic cirrhosis, 127

Cholecystectomy, hepatectomy and pylorotomy, 217

Cholecystitis, the relation of gallstones to, 277
 and cholangitis, with gallstones, 583

Cholemia, 134

Cholera and the comma bacillus in well waters, 268

Cholerae asiaticae, spirillum, serum reactions in, 230

Chopart's amputation, 569

Chorea, kneejerk in, 128
 occurring in pregnancy, 220
 psychoses of, 541

Choroid, injuries of the, 544

Choroiditis, case of, 317

Christian science, 95-149
 and medical training, 149
 and insurance, 282
 and life insurance, 524
 college, 427
 deaths due to, 428
 how to treat, 235
 humors in, 4
 plan to legalize, 11
 treatment, 426

Christianity and medicine, irreconcilability of, 52
 and science, 189

Chrome, diseases of those manufacturing, 518

Chromic acid, poisoning by, locally applied, 126

Chronic jaundice, hemorrhage in, 152

Churches, sanitation of, 878

Chyle, hyperacid, 42

Cigaret crusade, the, 428
 legislation, 58
 smoking, 58
 not injurious, 473

Cinnamate, sodium, in treatment of tuberculosis, 362

Cinnamic acid, injections in tuberculosis, 124
 treatment of tuberculosis with, 569

Cinamon treatment for tuberculosis, 39

Circulation, organs of, in the early stages of syphilis,
 568

Circulatory disturbances accompanying cirrhosis, 480

Circumcision as a preventive of venereal disease, 55

Cirrhosis, hepatic, with obliterative cholangitis, 127
 hypertrophic, of liver, operative treatment of, 290
 of liver, 273
 due to metallic poisons, 430
 treatment, 480
 ascites due to, 38
 ascites due to, surgical treatment of, 126, 252
 experimental production of, 374
 with inoculation of the portal branches, 480
 with pigmentation, 480

City, the most useful, a study in human dynamics, 83

Citizen or country practice, 424

Clark, Collo R.: Removal of powder stains with
 hydrogen dioxide, 384

Clavicle crunch, 133

Claudication, intermittent, 321, 343

Cleanliness, municipal, 150

Climate and diseases of Puerto Rico, 602
 best, for treatment of tuberculosis, 502
 of New York and New England, notes on the, 503

Climatic change, advantages of, 504
 early and radical, in pulmonary tuberculosis, 504
 influences of Newport, R. I., 502

Climatology of Augusta, Ga., 502
 of Arizona in pulmonary tuberculosis, 545

Clinic, medical and surgical, the combined, 234
 of Bassini, 270
 orthopedic, of Lorenz, 467

Clinical assistants, bureau for the engagement of, 187
 course of vaccinia, 44
 diagnosis, laboratory, sources of error in, 271
 importance of determining viscosity of blood, 243
 medicine, relations of science to, 129
 microscopy, value of, 445
 notes on 7 cases of cataract extraction, 317
 on the wounded in South Africa, 267
 observations in syphilis, 245
 in pericarditis, 482
 picture not always sufficient for diagnosis, 425
 side of cardiac and vasomotor stimulants, 243
 standpoint, shock from a, 433
 thermometers, bacteriologic examination of, 16, 553
 value of blood examinations in appendicitis, 292
 of tracheal tugging as a sign of aneurysm or
 mediastinal tumor, 108

Clinics, German, features of the, 246, 272

Clothes, where are your, made? 189

Clothing, summer, the selection of, 469

Club, an appendicitis, 191

Club finger, 519

Clubfoot, Phelps' operation for, 21, 72

Clubbing of the fingers and toes, 137

Coagulation of blood, 137

Coal, influence of, on the tubercle bacillus, 273

Cocain habit, immediate withdrawal of drug in, 266
 in spinal anesthesia, tropacocain hydrochlorate as
 a substitute for, 132
 in the animal body, the disappearance of the poi-
 sonous properties of, 198
 intraarachidian injection of, 605

Cocainization of the spinal cord, 409
 spinal, surgical anesthesia by means of, 315

Coccygeal cyst of the buttock, 175

Coffee, the consumption of, 426

Cooking, hotel and restaurant, dreary monotony, 423
 school for doctors, 242

Colds, primary cause of, 176

Colitis, acute, occurring in children, 515
 hyperplastic, 164
 membranous, 215, 492

College of fine forces, 100
 medical, the mission of a, 359

Colles' fracture, splint for, 44

Colon, ascending, extensive destruction of, 371
 bacillus, the toxin of the, 302
 extirpation for hyperplastic colitis, 164
 rupture of the, 178

Colonization, political, and medical science, 142

Colopexy, Noble's, 42

Colors and nerves, 476

Colostomy, inguinal, some remarks on, 120

Coma, from application of carbolic acid to unbroken
 skin, 176

Combustion, a remarkable case of, 471
 Comment, quotation without, 57

Commercial food products, the analysis of, 522

Commissions and fees—a remedy, 147

Committee of medical board of Bellevue hospital, 44

Common-law marriage, 149

Communion cups, 103

Complications of diphtheria, 188

Compound fractures, conclusions from personal ob-
 servations of, 207

Compounds, selenium, factors in beer-poisoning, 128
 tellurium, action of, 39

Concealment of plague in California, 141

Conditions, sanitary, and lowered mortality rates, 50

Confectionery ornamented with glass splinters, 425

Congenital malformations, 492

Congestions, cardiac, 243

Congress, international, of physiologists, 305

Conjugal tuberculosis, 130

Conjunctiva and nasal cavities, relation existing
 between diseases of the, 564

Connecticut, death-rate for, 58
 sanitary science, 58

Conjunctiva, diphtheria of the, 437

Conjunctivitis, gonorrheal, 368

Constipation, habitual, lavage of stomach for, 130

Consumptives, adaptability of Southern California and
 similar climates to the needs of, 495

Consumption, society for prevention of, 239

Consumptive aliens denied admission, 326
 convicts in Texas, 12
 national sanatorium for, 149
 philanthropy for, 141
 plea for poor, 240
 poor, city sanatorium for, 413
 psychology of the, 329

Contagious diseases, pay hospital for, 106, 149, 588

Contract surgeons, 190

Contractures from kneejoint inflammation, 287

Contributions, unauthorized use of scientific, 265

Contractions of chest, 225
 of the abdomen, 270

Convicts, consumptive, in Texas, 12

Cordier, A. H.: Gastrojejunostomy in gastrectasis, 66

Corns and warts, 810

Corneal lesions of acquired syphilis, 543

Corse, disposing of one's own, 37

Corpuscle, red blood, the erythrocyte, 99

Correspondence, learning nursing by, 159

Corsets, orthopedic, in lateral curvature of spine, 61

Cosmetic and visual results in squint, 498
 purposes, paraffin injections for, 226

Cough in phthisis, 83
 whooping, 282

- Cough reflex, 413
 Coughing, means to disseminate tubercle bacilli, 481
 Country or city practice, 424
 County society, the, 378
 Cousins, first, marriage of, 103
 Cook, John R.: A successful proctosarcan section, 588
 Creasote in tuberculosis, 495
 in pneumonia, 43
 Cremation in Basel, 476
 mid air, 473
 Cremation, 104, 192, 584
 Crematory, endowment of, 190
 Cretinism and rickets, serous vaccinia in, 364
 Crime and capital punishment, 103
 against criminals, 185
 and responsibility, 150, 411
 cost of, 426
 punishment to fit, 56
 Criminals, crime against, 185
 education of, 476
 Criticism of and advice to the editor, 55
 Cross-education, 101
 Cross, Victoria, 150
 Crusade against mosquitos, 238
 Crutch, clavicle, 133
 Culex mosquito as transmitter of yellow fever, 130
 Cullen, Thomas S.: The cause of cancer, 298
 Culture, physical, in schools, 59
 Cultures, typhoid, 314
 Cups, communion, 103
 Cure and prevention of insanity, 186
 Curet, use of, in obstetric practice, 535
 Curetment, uterine, 182
 Curist, a faith, 380
 Curvature, lateral, of spine, orthopedic corsets in, 51
 Cutaneous cancer, pathology and treatment of, 495
 Cutlery for lunatics, 584
 Coxa valga, 287
 Cyanosis of peripheral origin, late form of, 227
 Cycloplegic, homatropin as a, 215
 Cyclic albuminuria, 237
 Cyst, coccygeal, of the buttock, 175
 echinococcus of liver, perforation in bronchi, 413
 hydatid, of the liver, spontaneous cure of, 411
 of caudal with appendix vermiformis, hernia, of, 123
 ovarian, 41, 90
 Cystic affection of the breast, 464
 tumors, extraperitoneal, 417
 Cystinuria, 180
 Cystocele, 93
 Cystostomy, suprapubic, 246
 Cysts, intraligamentous, diagnosis and treatment, 430
 ovarian, and malignant sequelae, 338
 ovarian and parovarian, elongation of tubes, 371
- Da Costa, J. Chalmers:** The effect on the blood of ether used as an anesthetic, 306
 Danysz, bacilli found by, 418
 Davis, N. S.: Internal medicine in the nineteenth century, 459
 Deaf, schools for, 252
 Death and famine in India, 151
 and smallpox, 1
 by violence, instructions to medical examers as to what constitutes information of, 178
 causes of, among sailors, 310
 from anesthetics, 16
 intrauterine, pathology of, 180
 Deathrate, increased, due to speculation, 241
 for Connecticut, 58
 Deaths and births, registering, 284
 after local anesthesia, 197
 Deaver, John B.: The mortality of operation for obstructive jaundice, 19, 70
 Decortication of the lungs, 566
 Deformity, congenital, of wrist, 115
 Degeneration, granular, of red blood-corpuscles, 247
 Delivery, position of woman during, 535
 Dementia following inebriety, 542
 paretic, etiology of, 496
 Dentists, army, 282
 Dental abnormality, 240
 surgeons in the army, 238
 Department, health, 6, 221
 Dermatitis, 92
 blastomycetes, of the gluteal region, 318
 and relation to syphilis, 496
 from arsenic in stockings, 313
 tuberculous, 367
 Dermatolysis, case of, 12
 Desquamative, erythema scarlatiforme, 218
 Devil is an ass, the, 523
 Development, arrest of, 475
 Diabetes, 362
 etiology of, recent studies of the, 187
 insipidus, carbohydrates of the urine in, 318
 mellitus, 94, 222
 in childhood, 536
 as a cellular fault, 133
 treatment of, 125, 133
 metabolism in, 132
 pancreatic, influence of lesions of kidney, 337
 yeast in, 311
 Diagnosis, early, of insanity, 33
 of complicated fractures, 467
 already made, 105
 and surgical treatment of prolapsed kidney, 107
 medical, some notes on, 415
 the clinical picture not always sufficient for, 425
 etiologic-bacteriologic, 416
 of smallpox, leukocyte count in, 49
 of typhoid by blood-cultures, 2
- Diamia, paraphenylene, 366
 Diaphragm, hernia of the, 222, 290
 Diazoreaction, Ehrlich's, 222
 Dietetic value of sugar, 312, 334
 treatment for indigestion in infants and young children, 106
 Digestion, air as a factor in, 414
 starch, extent, in mouth and stomach, 289
 Digitalis as a therapeutic agent, 110, 159, 243
 constituents of, 94
 cumulative action of, 212
 hallucinations of, 598
 Dilation, acute of the stomach, the mechanism of, 285
 idiopathic, of esophagus, 290
 Diller, Theodore: The recognition of *tubercle bacillus*, 393
 Dionin as a sedative, 266
 Diphtheria, 148, 283, 381
 antitoxin, in membranous nondiphtherial tonsillitis, 174
 antitoxin treatment of, 52, 89
 use of, 198, 365
 bacteriology and pathology of, 229
 complications of, 188
 in horses, 239
 in Paris, 526
 is it quarantainable, 325, 380
 laryngeal, 92, 176, 218
 nasal and pharyngeal, 42
 of the conjunctiva, 437
 study of, 51
 the value of throat cultures in, 431
 treatment of, 180
 Diploma mills, nursing school, 143
 Disease and climate, 16
 and climate of Puerto Rico, 502
 flies as disseminators of, 521
 septic, in graduated attacks, 42
 spread by school slates, 10
 Diseases, transmissible, hygiene of, 102
 Disinfecting agent, hydrocyanic acid gas, 256
 Disinfectant, alcohol as a, 362
 Disinfection, hand, 373
 Dislocations and fractures of the spine, 308
 habitual, and old dislocations, operations for, 286
 of the hip, congenital, 287
 Disunity of the New York profession, 373
 Diverticulum, Meckel, intestinal obstruction, 175
 anatomy and surgery of, 90
 volvulus and intussusception of the, 272
 Divorce, insanity cause for, 191
 Doctors, cooking school for, 242,
 fee, the, 317
 proportion of, among men of genius, 145
 protest, 242
 popular conception of a country, 214
 ratio of, 426
 Doctoring, home, 474
 Douching, vaginal, in obstetrics, 363
 Dreams, the stuff where of, are made, 242
 Drinking and eating wrong, chronic ailments due to, 219
 Drug and medicine, prescribing, 98
 and spirit takers, responsibility in, 131
 habits, 59
 immediate withdrawal of, in cocaine habit, 266
 modern heart, effects on cardiac function, 244
 popular opinions as to certain, 43
 standardization, what it means for physicians, 129
 trade and scientific names of, 288
 vasomotor, the value of iodine as a, 289
 Drugs, crude, standardization of, 494
 economy in the use of, 526
 treatment of temperature by, 491
 Drunkards, inveterate, 239
 Drunkenness, increase in, 148
 Duct, lacrimal, stricture treatment, by electrolysis, 438
 nasolacrimal, stenosis of the, 317
 thyroglossal, persistence of the, 593
 Duodenum, dilation of the first portion, 410
 stricture of, due to carcinoma, 268
 ulcer of, from a surgical standpoint, 338
 Dust, factor in diseases of respiratory passages, 36, 86
 in Chicago streets, 475
 Dyes of stockings, arsenic in the, 425
 Dynamics, a study in human, the most useful citizen, 83
 Dysentery, treatment of, 44, 215, 267, 362
 tropic, 317
 Dysmenorrhea, causes of, 272
 Dyspeptic glycosuria, 147
 Dyspepsia, intestinal fermentation, 289
 Dysphagia amyotactica, 322
 Dystrophy, progressive muscular, 225
- E**ar disease, an overlooked nasal factor in, 413
 generally unrecognized, 438
 suppurative abscess, operation, 128
 localization of sound by the, 378
 parasite, organ megnini in each, 313
 Eating wrong, chronic ailments due to, 219
 Echinococcus liver cyst, perforation into bronchia, 413
 Eclampsia, 585, 586, 174
 puerperal, 535
 the definition and pathogenesis of, 628
 Ectopic gestation, 173, 535
 diagnosed as early uterine abortion, 314
 Eczema, infantile, treatment of, 363
 in relation to age, 364
 Edes, Robert T.: Slow pulse with special reference to Stokes-Adams disease, 299
 Edematous laryngitis, 499
 Editor, criticism of and advice to, 65
 Educational institutions, centralization of control, 141
- Educational statistics, 235
 Ehrlich's diazoreaction, 222
 Elbow-joint, fractures involving the, 609
 resection of, for ankylosis, 286
 Elective section, circumstances which render the justifiable in the interest of the child alone, 433
 Electro-bougie for stricture of masticatory tube, 438
 Electrolysis and gelatin injections for aneurysm, 251
 in diseases of the s. in, 556
 treatment for stricture of the lacrimal duct, 438
 Electrothermic hemostasis in abdominal and pelvic surgery, 489
 Ely, Leonard W.: The treatment of congenital dislocation of the hipjoint, 600
 Emasculating the Anatomy Act, 97
 Embolic teus, 320
 Embolism of arteria centralis retinae, 106, 131
 of the abdominal aorta, 519
 Embryo tuberculosis infection, without infection of mother, 54
 Embryonic development, 176
 Emergency cases, warning as to certain, 99
 Empyema of the frontal sinus, 438
 of the frontal sinus, 541
 of the kidney, 193
 the treatment of, 532
 Emmett, John Duncan: Myomectomy of 9 myomas during pregnancy and delivery at term, 594
 Encephalitis of the temporal lobe, after otitis, 195
 Encysted peritonitis, 92
 Endemic, strange, 103
 Endocarditis, malignant, 11, 41, 178
 of the aortic valves and patulous arterial duct, 181
 resulting from typhoid fever, 105
 Endowment of independent medical journal, 1
 of medical journals, to encourage the, 98
 English Medical Progress and London Polyclinic, 576
 Enterectomy, two cases of, 312
 Enteric fever, 267
 among troops in South Africa, 41
 immunity after, 175
 value of inoculation against, 216
 with hemorrhage from the sigmoid flexure, 92
 Enteritis, membranous, 172, 223, 370, 517
 Enteroptosis, 131, 274
 Enteroanastomosis, 569
 Enucleations, complicated, 130
 in 2 minutes with demonstration, 543
 Enuresis, rhus labra in, 410
 Enzymes, re-researches upon the, 378
 Eosinophilia as sign of appendicitis, 419
 Epidemic cerebrospinal meningitis, the spread of, 290
 abdominal influenza among children, 293
 arsenic poisoning, recent, action of arsenic, 364
 of pharyngitis, 142
 of rabies, 92
 smallpox, in Scotland, 37
 typhoid, 58, 224
 Epidermolysis bullosa, 12
 Epididymis, conservative operations, 196
 operations for tuberculosis of, 196
 and orchitis as sequelae of typhoid fever, 413
 gonorrhoeal, guaiacal therapy in, 363
 Epilepsy and heart stoppage, 174
 bromids in, 89, 172
 Jacksonian, operative treatment of, 610
 national association for the study of, 339
 resection of the cervical sympathetic for, 197
 Epileptic, national hospital (London), 56
 and feeble minded, institutional life for, 501
 colony, 241, 381
 home for, 284
 politics in the Ohio hospital for, 236
 what can be done for, in a medical way, 497
 Epileptic attacks, psychic, 609
 Epileptics, operation on, 566
 Epiphysis, of femur, traumatic separation, 255
 Epistaxis, 180
 of hemophilia, 312
 profuse, in middle age, cause and treatment, 268
 Epithelioma of the tongue, influence of smoking on, 329
 report of a case of, 496
 Epithelium of the uterus, the identity of the syncytium with the, 586
 Equilibrium, organs in Japanese dancing mouse, 273
 Ernst, Harold C.: Autvivisection in Massachusetts, 588
 Erysipelas, 179
 treatment of, 408
 Erythema multiforme, resembling smallpox, 229
 exudative, 224
 following a recent vaccination, 464
 nodosum, ichthyol in, 410
 scarlatiforme desquamativum, 218
 Erythromelalgia, acroparesthesia and sclerodactylia, 607
 Eosinophilia, excessive, in trichinosis, 513
 Esophagoscope, excision of tissue by aid of the, 285
 Esophagus, "idiopathic" dilation, 290
 resection of the, 371
 Esophoria, conservative treatment of, 272
 Ether anesthesia, lobar pneumonia following, 415
 as an anesthetic, 306, 467
 Ethyl chlorid as a general anesthetic, 94
 in treatment of lupus vulgaris, 363
 Ethyldiamin, mercuric, in disinfection for skin, 195
 Etiologic-bacteriologic diagnosis, 416
 Etiology of acute articular rheumatism, 317
 of arrested mental development, 317
 of diabetes, recent studies of the, 187
 the general, of pericarditis, 482
 Eucaian in spinal analgesia, 605

- Euphthalmic, 409
Eustachian tube, stricture of, 438
Evil, the midwife, 99
Exaethers, lantern slide demonstration of the, 496
Examiners, medical, Tennessee state board of, 104
Excision of larynx, 135
Executive value of medical training, 147
Exophthalmic goiter, 33, 267, 270, 364
Exstrophy of the bladder, 321
Extermination of birds, 375
 of rats, 146, 374
Extrauterine pregnancy, operation for, 179
 diagnosis and differential diagnosis of, 371
Extremity, amputation of upper and lower, 11
Eye, diseases of, treatment of, 313
 points in symptomatology, 507
 excision of cervical ganglion of the sympathetic, 543
 inflammation of the, 314
 foreign bodies in the, 564
Eyeball, traumatic rupture of the, 265
- F**
Face presentation, 270
 Family, divided, responsibility for medical attendance in, 147
Fact and sentiment, 521
Faith curists responsible, 475
Famine and death in India, 151
 in Shensi, 62
Fangotherapy, 191
Farnham, A. B. Oyster as a carrier of typhoid, 108
Fascia, tuberculosis of the, 412
Fat in the blood, methods for the estimation of, 227
 necrosis of the pancreas, 226
 the role of, 378
 splitting ferment of the stomach, 239
Fatty degeneration of organs, 337
Favus, formaldehyd in the treatment of, 311
Fear an element of nervous diseases, 541
Fecal accumulations, 126
Federal meat inspection, 42
Fee, the doctor's, 317
Feeding, artificial, in throat diseases, 95
 relation of scurvy, 38
 forced, follies, 237
Fees and commissions, a remedy, 147
Fell's apparatus, use of, for artificial respiration, 335
Felon, treatment of, 226
Femoral and inguinal hernia, radical cure of, 335
 artery, ruptured, traumatic aneurysm of, 133
 neck, anatomic treatment of fractures of the, 533
Femur, osteotomy for deformity, 130
 traumatic separation of lower epiphysis, 285
 united fracture of, 94
Fermentation, gastrointestinal, 93
 intestinal-dyspepsia, 289
 the theory of the process of, 570
Fetal inclusion in the mesocolon, 287
Fetus, spontaneous version of the, 174
Fever, blackwater, 91, 229
 yellow, 581
 enteric, 267
 among troops in South Africa, 41
 immunity after, 175
 value of inoculation against, 216
 intermittent hepatic, 224
 on urea formation, 290
 malarial, 241
 mountain, Widal's test in, 177
 relapsing, of Hodgkin's disease, 247
 rheumatic, investigations upon, 364
 scarlet, 57, 149
 joint affections in, 318
 new type of, from a public health point of view, 174
 treatment of, 566
 typhoid, 150, 192, 427
 abdominal pain in, 316
 bacteriologic investigations of, 326
 complications and sequels of, 566
 diagnosis in laboratory, 490
 endocarditis resulting from, 105
 epididymitis and orchitis as sequels of, 413
 immunity to, 330
 in an infant, 490
 in South Africa, 428
 means of infection in, 315
 modified treatment of, 481
 purpura in, 108
 symptoms in infancy and childhood, 490
 treatment of, 125, 491
 Texas, 476
 typhus, 238, 380
 yellow, 108, 238
 and its intermission, 129
 experimental, 248
 in Costa Rica, 525
 propagation of, 133
 spread of, in houses, 565
 to suppress, 57
 transmission by culex mosquito, 130
 vaccine, 426
Fever of Florida, 502
Fibers, elastic, Weigert's method for staining, 317
Fibrous pneumonia, the treatment of, 571
Fibroid tumors of the uterus, 181
 hysterectomy for, 173
 pregnancy complicated by, 356
Fibroma and carcinoma in the corpus uteri, 45
 multiple plexiform, 93
Fibromyomas, case of, 340
Filaria nocturna, development in mosquito, 563
Filtration, 427
Fingers and toes, clubbing of, 137
 flexor muscles of, venous angioma of the, 133
Firearms, injuries with, 195
Fissure of the head of the radius, 320
Fistula and ulcer, chronic, 222
 gastric, 90
Flatulence, 606
Flexion deformity from hipjoint disease, 130
Flies and the science of scavenging, 465
 as disseminators of disease, 521
Flint's murmur with aortic regurgitation, 105
Florida, fevers of, 502
 quarantine stations, 427
Fluid in abdominal cavity, 567
Fluids, body, pressure in the, 480
 consumption of, 407
Food for infants, prescriber of, 316
 American soldiers, 473
 legislation, 93
 pure, 104
 preservations, 379
 pure, bill, 149
 value of alcohol, 209, 258
 preservative values of experiments, in the question of, 563
 products, commercial, the analysis of, 522
Foods, staple, carelessness in the interdiction of, 424
Foot and mouth disease, 192
 multiple circoid angioma of the, 287
Forbes, W. S.: The anatomy act of 1883, 107
Forced feeding follies, 237
Forceps, extraction, 271
 Schnetter's placenta, 570
Forces, college of fine, 100
Forearm, dislocation of both bones with compound fracture of the olecranon, 413
Foreign bodies in the eye, 564
Forests, rapid disappearance of, 13
Formaldehyd in the treatment of favus, 311,
 Formalin in glycerin, 88
 in pulmonary tuberculosis, 125
 in suppurative otitis media, 509
Formic aldehyd in tuberculosis, 216
Formulas for a spore-staining solution, 272
Fort Stanton, national sanitarium at, 190
Foundlings, homes for, 144
Fourth of July battles, the, 575
Fracture, metatarsal, 118
 and dislocation of the spine, 308
 compound, conclusions from observations, 207
 diagnosis of complicated, 467
 due to metastasis, 314
 in which operative treatment was undertaken, 135
 of femur, ununited, 94
 of the pelvis, demonstration of the, 335
 treatment of, 43, 93, 286
Fractures and skiagraphy, 607
 involving elbow-joint, 609
Fulton, John S.: A preliminary note upon hydrocyanic acid gas as a disinfecting agent, 566
Furnd, Rudolph Virchow, 57
Furfirol and next morning's headache, 50
Furunculosis of the external auditory canal, 514
- G**
Gait of ataxia patients, 322
 Galenic preparations, standardization of crude drugs and, 494
 Gall-Bladder, surgery of the, 338
Galloway, D. H.: Device for paraffin imbedding, 15
Gallstone, and other diseases of liver, pyrexia in, 40
 pyrexia in, 40
 relation to acute and chronic cholecystitis, 277
 some points in diagnosis of, 177
Gallstones, 567
 the origin of, 578
Galvanocautery, application of the, 317
Galveston storm, effects of, 283
Ganglia, sympathetic cervical, first operation for excision of, 320
Ganglion cells, lipochrome of, 224
Gangrene, multiple, with cholangitis in typhoid fever, 490
 of feet, synchronous amputation of both thighs, 510
Gangrenous hernias, treatment of, 138
Garbage disposal system, a, 240
Garrison, Harriet E.: The value of intestinal antiseptics with simple aseptic pads in obstetric practice, 166
Gas, hydrocyanic acid, as a disinfecting agent, 256
Gastroctasis, gastrojejunostomy in, 66
Gastroctomy, 103
Gastric ferment, lipolyptic, 419
 fistula, 90
 atony and splanchnoptosis, treatment of, 247
 disorders, 569
 functions, influence of common remedies upon, 539
 HCl secretion, lost, restoration, 116, 162
 hemorrhage and surgical treatment, 121
 hemorrhage, hidden, 567
 hyperesthesia, treatment of, 539
 sarcoma, a case of, 411
 secretion, influence of artificial sweating upon, 228
 tetany, 369
 ulcer, 224, 284, 475, 517, 605, 608
 in which perforation was followed by rigors, 364
 intractable or relapsing, 515
 surgical treatment of, 515
 treatment of, 539
Gastritis, alcoholic, and caffeineism, 425
Gastroenterostomy for a large pyloric tumor, 175
Gastrointestinal antiseptic, calcium iodate, 171
Gastrointestinal, fermentation, 93
Gastrojejunostomy for rupture of the intestine, 410
 in gastractasis, 66
Gastroptosis, 168, 367
Gelatin injections and electrolysis for aneurysm, 251
 Remy's to diagnose typhoid, 315
Gelsemium to idiosyncrasy, 40
Generative organs, male, treatment of tuberculosis of the, 196
Genii valium, splint for, 217
Genitourinary examination by general practitioner, 481
Germ of cerebrospinal meningitis, 231
Germs found in the pregnant uterus, 587
German clinics, features of the, 245, 272
 East Africa, malaria in, 151
 sick clubs, 429
 school gardens, 429
 textbooks, 179
Germany, influenza in, 242
 specialists in, 584
Germs, disease, in books, 61
Gestation, ectopic, 173, 535
 diagnosed as early uterine abortion, 314
 diagnosis of, 179
 urine examination during, 422
Gift to Hahnemann Hospital, 60
Gland, parotid, mixed tumors of the, 181
 prostate, relief of senile hypertrophy of the, 245
 suprarenal, active principles of the, 540
 the pharmacology of the, 540
 surgery, some cases illustrating, 464
 thyroid, pathology and diseases of, 411, 464, 515
Glanders and tuberculosis, prophylaxis of, 213
Glands, suprarenal, the blood-pressure-raising principle of the, 605
 in parasite of syphilitics, 323
Glasgow, street cleaning in, 429
Glass particles in candy, 334, 425
Glaucoma, 92
 resection of sympathetic cervical ganglion, 552
Glutoid capsules, 519
Gluteal region, blastomycetic dermatitis of the, 318
Glycerin, formalin in, 88
Glycogen formation with albumins as food, 369
Glycosuria, dyspeptic, 147
Glycosuria, phenylhydrazin test for, 45
 tobacco as a factor in, 220
Goffe, J. Riddle: Indications and limitations of the vaginal operation in pelvic diseases of women, 79
Goiter, exophthalmic, 267, 270, 364
 extirpation of, 194
 nonoperative treatment of, 194
 treatment of, 38
Gold preparations, permanent, 511
Gonococcus, sterility and pelvic inflammation, 43
 unusual or abnormally behaved bacillus, 235
Gonorrhea, treatment for, 125, 273, 368
 and its sequels, 3, 215
 chronic, 368
 general infection produced by, 568
 in boys, 536, 537
 in women, the complications of, 318
 infection in, 127
 multiple neuritis secondary to, 139
 wounds, penetrating, the treatment of, 519
Gonorrheal conjunctivitis, 368
 ophthalmia in newborn, 538
 epididymitis, guaicol therapy in, 363
 posterior urethritis, treatment, 368
 stricture of the urethra, the treatment of, 368
Gout, excessive formation of uric acid in, 225
 treatment of, 571
 versus tuberculosis, 115
Graduate, the young, 379
Gram, F. C.: Death from anesthetics, 16
Grant, W. L.: Purpura in typhoid fever, 108
Granulomas, of the nose, 382
Graves' disease, thyroid extract, 172
 treatment with thymus extract, 540
Grip, 238
 pneumonia with cerebral involvement, 180
Growth of the American Medical Association, 146
Growths, malignant, further investigations on the etiology of, 527
Guaiaicol, local use of, in the treatment of frequent painful urination, 362
 therapy of gonorrheal epididymitis, 363
Gumma of the spermatic cord, 564
Gunshot injuries with modern firearms, 195
Gunshot-wounds, 135
 (Krönlein's) of the skull, 195
 in the South African campaign, 195
 experiences with, 195
Gynecology as a surgical specialty, the future of, 432
 organotherapy in, 319
 value of sterile permanent yeast in, 418
Gyromele, 269
- H**
Hahnemann Hospital, gift to, 60
 Hair, elimination of arsenic through, 92
Hall, J. N.: Vaginal false membrane due to Bacterium coli, 205
Hall, Harry Orville: The hallucinations of digitalis. Does digitalis cause hallucinations, delirium or insanity under certain conditions?, 598
Hand disinfection, 273
Hands, mercuric ethyldiamin to disinfect, 195
Hare, H. A.: An obscure case of hysteria with associated right mydriasis and amblyopia and left myosis, 24, 78

- Havosa, sanitary condition of, 148
 Hawkins, John A.: The radical cure of internal and external piles by excision, 398
 Head, diagnosis of injuries of the, 313
 Health authorities in a dilemma, 239
 board of, the Halifax, 526
 department, 6, 221, 426
 general, catarrhal disease of nose and throat, 544
 public, legislation, 428
 resorts, after-treatment of invalid soldiers at 196
 and "kurs" as a substitute for quackery, 523
 Hearing, binaural, 272
 functional tests of, 369
 Heart, acute dilation of the, 217
 and arteries, diseases and disorders of, 91, 173
 contractions influenced by mechanical irritation, 321
 disease, chronic, in children, systematic movements, 350
 chronic, blood-pressure in the treatment of, 244
 relation of vascular disease to, 414
 therapeutics, 125, 172, 288, 414
 drugs, modern effects on cardiac function, 244
 fatty infiltration after subepicardial overfatness, 275
 stoppage and epilepsy, 174
 recuperative power as a measure of ability, 288
 relation of arterial changes to the, 221
 results obtained in determining the size of, 337
 suture, 149
 testing the functional ability of, 244
 the percussion of the, 315
 Hedonal, 137
 Hematein, new method of staining elastic tissue, 106
 Hematemesis, acute, 90
 Haematobia, bilharzia, 174
 Hematokolpos, hematometra, etc., 489
 Hematology of reurbanism, 177
 Hematopoietic organs, giant cell degeneration, 290
 Hematoporphyria after prolonged use of trianol, 275
 Hemichorea, senile, 569
 Hemiplegia and apoplexy, 341
 Hemmeter, John C.: The logic of hydrochloric acid therapy, restoration of lost gastric HCl secretion by medical and surgical methods, 116, 162
 Hemophilia, epistaxis of, 312
 antenatal treatment of, 490
 Hemorrhage from sigmoid flexure in enteric fever, 92
 cerebral, symptomatology of, 497
 gastric and surgical treatment, 124
 hidden gastric, 567
 idiopathic, between retina and vitreous humor, 223
 in chronic jaundice, 152
 intestinal, 416
 in newborn, suprarenal extract in treatment, 437
 intrapelvic, unique case of, 182
 laryngeal, from an apparently normal larynx, 318
 leukocyte count in, 479
 obscure, following lancing abscess of neck, 383
 obstetric, 44, 218, 272
 postoperative intraperitoneal, 487
 uterine, treatment of, 409
 vaginal, in newborn, 40
 Hemorrhagic typhoid fever, 47
 Hemorrhoids, 172, 266
 Hemostatic medication, 89
 Hemostasis, electrothermic, in surgery, 489
 Hepatic cirrhosis, with obliterative cholangitis, 127
 fever, intermittent, 224, 290
 Hepatectomy, pylorotomy and cholecystectomy, 217
 Heredity and human progress, 2
 as a cause of insanity, 542
 the cause was traceable to, 523
 Hernia, acute strangulated femoral, 368
 appendix situated in a, 516
 autoplasmic suture in, 530
 diaphragmatic, 222, 290
 gangrenous, treatment of, 138
 inguinal, 201
 congenital, nature of a, 371
 and femoral, radical cure of, 335
 intestinal obstruction due to reduction of, 90
 of the appendix with cyst of canal, 123
 of the urinary bladder, 608
 postoperative, prevention and cure of, 505
 radical operation in congenital infantile, 138
 strangulated, treatment of, 178, 272
 umbilical, radical cure of, 335, 413
 ventral, 135
 Heroin and aspirin, therapeutic value of, 273
 and heroin hydrochlorid, incompatibilities of, 38
 Herpes zoster ophthalmicus, 543
 Hershey, E. P.: A case of double bladder: each with a separate ureter. A study of the urine from each kidney, 261
 Hetol in tuberculosis, 273
 in pulmonary and laryngeal tuberculosis, 569
 Heterophoria, nonoperative treatment of, 499
 surgical treatment of, 499
 Hibernation of mosquitos, 312
 Hiccough, persistent, 266
 Hip, bloody reposition of old dislocations, 286
 congenital dislocation of the, 287
 disease, hysteric, 269
 osteotomy for deformity, 596
 Hipjoint amputation, 11, 98
 amputation at the, 530
 congenital dislocation, 600
 congenital dislocation of the, 518
 disease, correcting the flexion deformity, 130
 luxation, congenital, 273
 Hodgkin's disease, relapsing fever of, 247
 Holmes, Bayard: A case of antrum infection and sigmoid sinus thrombosis without present middle-ear disease, presenting the symptoms of facial neuralgia and none of the ordinary symptoms of disease in the petrosa, retro-pharyngeal gravity—Abscess, general sinus thrombosis without much impairment of cerebation, death after 3 months, partial autopsy, presentation of specimens, 385
 Holmgren test, 218
 Homatropin as a cycloplegic, 215
 Home doctoring, 474
 treatment of tuberculosis, 503
 Homes for foundlings, 144
 Hoonth, 310
 Hopkins, George G.: Synchronous amputation of both thighs for gangrene of feet under spinal cocainization, 510
 Horses, diphtheria in, 239
 Hospital abuses in South Africa, 384
 American, in Turkey, 426
 cars, 219
 convict insane with other patients in, 187
 for chronic diseases, 473
 for contagious diseases, 473
 for infectious disease, 584
 for tuberculosis, 148, 427
 for tuberculous, 475
 general, at Johannesburg, 267
 gift for, 475
 gift of a, 60
 Imperial Yeomanry, at Pretoria, 267
 iosane, 103
 insufficiently heated, 334
 Johns Hopkins, cases of cancer of breast, 292
 Labrador, 428
 leper, 427
 Long Island College, 380
 major surgery should be done in, 470
 management of home military, 128
 for Boston, 148
 necessity for, 475
 new, for Atlanta, 104
 of the insane, tendencies of the, 501
 Ohio, for epileptics, politics in the, 237
 pay, for contagious diseases, 149, 588
 Pennsylvania, 150th anniversary, 283
 Princess Christian in South Africa, 267
 position prerequisite, admission to practice, 185
 promaternity, 173
 rural, 131
 sanitarium work, young physician in, 221
 scientific use of, 5
 site, tuberculosis, 380
 steal cases, may a, 294
 tent, Pennsylvania brigade, 435
 the children's, 427
 the New York, 426
 the Polyclinic, 191
 the support of, 425
 Welsh, in South Africa, reminiscences of the, 267
 Hospitals, new, 562
 State aid for, 526
 Hotel cooking, dreary monotony of, 423
 Hot-water vaginal injection, 179
 Hourglass stomach, 312
 Housing problems, new light on, 10
 of the poor, 62
 Howells, W. James: Practice of medicine in north-western states, 384
 Human and bovine tuberculosis, 524
 beings, shooting of, by hunters, 191
 blood, biologic identification of, 518
 body, microbial flora of the, 325
 influence on weather conditions, 334
 physiology, a compend of, 331
 progress and heredity, 2
 race, to regenerate the, 476
 Humerus, resection of entire, 286
 Humors of Christian science, 4
 Hydatid cyst of the liver, spontaneous cure of, 411
 Hydrocele, 105
 inversion of the tunica vaginalis for, 245
 Hydrochloric acid, free, in gastric carcinoma, 269
 therapy, 116, 162
 Hydrocyanic acid gas as a disinfecting agent, 256
 Hydrogen dioxide, removal of powder stains, 152, 384
 Hydrorrhachitis or spina bifida, 484
 Hydrothorax, cardiac, 518
 Hydropathic treatment of incipient tuberculosis, 567
 Hydrophobia, leukocytosis in, 289
 Hydropneumothorax, 92
 Hydropathic Institute for Philadelphia, 280
 Hygiene and sanitary science, progress in, 422
 and sanitation of public schools, 149
 of early school life, 538
 of transmissible diseases, 102
 progress and tendency of, 451
 school, 151
 school, a department of, 538
 the Journal of, 101
 Hygienic condition of slums, to improve, 293
 treatment of tuberculosis outside of sanatoriums, 503
 Hyperacid chyle, 42
 Hyperacidity, 609
 a clinical study, 516
 of the stomach treatment, 606
 Hyperchlorhydria, 247
 Hypremesis lactantium, 286
 Hyperemia, active, 289
 artificially produced, as a therapeutic measure, 289
 Hyperesthesia, gastric, treatment of, 539
 Hyperextension, 46
 Hyperplasia, sclerotic, of the pharynx, 175
 Hyperplastic colitis, 164
 Hypertrophic liver cirrhosis, operative treatment, 290
 Hypertrophy of the cervix, a case of congenital, 182
 of the prostate, 222
 prostatic, treatment of, 145, 181, 194
 senile, of prostate, 610
 with atresia of the pylorus, 128
 Hypnotic, chloroform as a, 89
 Hypnotism should be confined to the profession, 381
 therapeutic value of, 288
 Hypospadias, operations for, 219
 Hysterectomy for fibroids, 175
 for uterine cancer, status of, 431
 paravaginal method of, and its results, 197
 Hysteria, case of, 37
 with mydriasis, amblyopia and myosis, 24, 78
 Hysteric bip disease, 269
 acoliosis, 137
 Idiocy, prevention of, 380
 "Idiopathic" dilation of the esophagus, 290
 abscess of kidney, 515
 hemorrhage between the retina and vitreous, 223
 Idiosyncrasy to gelsemium, 40
 Ice for the poor, 594
 Ichthyiform in practical therapeutics, 124
 Ichthyol in deep-seated inflammation, 172
 in erythema nodosum, 410
 in smallpox, 266
 Ileocolic anastomosis, 91
 Ileus due to neoplasms, 320
 embolic, 320
 simulating, 134
 spastic, 246
 Illegitimacy in Porto Rico, 3
 Imbedding, paraffin, device for, 15
 Immigrants, baths for, 59
 Immunity, acquired, inheritance of, 363
 Impetigo pustulosa, 42
 Improvement in sanitation, 57
 Incision of kidney, 195
 Incontinence of urine, congenital, 134
 Incubator baby, feeding of an, 436
 Incurables, Home for, 103, 525
 Independent and professional journalism, cause of, 1
 India, famine and death in, 151
 Indiana mortality and morbidity for May, 1901, 475
 in March, 150
 Indican and oxalic acid, 93
 Indigestion in infants and young children, 106
 symptoms of, 106
 Inebriates' Home, 103
 pauper, 13
 Inebriety, followed by dementia, 542
 Infancy and childhood, albuminuria in, 536
 burns in treatment of, 124
 symptoms of typhoid fever in, 490
 protracted influenza pneumonia in, 491
 typhoid fever in, 490
 Infant feeding, place of cereals in, 436
 nursing, value of iron in human milk in the, 419
 Infantile cerebral palsy, 137
 eczema, treatment of, 363
 scurvy, 181, 222, 366
 Infants, lacrimal stenosis in, 543
 premature, 274
 prescriber of food for, 316,
 Infection in gonorrhoea, 127
 tuberculosis of embryo without infection of mother, 54
 puerperal, 173
 septic, the treatment of general, 321
 Infectious disease hospital, 684
 spread through milk supply, 318
 Inflammation, ichthyol in deep-seated, 172
 of the eye, 314
 Inflammatory pelvic diseases of women, 186
 Influenza, abdominal, epidemic among children, 293
 bacillus, morphology and pathology of the, 181
 diseases of the larynx incident to, 417
 in Germany, 242
 or mumps, 128
 reports on, 606
 treatment of, 216
 Influenzal laryngitis, 222
 pneumonia, protracted, in infancy, 491
 Infusion, transfusion, autotransfusion, 263
 Inguinal and femoral hernia, radical cure of, 335
 hernia, 201
 congenital, nature of a, 371
 colostomy, some remarks on, 120
 Inheritance of acquired characteristics in man, 563
 Injection, intravenous, salt solution for, 266
 calomel in syphilis, 89
 cinchamic acid in tuberculosis, 124
 gelatin, and electrolysis for aneurysm, 251
 intraperitoneal, 224
 intravenous, of cinchamic acid in tuberculosis, 124
 saline in, pneumonia, 265
 subarachnoid, tropaeocain or, 215
 subcutaneous, of quinin, 417
 tracheal, in tuberculosis, 39
 Injuries, feigned and real, 498
 to the median and ulnar nerves, 42
 Injury traumatic, 270
 vitality after severe, 608
 Innominate, multiple thrombosis of, 105
 Inoculation of vaccine virus, reaction following, 354
 Insane, Convict, with Patients in Hospitals, 187
 enlistment as soldiers, of the, 97
 hospital, 103
 increase and care of, 49

- Insane, journals edited and published by the, 523
 Spencer Hospital for, 526
 tendencies in hospitals of the, 501
 the indigent, 240
- Insanity a cause for divorce, 191
 early diagnosis of, 33
 heredity as a cause of, 542
 importance of the teaching of, 411
 increase of, 191, 192, 380
 prevention and cure of, 186, 314
 the borderland of, 414
- Insects, to lessen the spread of disease by, 575
- Insomnia, 132
- Inspection of federal meat, 42
- Inspectors, sanitary, 58
- Institute, hydrotherapeutic, for Philadelphia, 280
- Institutional life for epileptics and feeble minded, 501
- Institutionalism, abuses of, 501
 what is it? 501
- Institutions, charitable, and partisan politics, 49
- Instruments for intestinal anastomosis, 135
 care and use of, 176
- Insurance and Christian science, 282
 life, and Christian science, 524
 verdict, 427
- Intermittent claudication, a case of, 343
 hepatic fever, 224, 290
- Internal version, indications for true, 271
- International Fellowship, John W. Garrett, 151
- Interstate reciprocity and uniform medical legislation, 587
- Interstitial keratitis, 134
- Intestinal anastomosis, instrument for, 135
 antiseptics, value of, in obstetric practice, 166
 assimilation of food under influence of bile, 230
 fermentation, dyspepsia, 289
 hemorrhage, 416
 obstruction, mechanical, 320
 acute, 90, 91
 atropin in, 172, 330
 chronic, 90
 due to an adherent Meckel's diverticulum, 175
 due to the reduction of a hernia en masse, 90
 resection, 129
 surgery, the knot within the lumbar region in, 485
- Intestine, a method of closing the, 287
 complete rupture of, gastrojejunostomy, 410
 effect of atropin on the, 410
 surgery of the large, 217
- Intraarachidian injection of cocain, 605
- Intracranial abscess, 223
 operations for trigeminal neuralgia, 195
 pressure, a study of, 197
- Intramedullary neuroma and syringomyelia, 189
- Intranasal lesions, 365
- Intraorganic and venous injections, 492
- Intra pelvic hemorrhage, unique case of, 182
- Intraligamentous cysts, diagnosis and treatment, 430
- Intra pelvic operations for uterine displacements, 182
- Intra peritoneal hemorrhage, postoperative, 487
 injections, 224
 traumatic rupture of the bladder, 244
- Intra rectal injections, salt solution, in typhoid, 491
- Intra thoracic struma, operation for, 194
- Intra uterine death, pathology of, 180
- Intravenous use of cinchonic acid in tuberculosis, 124
 salt solution for, 266
- Intubation of the larynx, 177
 prolonged, 214
- Intussusception, acute, in an infant: laparotomy, 89
 and volvulus of Meckel's diverticulum, 272
 diagnosis and treatment, 90
- Invalids, an improved bedstead for, 512
- Iodids, vasomotor role of, 419
- Iodin as a vasomotor drug, value of, 289
 in tuberculosis, 362
- Iodipin hypodermically in pulmonary tuberculosis, 171
- Iodophylla, 565
- Ionization in physiologic and pathologic relations, 43
- Iridectomy, extraction of hard cataract, without, 499
- Iris, primary sarcoma of, 106
 retroflexion of report of a case of, 498
 tuberculosis of the, 415
- Iron cacodylate, 39
 in anemia, action of, 125
 in human milk, importance to the nursing infant, 419
 mineral waters, 317
- Irreconcilability of medicine and Christianity, 52
- Isotonic point of blood in malaria and blackwater fever, 91
- Italy, malaria in, 192
- Jacksonian epilepsy, operative treatment of, 610
 Japan, vegetarian regime in, 323
- Jaundice, chronic, hemorrhage in, 1, 2
 obstructive, mortality of operation for, 19, 70
- Jaw, upper, should anesthesia be used in resection, 198
- Jews, comparative pathology of, 94
- Johnson, William Crawford: Pneumonia, a historic review of its treatment, 160
- Johnston, W. W.: Aneurysm of ascending aorta of great size, treatment by gelatin injections and electrolysis, with effect of coagulating most of the contained blood, 251
- Joint-affectations in scarlet fever, 318
 disease, 413
 tuberculosis, 129
 treatment of, 46
- Journal, American, of nursing, 238
 Medical, the endowment of, 1
 report of committee on, 435
- Journalism, cause of independent and professional, 1
- Journalistic seasickness, 2
- Journals edited and published by the insane, 523
 medical, need of independent, 6
 subscribers to, 6
 to encourage the endowment of, 98
- Kaleyer, J. L.: The effect on the blood of ether, as an anesthetic, 306
- Keen, W. W.: Mission of a medical college, 359
 anatomy in relation to art, 14
- Keiller, William, On the anatomy of the renal vessels and pelvis of the kidney in relation to digital exploration of that organ in the operation of nephrotomy, 29
- Kelly, Howard A.: How to deal with vermiform appendix, some forms of complicated appendicitis, 109
- Keloid, 130
 development of a, on a vaccination scar, 315
 the pathogenesis and treatment of, 287
- Keratitis, interstitial, 134
- Keratosis follicularis, notes on a case of, 496
- Key, Bailey P.: Obscure hemorrhage following lancing an abscess of the neck, 383
- Kidney, anchoring, by formation of flaps, 609
 and ureters, physiology of the, 369
 difference in changes in the arteries, 607
 empyema of the, 193
 exploration of renal vessels in nephrotomy, 29
 floating, in children, 219
 fracture of, 336
 idiopathic abscess of the, 515
 incision of the, 195
 lesions of, in pancreatic diabetes, 337
 movable, 465
 its cause and treatment, 336
 nerve and vascular associations, 608
 nephrolithotomy on both, 336
 prolapsed, diagnosis and surgical treatment, 107
 examination for the detection of a, 466
 right, traumatic rupture of the, 316
 stone, the diagnosis and treatment, 338
 treatment of newgrowths of the, 193
 tuberculous, nephrectomy for removal of, 135
- Kiernan, James G.: Correction, 588
- Kissing the book, 55
- Klondike, pneumonia in, 103
- Knee, disease and deformity of, 295, 345
- Kneejer in chorea, 128
- Knee joint inflammation, contractures from, 287
 removal of bullet in the, 314
 suppurating, open treatment of, 42
- Kneippism, 426
- Knot within the lumbar region in intestinal surgery, 485
- Knowledge, monopoly of, 105
- Kober, George M.: The progress and tendency of hygiene and sanitary science in the nineteenth century, 451
- Koplik's spots, 570
- Kronlein's gunshot-wound of the skull, 195
- Kyphoses, recumbent, 46
- Labor, retinal attachment during, associated with albuminuria, 465
 in narrow pelvis, treatment by version, 518
 streptococcal infection following, 535
 value of quinin in, 39, 54
- Laboratories, new medical, at Univ. of Penna, 326
- Laboratory, bacteriologic, 123
 clinical diagnosis, sources of error in, 271
 guide in elementary bacteriology, 102
 the function of the, in surgical practice, 421
- Lacrimal duct, in stricture, electrolysis, 438
 stenosis in infants and its treatment, 543
- Laminectomy, for Pott's disease, 129
- Landry's paralysis, 129, 364
- Langdon, F. W.: The most useful citizen: A study in human dynamics, 83
- Laparotomy: Acute intussusception in an infant, 89
 and suture for rupture of the bladder, 244
 the danger of, 587
 vaginal compared with ventral laparotomy, 197
- Laplace, Ernest: Secondary suture of resected ulnar nerve, seventeen months standing. Immediate restoration of function, 15
- Larval mosquito, the resistance of the, to cold, 217
- Laryngeal diphtheria, 176
 and pulmonary tuberculosis, helol in, 569
 complicating measles, 92
 hemorrhage from an apparently normal larynx, 318
 nerve, recurrent, paralysis, in mitral stenosis, 337
 nerve, superior, paralysis of the, 232
 whistling, involuntary, 176
- Laryngitis, edematous, 499
 influenza, 222
 treatment of, 499
- Laryngoscope, the discoverer of the, 242
- Larynx, apparently normal, hemorrhage from, 318
 cancer of the, case of, 514
 diseases of, incident to influenza, 417
 extirpation of the, 185, 285
 intubation of the, 177
- Lateral curvature of spine, orthopedic corsets in, 51
- Laundry law, 426
- Lavage of stomach for habitual constipation, 130
 in children, 671
- Law, anticigaret, 238
 Chilton, 171
- Left handedness, 407
- Leg (left), fracture of both bones, 132
 ulcers, 273
- Legalization of Christian scientists, 11
- Legislation, cigaret, 58
 food, 93, 104
 tenement, 148
 quack, 1
- Lemere, Henry Basset: A few useful points in symptomatology applied to general practice, 507
- Lenses, congenitally opaque, 106
- Leper hospital, 427
 in Chicago, 428
- Leper's Home, the location of the, 474
 to nurse, 475
- Leprosy, 10, 130, 151, 240, 275, 476
 increasing in France, 476
 in the United States, 577
 nerve, treatment of 2 cases of, 364
- Leroy, Louis: A new series of anaerobic bacteria, 206
- Lesions, intranasal, 365
 syphilitic, of central nervous system, 417
- Leukemia, 222
 splenic-myelogenous, in pulmonary tuberculosis, 46
- Leukocyte count in the diagnosis of smallpox, 49
 in hemorrhage, 479
- Leukocytes, behavior, under local counter-irritation, 568
- Leukocytosis and typhoidal perforation, 178
 in carcinoma of the stomach, 40
 in clinical and experimental hydrophobia, 289
- Librarians, Medical, Association of, 98
- Library, free medical, 474
- Lichen hypertrophic, 541
 planus, acute, 92
- Life insurance and Christian science, 524
 examination for, 221
 middle and advanced, cardiovascular disease in, 310
- Ligation of abdominal aorta, 669
- Ligatures, snipulations around, 195
- Lilienthal, Howard: Hyperplastic colitis: Extirpation of the entire colon, and the upper portion of the sigmoid flexure and 4 inches of the ileum, 164
- Lip, cancer of, 93
- Lipochrome of ganglion cells, 224
- Lipolytic gastric ferment, 419
- Lipomyoma of the uterus, 13
- Liquid air in medicine, 55
- Litholapaxy in a child 8 years old, 265
- Lithotomy, 42
 or lithotripsy, 321
- Ligation of the carotid artery, 133
- Littlefield, Anna M.: Some notes on a case of cerebral embolism, 400
- Liver, abscess of, 314
 acute, yellow, atrophy of the, 317
 and spleen, enlargement of, 105
 and suprarenal, congenital carcinoma, 47
 carcinoma and other diseases of, 40
 cirrhosis, 273
 of the, due to metallic poisons, 480
 hypertrophic, the operative treatment of, 290
 ascites due to, surgical treatment of, 126
 surgical treatment of, ascites due to, 52
 experimental production of, 374
- echinococcus cyst, perforation in bronchi, 413
 foam, 225
 power, to lessen toxic properties, 370
 spontaneous cure of hydatid cyst of the, 411
 syphilis of the, 246
 treatment of cirrhosis of, 480
- Lobar pneumonia with empyema in pregnancy, 128
- Lobes, anterior, of prostate, removal of, 95
- Locomotor ataxia, biceps tendon jerk in, 467
 league, a national, 582
- London Polyclinic and English Medical Progress, 576
- Long Island College Hospital, 380
 the climate of, 466
- Loveland, B. C.: Postinfluenzal melancholia, 340
- Lumbago, 172
- Lumbar region, knot within, in intestinal surgery, 485
- Lunacy commission, New York, reorganization, 326
- Lunatic asylum, state, in India, 104
- Lunatics, cutlery for, 584
- Lung, button in the, 273
 development of surgery of, 337
 left, extreme atrophy of, 228
 sarcoma, of, 563
 malignant tumors of the, 370
 resection of, 196
 syphilis of the, 290
 tuberculous, proper management, 495
- Lungs, decortication of the, 566
- Lupus vulgaris treated with ethyl chlorid, 363
 with permanganate, of, 125
- Luxation, congenital, of the shoulder, 44
 a new method of reducing, 286
- Lymphatic glands, of syphilitic, parasite in, 323
- Lymphemia, chronic, 228
- MacDonald, Charles F.: The early diagnosis of insanity, 83
- MacDonald, G. Childs: Case of congenital form of hernia of the appendix vermiformis in conjunction with a cyst of the canal, 123
- MacGregor, J. A.: Peripheral venous thrombosis in cardiac disease, with a report of a case, 353
- Machine, sewing, surgeon's, 62
- Madden, John: The food value of alcohol, and Prof. Atwater's experiments and teaching, 209, 258
- Maine Eye and Ear Infirmary, 58
- Malaria, 165, 241
 and blackwater fever, isotonic point of blood in, 91
 in a child of 3 weeks, 178
 in German East Africa, 151
 in Italy, 192
 perniciousness, in, 478

- Malaria, Romanowski's stain in, 40
treatment of, 407
- Malarial investigations, 223
- Malformation, case of, 129
- Malformations, congenital, 492
- Malignant growths, etiology of, 527
disease, the treatment of, 487
- Mammary and uterine cancer, early diagnosis of, 338
- Man, inheritance of acquired characteristics in, 563
who never makes mistakes, 186
- Mania, nostrum, 188
- Manila Hospital, 473
- Mankind, the proper study of, is the child, 278
- Maple scale, 429
- Marine hospitals, medical man in, 221
Service Office, The United States, 427
medical inspectors, 60
- Marriage, common-law, 149
of first cousins, 103
in cases of tuberculosis, 5
of individuals suffering from physical or mental defects, 338
regulation of, 147
State supervision of, 500
unsuitable, 13
- Marston, Daniel W.: Disease and deformity of knee:
etiology, diagnosis, treatment, 295, 345
- Massachusetts, autvivisection in, 588
- Massage, brush, 216
new institute of, 369
vs. osteopathy, 237
- Mastoiditis after tympanic disease, 544
meningitis, tuberculosis, otitis media, 438
the diagnosis and treatment of, 544
- Matas, Rudolph: The treatment of abdominal aortic aneurysm by a preliminary exploratory celiotomy and peritoneal exclusion of the sac, followed at a later sitting by wiring and electrolysis, with the report of 2 hitherto unpublished cases, 546, 589
- Materia medica, proposed national bureau, 189, 219
- Matriculation, medical, 150
- Maxilla, superior, carcinoma of, 318
resection, ligation of the carotid artery, 133
- Maxillary antrum, diseases of, 412
- Mayo, William J.: Some remarks on inguinal colostomy, 120
- McPhedran, Alexander: Gastroptosis, 168
- Measles, 489
and diphtheria, 218
red light treatment for, 429
- Meat inspection, federal, 42
- Mechanism of prolapsus uteri, 134
- Meckel's diverticulum, anatomy and surgery of, 90
intestinal obstruction due to an adherent, 175
strangulation of, 514
volvulus and intussusception of the, 272
- Mediastinal tumor or aneurysm, tracheal tugging, 108
- Mediastinum, posterior, treatment of suppuration, 285
- Medical and surgical clinic, the combined, 234
advertisements, newspaper, 579
appointments held by women physicians, 221
aspects of carcinoma of the breast, 17
attendance in divided family, responsibility, 147
bill killed, amendment to, 149
in Minnesota, defeat of, 56
college, the mission of a, 359
colleges, raising the standard in, 521
departments in public libraries, 565
research, Rockefeller Institute for, 525
corps of navy, 221
course, preliminary to, 242
Dept. of the Phila. Girls High School, 376
diagnosis, some notes on, 415
education, centralization, by Univ. of London, 363
evidence, expert, 609
examination for school teachers, 474
fees, necessity for revising, 502
library, free, 474
licensure, the desirability of reciprocity, in, 501
examiners, definite instructions to, 178
experts, the opinion evidence of, 177
inspection, 380
of schools in Chicago, 240
inspectors, marine, 60
journal, endowment of independent, 1
need of independent, 6
subscribers to, 6
to encourage the endowment of, 98
laboratories, new, at Univ. of Penna., 326
legislation, proper, 339
some vulnerable points, 587
uniform and interstate reciprocity, 587
librarians, association of, 28
man in marine hospitals, 221
matriculation, 150
military academy, 429
profession, duty of the public to, 87, 94, 105, 369
financial relations of the, to the public, 366
progress, English, and London Polyclinic, 576
research, need of, 428
schools, zoology in, 465
biologic training in, 99
science and political colonization, 142
popularizing, 327
service, value of gratuitous, 106
society in fiction, a, 239
study, a college course as a preparation for, 422
for German women, 241
training and Christian science, 149
executive value of, 147
- Medication, hemostatic, 89
- Medicine and Christianity, irreconcilability of, 52
- Medicine and drugs, prescribing, 98
clinical, relations of science to, 129
general, relation of nervous and mental diseases to, 496
how should the practice be legally defined? 587
internal, in the nineteenth century, 459
internal, the study of, 221
liquid air in, 55
practice of, in the northwestern states, 384
uniform examination for license, 575
women in, 150
- Medulla oblongata, experimental lesions of the, 337
- Medullary analgesia, tropacocain in, 267
- Melancholia and neurasthenia, toxic origin of, 247
postinfluenzal, 98, 144, 340
- Melancholic stupor, prolonged, by thyroid extract, 127
- Membrane, false vaginal, due to *Bacterium coli*, 205
- Membranous colitis, 492
angina, case of, 467
colitis, 215
enteritis, 172, 223, 370, 517
nondiphtherial tonsillitis, antitoxin, 174
- Men, eminent, brains of, 132
- Ménière's disease, 366
cerebrospinal, 222
- Meningitis, acute serous, 570
case of suppurative, 19
germ of, 231
mastoiditis, tuberculous otitis media, 438
purulent, operative treatment of, 195
studies of, 10 cases, 607
syphilitic, 223
the spread of epidemic, 290
tuberculous, 244
- Menopause, artificial, nervous phenomena of, 92
- Menstrual disturbance, carbonic acid in, 416
- Menstruation, painful, in determining operations on the uterine appendages, 430
senile, 339
status of, 430
the age of first, in the United States, 431
- Mental condition, the patients, 188
deficiency, the heredity of, 517
depression, influence on disease development of, 292
development, disease of upper air-passages, 382
etiology of arrested, 317
diseases, relation to general medicine, 496
fatigue in children, 412
shock, 481
therapeutics, 474
- Mercuric ethyldiamin in disinfection of skin, 195
- Mercuriol in syphilis, 409
- Mercury in eye diseases, 313
oxycyanid, in practical antiseptics, 39
- Mesocolon, a fetal inclusion in the, 287
- Metabolism in diabetes mellitus, 132
of sugar in the body, experimental study, 336
- Metallic poisons, cirrhosis of the liver due to, 480
- Metamorphosis various with a report of 3 cases, 544
- Metastases, fotation in the uterus in malignant diseases of tube, 587
- Metastasis, fractures due to, 314
- Metastatic, postpartum, panophthalmitis, 253
- Metatarsal fracture, 118
- Meter, water, in public sanitation, the role of the, 234
- Methemoglobin poisoning, 567
- Methyl-alcohol, toxic action of, 142
- Methylene-blue, elimination of, 225
- injections in pleurisy, 517
- Metreurynter, the, 223
- Metric system, to introduce the, 238
use of in prescription writing, 288
- Michigan, mortality for, during March, 1901, 150
- Microbian flora of the human body, 345
- Microorganisms, prevention of infection through mouth and nose, 602
- Microscopy, clinical, value of, 445
- Middle States, tuberculosis in, and its curability, 545
- Midwife evil, 99
- Migraine, 215, 216
pathology and theory of, 415
- Mikulicz tampon, new uses for the, 285
- Military tuberculosis, acute, primarily splenic, 247
- Military surgeons, instructions to, 222
- Milk, breast, 270
cow's, streptococci in, 122
human, iron in, important to nursing infant, 419
infectious diseases spread through the, 318
pure, Philadelphia Pediatric Society, 378
supply, 242, 427
supply, pure, 474
secretion of, 323
- Millionaires, suggestion to generous, 55
- Mineral waters, 415
iron, 317
- Minnesota, defeat of medical bill in, 56
- Mirror writing and inverted vision, 541
- Mistakes, the man who never makes, 186
- Mitral stenosis, paralysis, laryngeal nerve, 337
the murmur of, 465
- Modeling-clay, bacteria in, 239
- Molluscum fibrosum, 15
- Monopoly of knowledge, 105
- Monster, anencephalic, 323
- Montgomery, E. E.: Puerperal sepsis; its prevention and methods of treatment, 27
- Monument, Pasteur, 104
- Moore, James E.: Prevention and cure of postoperative hernia, 505
- Moriarta, Douglass C.: Conclusions from personal observations of compound fractures, 207
- Morphinism, suggestions for lessening the frequency of relapse after treatment of, 496
- Morphology of bacteria and relation to virulence, 567
- Mortality and morbidity in Indiana for March, 150
from typhoid fever in private practice, 58
in concentrated camps, 584
of Michigan for March, 1901, 150
of operation for obstructive jaundice, 19, 70
rate, cause of lower, 5
rates lowered, improved sanitary conditions, 50
- Moscow, alcoholism in, 285
- Mosquito culex, transmitter of yellow fever, 130
bites, remedy for, 476
Jersey, breeding of the, 427
larva, the resistance of the, to cold, 217
nuisance of, 37
theory, 58, 103, 283, 380, 426
- Mosquitos, 526
crusade against, 238, 429
development of *Filaria nocturna* in, 563
freezing, 508
hibernation of, 312
in Paris, 192
- Mountain fever, Widal's test in, 177
- Mouth and stomach of man, starch digestion in, 289
and nose, prevention of disease by microorganisms, 602
- Moyer, Harold N.: Apoplexy and hemiplegia, 341
the so-called traumatic neurosis, 550
- Mucous membrane of uterus, effects of atmokausis, 419
- Mucus of respiratory tract, action on organism, 422
- Mules' operation, immediate results of, 107
operation, 543
- Mullen, Joseph: Resection of superior sympathetic cervical ganglion for noninflammatory glaucoma, 552
- Multiple neuritis, ten cases of, 512
- Mumps, a new sign of, 284
or influenza, 128
- Munger, E. E.: Improved bedstead for invalids, 512
- Municipal cleanliness, 150
- Muscle-Serum, in pulmonary tuberculosis in children, 606
- Muscles, flexor, of the fingers, venous angioma of, 133
ocular, asthenopia and anomalies of, 132
ocular, table of paralyses of, 499
- Murmur of aortic insufficiency, 563
- Muscular dystrophy, progressive, 225
- Muscular tumor of the uterus, 371
- Myasthenia, grave pseudoparalytic, 234
- Mydriasis, alternating, 226
amblyopia, and myosis in hysteria, 24, 78
- Myelitis, acute, 290
- Myocarditis, chronic, 493
- Myocardium, condition affecting cardiac murmurs, 93
diseases of, 93
- Myosis, and mydriasis, in hysteria 24, 78,
- Myomas (9) myomectomy of, during pregnancy, 591
uterine, how shall we deal with, 488
- Myomectomy of 9 myomas during pregnancy, 594
- Myxedema of varied type, 412
- Nantucket and the ocean climate, 502
- Nares, irrigation, whooping cough cured by, 364
- Nasal conditions in the aged, 516
- Narcotics, use of in Vermont, 282
- Nasal factor, an overlooked, in ear disease, 413
cavities and conjunctiva, relation existing between diseases, 564
conditions, asthma as a result of, 544
disease, chronic, the relation of middle turbinate, 499
passage, sarcoma of, 544
septum, chancere of the, 368
method of correcting deviations of the, 179
- Nasolacrimal duct, stenosis of the, 317
- Nasopharynx, carcinoma of the, 544
- National bureau of materia medica, a proposed, 189
department of health, 6
hospital (London) for paralyzed and epileptic, 56
sanatorium for consumptives, 149
- Nausea and vomiting, prevention during anesthesia, 606
- Navy, medical corps of the, 221
medical department, stagnation in the, 576
- Neck, abscess, hemorrhage, lancing, 383
- Necrosis, fat, of the pancreas, associated with septic complications, 226
multiple fat, a case of, 518
- Needle swallower of St. Germain, the, 242
- Negro, cardiac lesions as observed in the, 483
race, progress of, 474
- Neoplasms, ileus due to, 320
- Nephrectomy for adenocarcinoma, case of, 245
for removal of tuberculous kidney, 135
- Nephritic urine, albumin in, 224, 317
- Nephritis of children, 275
- Nephritis and urethritis, calculous, indications for operation in, 533
acute interstitial (nonsuppurative), 54
parenchymatous, complicating chickenpox, 137
treatment of, 124
- Nephrolithiasis, 416
- Nephrolithotomy on both kidneys, 336
- Nephroptosis, bandages for, 271
- Nephrotomy, 224
operation of, and anatomy of renal vessels, 29
- Nerve, unilateral paralysis of recurrent, 337
and vascular associations of the kidneys, 608
degeneration, products of, 218
disease, functional, 363
fibers in the pia mater, 144
leprosy, treatment of 2 cases of, 364
median and ulnar, injuries to, 42

- Nerve optic and cervical, neuritis of the, 217
 secondary suture of, 467
 superior laryngeal, paralysis, 222
 suture, 135
 ulnar, suture of resected, 15
 vasomotor, in the brain, 327
- Nerves and colors, 476
- Nervous and mental diseases, relation of, to general medicine, 496
 diseases, fear as an element of, 541
 exhaustion due to West Point training, 558
 system, syphilis of the, 497
- Nervous phenomena of artificial menopause, 92
 system, central, curing syphilitic lesions, 368, 417
 tachypnea, 417
- Neuralgia, 410, 605
 trigeminal, intracranial operations for, 195
- Neurasthenia and melancholia, toxic origin of, 247
 recurrent alcoholic peripheral, 217
 after atrophy, 367
 secondary to gonorrhoea, 139
 study in the hematology of, 177
 treatment of, 310, 495, 541
 of optic and cervical nerves, 217
- Neurasthenics, 315
- Neuritis, multiple, 226
 and hematuria, 275
 multiple, ten cases of, 542
 alcoholic, arsenic and alcohol in, 608
- Neuroma, intramedullary, and syringomyelia, 139
- Neuroretinitis, double, complete recovery from, 513
- Neurosis, traumatic, the so-called, 550
 vasomotor, in varying regions of same patient, 128
- New army ration, 10
- Newborn, gonorrhoeal ophthalmia in, 588
 hemorrhage, suprarenal extract, 437
 pathology of, 130
- Newgrowths, cancerous and other, causation of, 53
 Newman's tracheloplasty, 176
- Newport, R. L., climatic influences of, 502
- Newspaper medical advertisements, 579
- New use for an old remedy, 5
- New York and New England, notes on the climate of, 503
 need of pipe galleries in, 330
- Night sweats of tuberculosis, the treatment of, 407
- Nipples, fissured, 206
- Nitrous oxid and oxygen as a surgical anesthetic, 105
- Nitrosugars, 269
- Nondrainage in operation for appendicitis with pus, 95
- Nondiphtherial tonsillitis, antitoxin in, 174
 thera antitoxin in treatment of, 174
- Nonintoxicating drinks in saloons, 239
- Nontraumatic tetanus, 323
- Nonunionists, 149
- Norris, George W.: The clinical value of tracheal tugging as a sign of aneurysm or mediastinal tumor, 108
- Nose and throat diseases, limitations as to general treatment, 269
 operation upon the, 221
 prevention of infection by microorganisms, 602
 so-called catarrhal disease, effect on the general health, 344
 tuberculous and syphilitic granulomas of the, 382
- Noses, syphilitic, reconstruction of, 129
- Nostrum mania, 188
- Nuisance, mosquito, 37
- Nurses, plague, 426
- Nursing, American Journal of, 238
 diploma mills, 143
 ethics, 332
 learning, by correspondence, 159
- Nystagmus of spasmus nutans in infants, 127
- O**besity, the treatment of, 493
 Obituary, 10, 14, 58, 62, 103, 104, 148, 151, 238, 241, 282, 284, 190, 192, 334, 379, 381, 426, 428, 473, 476, 525, 526, 581, 584
- Obstetric amphitheater, an, 149
 hemorrhages, 44
 hemorrhages, cause and significance of the, 272
 practice, the value of intestinal antiseptics with simple aseptic pads in, 166
- Obstetrics, advance of, 219
- Obstipation, 610
 the practice of, 534
 use of curet in, 535
 vaginal douching in, 363
- Ocular muscles, asthenopia and anomalies of, 132
 paralyses of, table of, 499
- Oculomotor paralysis, recurrent, 414
- Ohio hospital for epileptics, politics in the, 236
- Olecranon, fracture, dislocation of forearm, 413
 both bones of the forearm, 413
- Oleomargarine, 147, 427
- Olivary bundle, 321
- Operation, Bottini, 246
 for obstructive jaundice, mortality of, 19, 70
 intracranial, for trigeminal neuralgia, 195
 uranoplastic, 286
- Operative treatment for fractures, 135
- Opium market, cornered, 581
 poisoning, 570
 smoking, 151
- Operation, extending an, without consent, 583
- Ophthalmia, gonorrhoeal, in newborn, 588
- Ophthalmoscopes, 498
- Ophthalmology, 465
- Optic and cervical neuritis, 217
- Opticians, refracting, 56
 licensing, 61
- Orbit, abscess of the, 317
- Orbital surgery, report of 2 cases of, 543
- Orchitis as sequel of typhoid fever, 413
- Organism, action of mucus of respiratory tract, 422
- Organization, protective, 239
- Organotherapy in gynecology, 319
- Organs, fatty degeneration of, 337
- Orthopedic clinic of Lorenz, 467
 corsets in lateral curvature of the spine, 51
- Osler, William: Hemorrhage in chronic jaundice, 152
 Congress on tuberculosis, 588
 The medical aspects of carcinoma of breast, with a note on the spontaneous disappearance of secondary growths, 17, 63
- Osmotic pressure and its relation to uremic manifestations, 479
- Ossiculectomy for chronic suppurative otitis media, 516
- Osteoarthritis, pulmonary hypertrophic, 563
- Osteofibroma of the uterus, 272
- Osteopaths, 10, 93, 284
- Osteopathy, the treatment of, 524
 vs. massage, 237
- Osteotomy, for deformity of hip joint disease, 130
 for deformity of hip disease, 596
 of radius, 115
- Otitis media, 43
 chronic purulent, 415
 ossiculectomy for, 516
 suppurative, formalin in the treatment of, 509
 complications after, 195
- Ovarian cysts, elongation of tubes with, 371
 cyst, 41
 acute intestinal obstruction due to, 90
 and malignant sequel, 338
 surgery, some results of, 488
 transplantation, 330
 tumor, a solid, 182
 in a child, 338
- Ovaries and tubes, operation upon, 131
- Ovary, the origin of carcinoma of the, 198
- Oxalic acid and indican, 93
- Oxid, nitrous and oxygen as a surgical anesthetic, 105
- Ox-serum in rectal feeding, use of, 174
- Oxycyanid of mercury in practical antiseptics, 39
- Oxygen and chloroform apparatus, a new, 197
 and nitrous oxid as a surgical anesthetic, 105
- Oyster as a carrier of typhoid, 108
- P**alate, soft, 517
 Palsy, asthenic bulbar, 143
 infantile cerebral, 137
- Pancreatic diabetes, lesions of kidney in, 337
 disease, estimation of urinary sulfates in, 274
- Pancreas, extirpation, for carcinoma, 287
 fat necrosis of, with septic complication, 226
 sarcoma of the, 412
- Pancreatitis, 335
- Panhysterokolpctomy, a new prolapso operation, 431
- Panophthalmitis, postpartum metastatic, 253
- Paracentesis in acute pleurisy, rules for, 408
- Paraffin imbedding, device for, 15
 injections for cosmetic purposes, 226
- Paralyses of ocular muscles, table of, 499
- Paralysis, acute ascending, 175
 agitans, trauma as an exciting cause of, 415
 asthenic bulbar, 269
 treatment, by systematic exercise, 604
 bilateral brachial, 221
 general, and tubes, pathologic unity, 525
 Landry's, 129, 364
 or grave pseudo-paralytic myasthenia, 234
 of serratus magnus, 541
 of laryngeal nerve in mitral stenosis, 337
 oculomotor, recurrent, 414
 of cervical lymphatic, 607
 of the placenta site, 226
 peripheral uremic, 323
 superior laryngeal nerve, 222
 unilateral, of the recurrent nerve, 337
- Paralyzed and epileptic, National Hospital for, 56
- Paramyoclonus multiplex, 609
- Paraphenylenediamin, 366
- Paraplegia from birth, 93
- Parasite, Argas megnini in each ear, 313
 in the lymphatic glands and blood of syphilitics, 323
 of carcinoma, 100, 286
- Paravaginal hysterectomy and its results, 197
 method for extirpation of uterus, 527
- Parenchymatous nephritis complicating chickenpox, 137
- Paresis, accommodation, or premature presbyopia, 185
- Paretic dementia, etiology of, 496
- Paris, mosquitoes in, 192
- Parotid gland, mixed tumors of, 181
- Parotitis, 179
- Paroxysmal arrhythmia, 289
- Pasteur treatment of rabies, 198
- Patek, A. J.: Excessive esinophilia in trichinosis, 513
- Patella, fracture of the, 174, 286
 ankylosis of the, 286
- Pathogenesis and bacteriology of diphtheria, 229
 chemie. teaching of, 610
 comparative, of the Jews, 94
 of newborn, 130
- Patients in Hospitals, convict insane with other, 187
 mental condition, 188
 remuneration in public institutions, 423
- Patriotism, professional, American, 49
- Pauper inebriates, 13
 practice, 475
- Paupers in Kansas, 391
- Pelvic contractions, indications as furnished by, 433
 diseases in women, vaginal operation in, 79
 inflammation and uterine fibroid degeneration, 153, 199
 inflammatory diseases of women, 186
 organs, the relation and position of, 313
 surgery, accidents and complications, 488
- Pelves, labor in narrow, treatment by versions, 518
- Pelvis, demonstration of fractures of the, 335
- Pemphigus neonatorum, infant three days old, 129
- Penis and scrotum, plastic operations for loss of skin, 196
- Pennsylvania Board of Pharmacy, 149
 Brigade Hospital Tent, 435
 Hospital, one-hundred and fiftieth anniversary, 283
 Society for the Prevention of Tuberculosis, 119
- Penology, 190
- Pentosuria, chronic, 336
- Peptic ulcer, 130
- Perussion, auscultatory, 228
 of the heart, 315
- Perforation and appendicitis, septic peritonitis, 42
- Pericarditis, tuberculosis, 412
 clinical observations in, 482
 pathology and pathogenesis of, 482
 the general etiology of, 482
 treatment of, 483
 tuberculous, 482
- Pericardium, adherent, 482
- Perineal prostatectomy, 531
- Periostitis, demonstration of multiple, 290
- Peripheral neuritis, recurrent alcoholic, 217
 uremic paralysis, 323
 venous thrombosis in cardiac disease, 353
- Peritoneal adhesions, inferior, 371
 cavity, pus in the, 318
 tuberculous, curious case of, 13
- Peritonitis, contributing factors in production, 487
 diffuse, complicating appendicitis, 483
 diffuse, from appendix perforation, 268, 365, 417
 encysted, 92
 general septic, following appendicitis, 91
 perforative, when to operate in, 268
 septic, after appendicitis and perforation, 42
 tuberculous, 41
- Permanganate, treatment of lupus with, 126
- Pertussis, pathology and treatment of, 489
- Petition from Porto Rico, 103
- Pharmacology of the suprarenal gland, 510
- Pharyngeal pouch, removal of a large, 465
- Pharyngitis, epidemic of, 142
- Pharynx, sclerotic hyperplasia of the, 175
- Phelps, A. M.: Phelps' operation for clubfoot with a report of 1,650 operations, 21, 72
- Phenylhydrazin test for glycosuria, 45
- Philadelphia High School for Girls, the medical department of the, 376
- Philanthropy for consumptives, 141
- Philippines, ration for soldiers, 103
 typhoid fever in the, 315
- Phosphorus in rachitis, 124
- Photographs in surgery, 238
- Photography, x-ray, 131
- Phthisis, cough in, 88
- Physical condition of slums, to improve, 293
 culture, 59, 214
 culture in children, 536
 measurements in puberty, 436
- Physician, some of the ethic and sociologic relations of the, to the community, 502
 not compelled to practise, 190
- Physicians, first women, 62
 income of Berlin, 428
 Ontario, 428
 strikes, 277, 378
 suit against, 325
 support of, 581
 women resident, 1:1
- Physiologic relations of the three arabinoses, 337
- Physiologists, international congress of, 305
- Physiology in public schools, 97, 191, 378
 of the kidneys and ureters, 369
- Pia mater, nerve fibers in the, 144
- Picric acid in affections of skin, 100
- Pigeon shooting, "sport" of, 51
- Pigmentation, cirrhosis with, 480
- Piles, radical cure by excision, 398
- Pills, sugarcoted, 240
 quinn, wasted, 92
- Pilocarpin, hypodermically, in diseases of the eye, 313
- Pipe galleries, the need of, in New York, 330
- Pirkner, F.: On the use of alcohol in treatment of carbolic acid burns and poisoning, 358
- Pitfalls and traps in special and general practice, 312
- Pituitary body, akromegaly treatment with, 540
- Pityriasis versicolor, 220, 467
- Placenta, adherent, 418
 forceps, Schnetter's, 570
 prævia, 173, 433
 prævia, cesarean section for, 536, 578
- Placental site, 173
 paralysis of the, 226
- Plague, 163, 192, 231, 241, 369, 428
 among rats, 282
 at Ann Arbor, 61
 at Cape Town and Manila, 10
 bubonic, 526, 584
 a study of, based upon the outbreak in San Francisco, 218
 house rats as a means of spreading, 150
 in California, 61, 141, 146

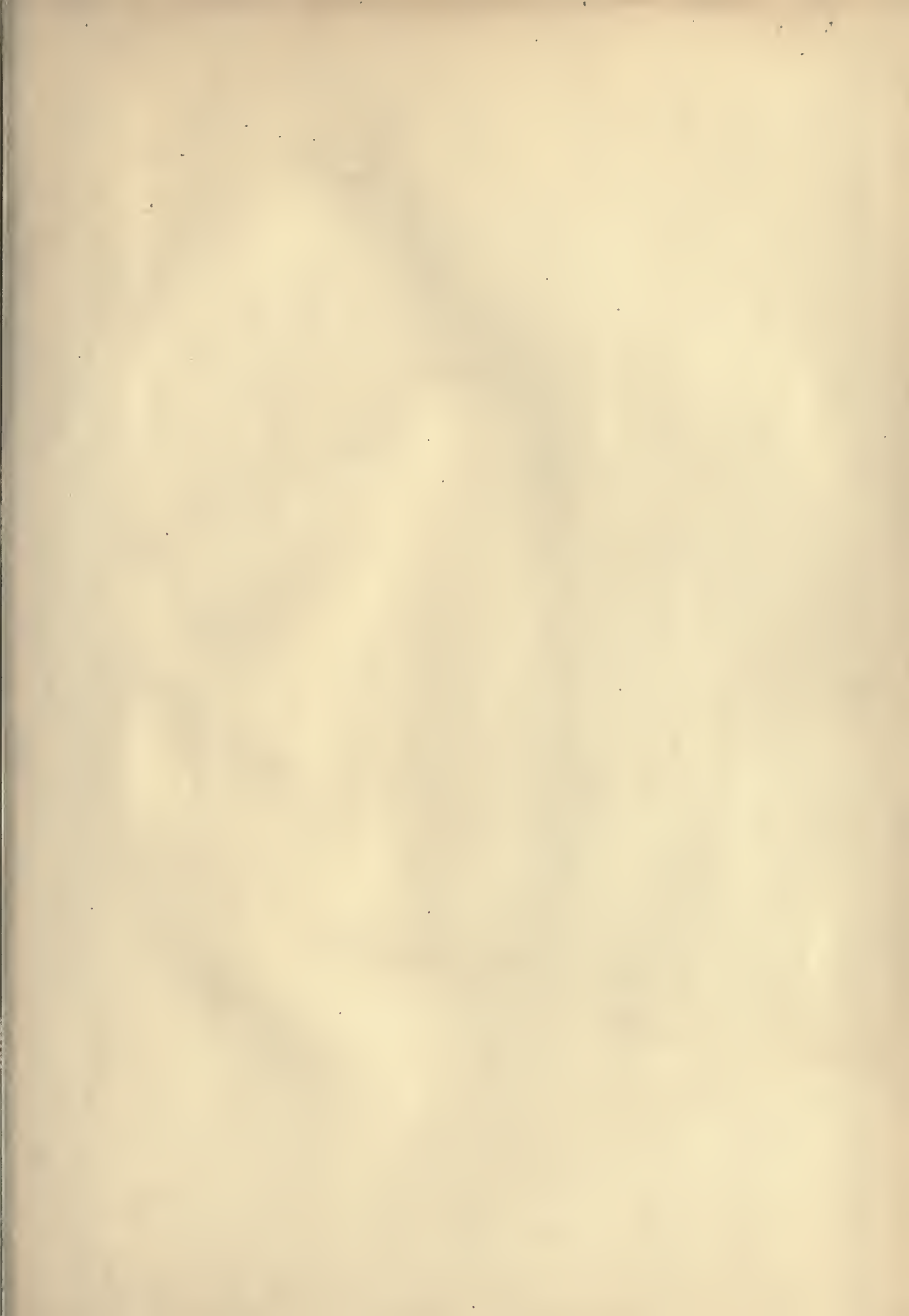
- Plague, investigation of, 284
nurses, 426
of rats in Cape Town, 608
on an army transport, 473
recrudescence of, 97
- Plantose, use of, 370
- Plasmon and tropion, 273
- Playrooms, 473
- Play schools, summer, 375
- Pleurisy, acute, paracentesis in, 408
methylene-blue injections in, 617
- Pleuritic arthritis, 143
- Pneumonia, a historic review of its treatment, 169
and celiotomy, 285
and pneumotomy, 532
antidiphtheric serum in, 409
atypical, and pulmonary tuberculosis, 555
complicated by pseudo-membranous exudate, 247
fibrinous, the treatment of, 571
in Klondike, 103
lobar, following ether anesthesia, 415
treated by icepack, 43
with empyema in pregnancy, 123
more fatal than tuberculosis, 278
mortality in hospitals, 337
protracted influenza, in infancy, 49
saline injections in, 265, 293
treatment of, 126, 315, 495, 605
- Pneumopericardium, 223
- Pneumotomy and pneumectomy, 532
- Poison, sensibility of plants to, 284
- Poisons, metallic, cirrhosis of the liver due to, 480
- Poisoning, arsenic, investigation of, 37
relation to arsenic elimination through the hair,
92
bismuth, 519
by chromic acid locally applied, 126
soft-soap, 519
turpentine, 40
with the toadstool agaricus torminosus, 317
- Poliomyelitis and puerperal poliomyelitis, 271
- Political colonization and medical science, 142
- Politics in the Ohio hospital for epileptics, 236
partisan, and charitable institutions, 49
- Pollution of river water, 219
- Polyclinic, London, and English medical progress, 576
- Polyneuritis, puerperal, and poliomyelitis, 271
- Polypoid growth of the tonsil, 218
- Poor, ice for, 594
- Porencephalia, 337
- Porocæsarean operation, 566
section, a successful, 588
vs. cesarean operation, 269
- Port quarantine facilities, danger to life and hardships
to travelers, 51
- Porter, William Henry: The good and bad effects
obtainable from digitalis used as a therapeutic
agent, 110, 159
- Porto Rico, illegitimacy in, 3
petition from, 103
- Postgraduate study, 237
- Postinfluenzal melancholia, 98, 340
- Postmaster-General, blessed be the, 55
- Postoperative intraperitoneal hemorrhage, 487
- Postpartum hemorrhage, 218
metastatic panophthalmitis, 253
- Potassium bromid, analyses of stools and urine of epi-
leptic patients treated with, 515
iodid, in diseases of the eye, 313
and rest in case of aortic aneurysm, 89
sulfocyanid in the human saliva, 568
- Pott's disease, laminectomy for, 129
- Powder grains, removal, hydrogen dioxid, 16, 152, 384
- Practice, city or country, 424
illegal, 426
hospital positions prerequisite of admission to, 185
pauper, 475
- Practitioner, medical, desultory work with, 105
- Pregnant uterus, germs found in the, 587
- Precordial area, respiratory movements of, 865
- Pregnancy, abdominal, 566
chorea occurring in, 220
extrauterine, differential diagnosis, 371
operation for, 179
fibroid tumor, cesarean hysterectomy, 356
in a bicornate uterus, 319
lobar pneumonia with empyema in, 128
myomectomy of 9 myomas during, 594
presystolic murmur as associated with, 369
toxemia of, 178
- Premature infants, 274
- Presbyopia, premature, or accommodation paresis, 185
- Prescriber of food for infants, 816
- Prescription writing, use of metric system in, 288
- Presidential address, the, 421, 439
- Presystolic murmur as associated with pregnancy, 369
- Prevention and cure of insanity, 186
of, in predisposed children, 491
the treatment of, 495
- Preinsula, redundancy of, in brains of distinguished
men, 565
- Primary tuberculosis of the vagina, 4
- Prize-essays for public instruction—a suggestion, 329
- Profession, advertising in, 95
the disunity of the New York, 373
- Professional defense, 150
journalism, for the cause of, 1
patriotism, American, 49
spirit, touchstone of, 6
- Professor, the old, 185
- Progress, heredity and human, 2
- Projectiles, paired, 195
- Prolapsus, operation, a new, 431
- Prolapsus, uteri, mechanism of, 134
- Promaternity hospitals, 173
- Proofreading as she are done, 524
- Propagation of yellow fever, 133
- Prophylaxis of glanders and tuberculosis, 213
of venereal diseases, 132
- Proportion of doctors among men of genius, 145
- Prostate and seminal vesicles, new operation, 269
gland, relief of senile hypertrophy of the, 245
senile hypertrophy of the, 610
hypertrophy of the, 222
removal of the anterior lobes, 95
- Prostatectomy, 245, 246, 531
perineal, 531
- Prostatic enlargement, 517
hypertrophy, treatment of, 181, 194
obstruction, following Bottini operation, 246
- Prostitution in tenement houses, 59
- Protargol for treatment of gonorrhœa, 273
clinical observations on, 605
- Prow, youth at, 146
- Pruritus, senile, treatment of, 125
veratrin in, 216
- Pryor, John H.: Deep breathing as a curative and pre-
ventive measure, 81
- Pryor, W. R.: An analysis of my vaginal ablations in
181 cases of pelvic inflammation and uterine
fibroid degeneration, 153, 199
- Pseudoparalytic myasthenia, grave, or, 234
- Pseudopathy as a warning, 141
- Psos abscess, treatment of, 366
- Psychic epileptic attacks, 609
- Psychology of the consumptive, 329
- Psychoneurosis, repetition, 268
- Psychologic department, a, 476
- Psychoses, acute, treatment of in private practice, 497
in cerebral syphilis, 497
of chorea, 541
- Ptoxis, congenital, new operation for, 127
- Puberty, physical measurements in, 436
- Pubescent school girl, the, 537
- Public bath and washhouse of Philadelphia, 59
duty of the, to the medical profession, 87
health legislation, 428
instruction, prize essays for, a suggestion, 329
institutions, remuneration and employment of
patients in, 423
libraries, medical departments in, 563
service, 47, 137, 182, 275, 323, 371, 419, 467
schools, hygiene and sanitation of, 149
physiology in, 191
temperance physiology in the, 378
- Puerperal eclampsia, 535, 585
infection, 173, 338
polynneuritis and poliomyelitis, 271
sepsis, 27
septic infection, 516
sepsis, prophylaxis and treatment of, 535
the definition and pathogenesis of, 523
- Puerperalis, tetanus, 313
- Puerto Rico, climate and diseases of, 502
- Pulmonary tuberculosis in children treated by muscle-
serum, 606
and atypical pneumonia, 555
climatology of Arizona, 545
and laryngeal tuberculosis, hetol in, 569
formalin in, 125
hypertrophic osteoarthropathy, 563
early and radical climatic change, 504
in children, thiocol in treatment, 267
iodipin hypodermically in, 171
practical thoughts in, 392
selection of favorable cases for sanatorium treat-
ment, 503
specific therapeutics in, 495
treatment of, 401
- Pulse-rate in pulmonary tuberculosis, 563
- Pulse, slow, in Stokes-Adams disease, 299
- Pulsus paradoxus, reversed, 312
- Punishment to fit the crime, 56
- Purity, social, 43
- Purpura in typhoid fever, 108
- Purulent meningitis, operative treatment of, 195
- Pusiformis, bacillus, angina of, 323
- Pus in abdominal operations, 432
in peritoneal cavity, 318
- Pyle, Edwin W.: Simplicity in therapeutics, 396
- Pyle, W. L.: Postpartum metastatic panophthalmitis,
with a clinical and pathologic study, 253
- Pylorectomy, 315
hepatectomy, partial, and cholecystectomy, 217
for carcinoma of the stomach, 135
- Pyloric tumor, disappearance, after gastroenterostomy,
175
- Pylorus, carcinoma of, 25
hypertrophy with stenosis of, 128
- Pyramidon, camphorate of, 419
and its salts, 606
- Pyrexia in carcinoma and other diseases of the liver
and in cases of gallstone, 40
- Quack legislation, 1
- Quackery, health resorts and "kurs" as a sub-
stitute for, 523
- Quarantine, facilities, danger to life and hardships
to travelers by lack of, 51
lack of, 233
proclamation, 12
regulations, a change in, 191
right to, 190
stations, Florida, 427
- Quinin in labor, 39, 54
- Quinine pills, wasted, 92
subcutaneous injections of, 417
- Quotation without comment, 57
- Rabies, 92, 282
in Berlin, 359
its cause, frequency and treatment, 233
Pasteur treatment of, 198
- Race, solidarity of, 54
- Rachitis, phosphorous, 124
treatment of, with suprarenal extract, 571
- Radiography apparatus, continental progress, 228
- Radius, fissure of the head of the, 320
osteotomy of, 115
- Ration for Philippine soldiers, 103
- Rats, extermination of, 146, 150, 241, 374, 381
house, as a means of spreading plague, 150
plague among, 282
of, in Cape Town, 608
the study of, 284
destruction of, on ships, 242
- Reason in animals, 61
- Reciprocity, away with, 501
in examining for license to practice medicine, 575
interstate, and uniform medical legislation, 587
- Recreation Building, 427
- Recrudescence of plague, 97
- Rectal feeding, use of ox-serum in, 174
- Rectum, anomalous position of, 91
cancer of, 105
new operation for, 486, 488
- Recuperative power of heart measure of ability, 283
- Red light treatment for measles, 429
- Reed, Charles A. L.: The president's address, 439
- Refracting optician, 56
- Regional anatomy, a method for the study of, 486
- Registration act, modification of, 59
- Regurgitation, aortic, with Flint's murmur, 105
- Remedy, for mosquito bites, 476
local, in affections of the skin, 100
new use for an old, 5
- Remy's gelatin to diagnose typhoid, 315
- Renal and ureteral calculi, 434
anomaly, an unusual, 194
calculi, a demonstration of skiagraphs of, 193
cases, 93
disease, diagnosis and treatment, 193
operations, various incisions appropriate, 488
or ureteral calculi, 320
retention, conservative operation for, 319
stone, the x-ray in diagnosis of, 245
surgery, a contribution to, 193
skiagraphic diagnosis of, 530
tuberculosis, diagnosis and surgical treatment, 515
vessels in relation to digital exploration, 29
- Resection, intestinal, 129
of elbow for ankylosis, 236
of lung, 196
of the cervical sympathetic for epilepsy, 197
of the entire humerus, 286
of the inferior turbinate, 223
of the upper jaw, 198
- Resident physicians, women, 151
- Resorcin as a preservative of suprarenal extract, 215
- Respiration, artificial, by means of an air pump, 336
Fell's apparatus for, 335
- Respiratory congestions, 243
movements of the precordial area, 365
passages, dust as a factor in diseases of, 37, 86
tract, action of mucus of on organism, 422
silver nitrate in inflammation, 408
- Responsibility and crime, 411
for medical attendance in a divided family, 147
- Retina and vitreous, idiopathic hemorrhage, 223
newer pathology of the, 543
- Retinal artery, central, embolism of, 100, 131
detachment in labor with albuminuria, 465
- Retinitis, 365
acute catarrhal, 39
- Retrodisplacements of the uterus, 47
- Retroflexion of iris, report of a case of, 498
- Retropharyngeal gravity-abscess, 385
- Reviews:
Abbott, A. C.: The hygiene of transmissible dis-
eases, 102
Anders, James M.: A textbook of the practice of
medicine, 9
Bohm, A. A.: A textbook of histology, 8
Bowditch, Henry P.: An American textbook of
physiology, 9
Brubaker, Albert P.: A compend of human physi-
ology, 331
Cullen, Thomas Steven: Cancer of the uterus,
pathology, symptomatology, diagnosis, and
treatment, 580
Davidoff, W.: A textbook of histology, 8
French, Edwin Charles: Food for the sick; how
to prepare it. Food for the baby, 331
Frost: William Dodge: A laboratory guide in
elementary bacteriology, 102
Garrigues, Henry J.: A textbook of the diseases
of women, 102
Goelet, Augustin H.: The technic of surgical
gynecology, 9
Gould, Geo. M.: American year-book of medicine
and Surgery for 1901
Gould, Geo. M.: Anomalies and curiosities of
medicine, 331
Greene, Charles Lyman: The medical examination
for life insurance, 7
Haab, O.: Atlas of ophthalmoscopy; translated
and edited by G. E. de Schweinfütz, 580

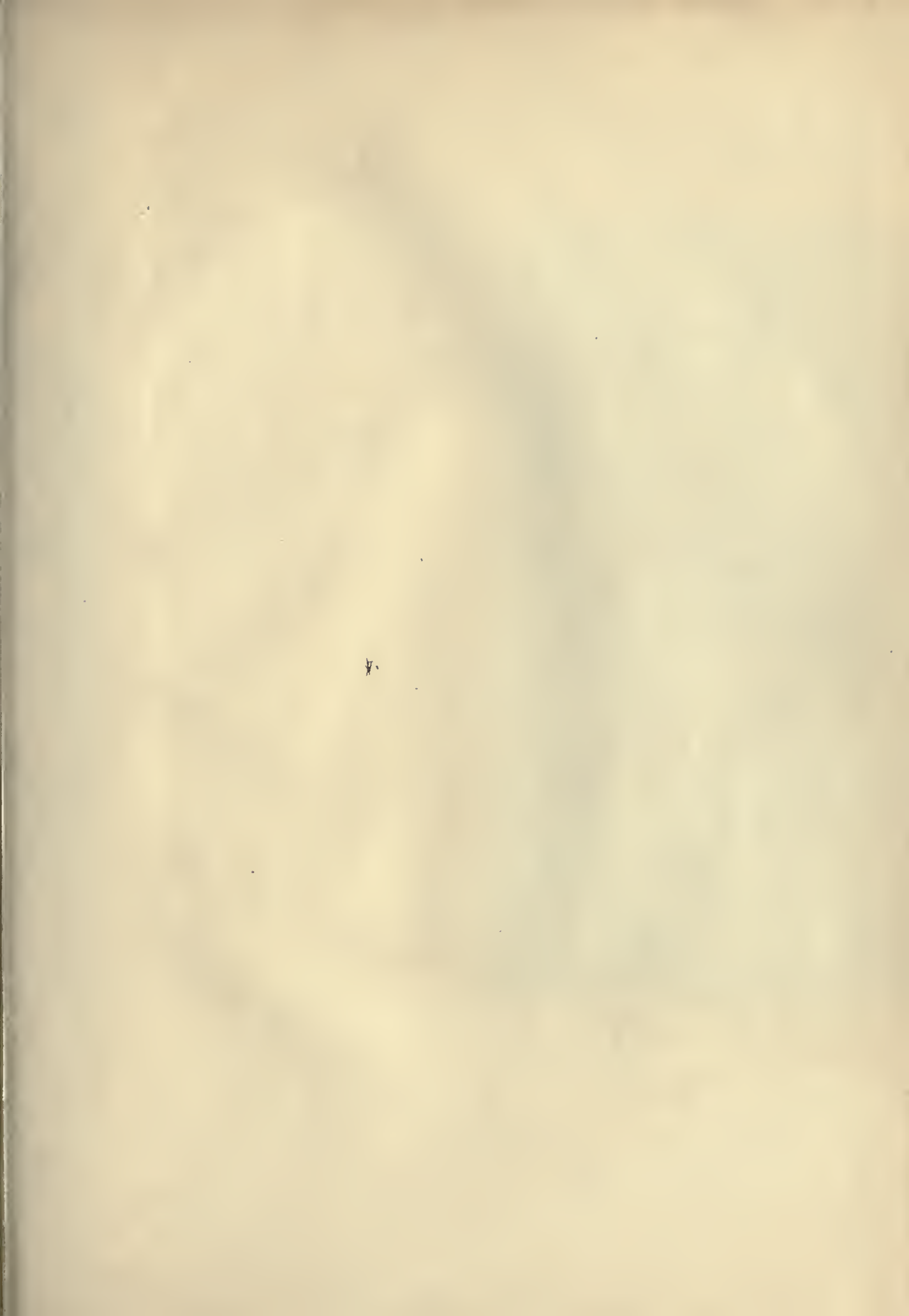
- Reviews:
- Haig, Alexander: Diet and food, 102
 - Harrington, Charles: Manual of practical hygiene for students, physicians and medical officers, 332
 - Hyde, James Nevins: A manual of syphilis and venereal diseases, 332
 - Kehr, Hans: Gallstone disease, 581
 - Knopf, S. A.: Tuberculosis as a disease of the masses, and how to combat it, 331
 - Kyle, D. Braden: Diseases of the nose and throat, 102
 - Lowrie, Edward: Chloroform, a manual for student and practitioners, 331
 - May, Charles H.: Manual of the diseases of the eye, 332
 - Mays, Thomas J.: Pulmonary tuberculosis, pneumonia, and allied diseases of the lungs, 581
 - Ogden, J. Bergen: Clinical examination of the urine and urinary diagnosis, 580
 - Parkes, Louis: Practical hygiene, 8
 - Powell, William M.: Essentials of the diseases of children, 580
 - Pyle, Walter L.: Anomalies and curiosities of medicine, 331
 - Pyle, Walter L.: Manual of personal hygiene, 7
 - Robb, Isabel Hampton: Nursing ethics, 332
 - Schaeffer, Oskar: Anatomic atlas of obstetrics, 580
 - Schaeffer, Oskar: Saunders' medical hand atlases, 8
 - Schaeffer, Oskar: Atlas and epitome of labor and operative obstetrics, 332
 - Schmidt, Prof. Ad.: Die faeces des menschen in normalen und krankhaften zustande, 7
 - Stengel, Alfred: A textbook of pathology, 331
 - Strassburger, J.: Die faeces des menschen in normalen und krankhaften zustande, 7
 - Sturgis, F. R.: Sexual debility in man, 331
 - Sturgis, F. R.: The students' manual of venereal diseases, 332
 - Taylor and Wells: Diseases of children, 8
 - Thorington, James: Retinoscopy, 102
 - Reyburn, Robert: Prevention of disease infection by microorganisms through the mouth and nasal cavities, 602
 - Rheumatic fever, investigations upon, 364
 - stimulants, 480
 - Rheumatism, 366
 - acute articular, bacteriology of, 337
 - articular, etiology of, 337
 - treatment of, by aspiration, 604
 - rheumatic and rheumatoid affections, 41
 - treatment of acute, 88
 - Rheumatoid arthritis, pathology and treatment, 175
 - Rhinologic operations, suprarenal capsule in, 133
 - Rhinoscleroma, 541
 - Rhoads, J. Neely: Removal of powder stains, 16
 - Rhus glabra in enuresis, 410
 - Rib, cervical, 607
 - Richardson, Mark W.: Disinfection of typhoid urine, 340
 - Rickets and cretinism, serous vaccinia, 364
 - scurvy, 174
 - Ricketts, B. Merrill: Inguinal hernia, 201
 - Riesman, David: A case of intermittent claudication, 343
 - Persistence of the thyroglossal duct, 593
 - Pulsation of the uvula in aortic insufficiency, 505
 - Rinderpest, 10, 145, 282
 - River pollution, 191
 - Rockefeller Institute for Medical Research, 525
 - Romanowsky's stain in malaria, 40
 - Röntgen rays, 242
 - Rosenberger, Kandle C.: A plea for uniformity of technic in Widal's reaction, 304
 - The bacteriologic examination of clinical thermometers, 553
 - Rosenthal, Edwin: Prolonged intubation, 214
 - Rubber dam, adhesive, 270
 - Rudolf Virchow Fund, 57
 - Rupture of the bladder, 244
 - of aorta, a rare cause of, 337
 - of the urethra, 245
 - traumatic, of eyeball, 265
 - traumatic, of right kidney, 316
 - Ruptured spleen, 317
 - Saccharin bill, the, 334
 - Sacrosanct tub-bath, the, 522
 - Sailors, causes of death among, 300
 - Saline infusion in pneumonia, 262, 233
 - treatment of dysentery, 215
 - Saliva, human, potassium sulfocyanid in the, 568
 - Salivary calculus, passage of a, without symptoms, 174
 - Salt sickness, 240
 - solution for intravenous injection, 266
 - intrarectal injections in typhoid fever, 491
 - Sanatorium, Rocky Mountain Industrial, 13
 - treatment for tuberculosis, progress in the, 236
 - of pulmonary tuberculosis, 503
 - Sand, intestinal, 91
 - San Francisco plague situation, 61, 248
 - Sanitarium, National, at Fort Stanton, 190
 - Work and State Hospital, young physicians in, 221
 - for tuberculosis, 429
 - Sanitary condition of Havana, 148
 - conditions, improved, and lowered mortality rates, 50
 - Connecticut, 58
 - effort and women's clubs, 185
 - features of smallpox, 529
 - inspectors, 58
 - league, women, 60
 - progress and tendency of, 451
 - Sanitary science and hygiene, progress in, 422
 - treaty, 238
 - Sanitation and hygiene of public schools, 149
 - domestic, 87
 - improvement in, 57
 - in the Austro-Hungarian navy, 429
 - of Chicago schools, 428
 - of churches, 373
 - of West Africa, 241
 - of nasal passages, 544
 - of the root of the left lung, 563
 - public, the role of the water meter in, 234
 - Sanitoriums for tuberculosis, 501, 545
 - Santiago as a yellow fever center, 132
 - Saponin and its antidote, 224
 - Sarcoma, amputation of hipjoint for, 11
 - case of, 516
 - congenital, of liver and suprarenal, 47
 - gastric, a case of, 411
 - inoperable, treated with mixed toxins, 292
 - of the brain, 217
 - of the pancreas, 412
 - of uterus, 135, 365
 - primary, of the iris, 106
 - resection of a large part of the chest wall, 335
 - Scalp, peculiar disease of, 62
 - Scar tissue, pressure of, 93
 - Scar vaccination, development of a keloid, 315
 - Scarlatiforme, erythema, desquamativum, 208
 - Scarlet fever, 57, 149, 10
 - joint affections in, 318
 - new type of, from a public health point, 174
 - treatment of, 56
 - Scavenging, flies and the science of, 465
 - Scheppegrell, W.: Dust as a factor in diseases of the upper respiratory passages, 36, 86
 - Schetter's placenta forceps, 570
 - School buildings, filthy, 241
 - Schools, home study for, 101
 - for deaf, 252
 - gardens, German, 429
 - girl, the pubescent, 537
 - hygiene, 151
 - hygiene, a department of, 538
 - life, early, hygiene of, 538
 - medical, biologic training in, 99
 - nursing, diploma mills, 143
 - public, change in methods of teaching, 97
 - vacation, 373
 - work, philanthropy in, 576
 - Schott exercises, 414
 - Sciatic nerve, multiple tumor of, 133
 - Sciatica, treatment by dry air, 126
 - Science and christianity, 189
 - christian, humors of, 4
 - Sanitary, Connecticut, 58
 - Scientific and trade name of drugs, 288
 - Sclerodactylia and acroparesthesia, 607
 - use of hospitals, 5
 - Scleroderma, treated by superheated dry air, 126
 - diffuse, 41
 - Sclerotic, hyperplasia of the pharynx, 175
 - Sclerosis, amyotrophic lateral, 542
 - Scoliosis, hysterical, 137
 - incipient, 138
 - Scopolia carmelolica, physiologic relation to atropa belladonna, 605
 - Scotland, smallpox epidemic in, 87
 - Scrofuloderma, ulcerating, 12
 - Scrotum and penis, plastic operation for complete loss of skin of, 196
 - Scurvy, infantile, 125, 181, 222, 366
 - relation of, to recent methods of artificial feeding, 38
 - rickets, 174
 - Sea air, 209
 - hospital for French fishermen, 14
 - Seasickness, 123, 409
 - journalistic, 2
 - Seborrhea, benzoin in, 410
 - Secretion, of milk, 323
 - Sedative, dinoin as a, 266
 - Selenium, influence of, 42, 128
 - Seminal vesicles, new operation to expose, 269
 - total extirpation of the, 569
 - vesiculitis, chronic, 565
 - Senile hypertrophy of the prostate gland, relief of, 245
 - menstruation? 339
 - pruritus, treatment of, 125
 - Sensation, disturbances of, 227
 - Sentiment and fact, 521
 - Sepsis, puerperal, 27
 - prophylaxis and treatment of, 535
 - Septic disease in graduated attacks, 42
 - infection, the treatment of general, 321
 - puerperal infection, 516
 - Septicemia following suppurative appendicitis, 219
 - Septum, nasal, chance of the, 368
 - method of correcting deviations, 179
 - Sequels of gonorrhoea and their significance in surgery, 3
 - Serotherapy in 1,778 cases of diphtheria, 89
 - Serous meningitis, acute, 570
 - vaccinia with cretinism and rickets, 364
 - Serum and antiseptic treatment pernicious anemia, 362
 - anthrax, 567
 - diagnosis of tuberculosis, 289, 418, 567
 - antidiphtheric, in pneumonia, 409
 - antipneumococcal, 466
 - antitetanus, in tetanus neonatorum, 127
 - fabrication of antiplague, 123
 - reaction, Arloing-Courmont, 183
 - not uniform in spirillum cholerae Asiaticae, 230
 - Serums, agglutinating, partial and mutual reactions of, upon different races of bacteria, 230
 - Service, medical, value of gratuitous, 106
 - Sesamum, oil of, with bromin, 215
 - Sewage, Chicago, 428
 - Sewerage into running streams, 59
 - Shock from a clinical standpoint, 433
 - surgical, 564
 - Shoulder, congenital luxation of, 44
 - Sick clubs, German, 429
 - Sigmoid flexure, hemorrhage from, in typhoid, 92
 - Silver nitrate in inflammations of the upper respiratory tract, 408
 - Sinus, frontal, anomalies bearing on chronic sinusitis, 544
 - empyema of the, 544
 - chronic, bearing of anomalies of frontal sinus, 544
 - frontal, empyema of the, 438
 - thrombosis and antrum infection, 385
 - Sitophobia, 564
 - Skiagraphic diagnosis in renal and ureteral surgery, 530
 - Skin affections, picric acid, local remedy, 100
 - blastomycosis of the, 496
 - cancer, 496
 - electrolysis in diseases of the, 556
 - mercuric ethyldiamin to disinfect, 195
 - of penis and scrotum, loss of, plastic operations, 196
 - Skiagraphy and fractures, 607
 - Skirts, long, 242
 - Skull, fracture, with dislocation of the cervical vertebra, 176
 - Krönlein's gunshot-wound of the, 195
 - Sleep center, 14
 - those who must, in the day, 186
 - Slums, condition, to improve, 293
 - Smallpox, 10, 16, 58, 148, 190, 238, 242, 282, 333, 379, 429, 474
 - and death, 14
 - case of erythema multiforme resembling, 229
 - cost of, 476
 - epidemic, Glasgow, 476
 - epidemic in Scotland, 37
 - ichthyol in, 266
 - increase, in the United States, 279
 - inoculated form of, relationship of vaccinia to, 410
 - inoculation in Algeria, 250
 - lenkocyte count in diagnosis, 49
 - mild discrete, and chickenpox, distinguishing characteristics between, 529
 - form of, 410
 - the diagnosis of, 529
 - pseudo or modified, further report on, 528
 - regulation, 428
 - sanitary features of, 529
 - the old and new, 529
 - Smith, Andrew H.: The duty of the public to the medical profession, 87
 - Smith, Frederick K.: Removal of powder grains by hydrogen dioxide, 152
 - Smith, Mary Almira: Pregnancy complicated by fibroid tumors, cesarean hysterectomy at eighth month, 356
 - Smoke nuisance, the, 239
 - Smoking, opium, 151
 - rendered harmless, 359
 - influence, in epithelioma of the tongue, 329
 - Social purity, 43
 - Societies of New York, home for the scientific, 59
 - Society, Pennsylvania, for the prevention of tuberculosis, 149
 - Society Proceedings:
 - American Academy of Medicine, 61, 601
 - Association of Genitourinary Surgeons, 244
 - Climatologic Association, 148, 502
 - Gastroenterological Association, 246
 - Gynecological Society, 430
 - Laryngological, Rhinological and Otological Society, 382, 437
 - Medical Association, 477, 528
 - cutaneous medicine and surgery, 495, 541
 - diseases of children, 489, 536
 - general session, 477
 - hygiene and sanitary science, 500, 528, 545
 - laryngology and otology, 499, 544
 - maternal medicine, pharmacy and therapeutics, 492, 539
 - nervous and mental diseases, 496, 541
 - obstetrics and diseases of women, 487, 534
 - ophthalmology, 498, 542
 - practice of medicine, 473, 528
 - surgery and anatomy, 483, 580
 - Pediatric Society, 436
 - Surgical Association, 291, 335
 - Therapeutic Society, 288
 - Association of American Physicians, 247
 - of Military Surgeons, 434
 - Congress of Charities and Correction and the Nat'l Ass'n for Study of Epilepsy, 338
 - German Gynecological Society, 527, 535
 - Medical Congress, 243, 288, 336
 - Surgical Association, 193, 285
 - Illinois State Medical Society, 381
 - Iowa State Medical Association, 338
 - Johns Hopkins Medical Society, 12
 - National Confederation of State Medical Examining and Licensing Boards, 587
 - New Hampshire Surgical Club, 106
 - New York Academy of Medicine, 105
 - County Medical Association, 107
 - Philadelphia Academy of Surgery, 11
 - College of Physicians, 105
 - County Medical Society, 106
 - Duhring Dermatological Society, 12
 - Pathological Society, 106
 - Pediatric Society, 106
 - Wills' Hospital Ophthalmic Society, 106

- Soda, persulphate and metaranadate of, aperient action, 606
water sparklets, 334
- Sodium cacodylate, 38, 216
cinnamate in treatment of tuberculosis, 362
salicylate in diabetes mellitus, 125
- Soft-soap poisoning, 519
- Soldiers, enlistment as, of the insane, 97
invalid, at baths and health resorts, 196
Philippines, ration for, 103
suppression of vice, 477
- Solidarity of race, 54
- Solis-Cohen, S.: Saline infusion in the treatment of pneumonia, first used by Dr. F. P. Henry of Philadelphia, 293
- "Something unusual to offer you" in advertising, 145
- Sores, veld, 267
- South Africa, hospital abuses in, 384
hospitals question, 287
- Spasmus nutans in infants, nystagmus of, 127
- Spastic ileus, 246
- Specialists in Germany, 584
syndicating the, 376
- Speculation, increased deathrate due to, 240
- Speech as a factor in the diagnosis and prognosis of backwardness in children, 537
- Spermatic cord, gumma of the, 564
- Sphenoidal abscess, amaurosis and operation, 438
- Spina bifida or hydrorrhachitis, 484
- Spinal analgesia, eucain in, 605
anesthesia, 197, 271
ataxia, acute, 180
by cataphoresis, 316
cocainization, surgical anesthesia by means of, 315
column, chronic inflammation of, 226
cord, surgery of the, 483
cocainization of the, 409
surgery, the present status of, 177
tropococain hydrochlorate as substitute for cocaine, 132
- Spine, fractures and dislocations of the, 303
orthopedic corsets in lateral curvature of, 51
rigidity of the, 399
traumatic injury to the, 270
- Spirillum cholerae asiatica, serum-reactions in, 230
- Spirit and drug takers, responsibility in, 131
- Spitters in New York City prosecuted, 11
- Spitting nuisance, 59
- Splanchnoptosis and atonia gastrica, treatment, 247
- Spleen and liver, enlargement of, 105
fracture of, 336
ruptured, 317
- Splenic and subphrenic abscess, 218
anemia, 223
- Splenomegaly, primary, 274
- Splint for Colles' fracture, 44
for genu valgum, 217
- Spore, staining solution, formula for, 272
- Sporidium vaccinale, 418
- "Sport" of pigeon shooting, 51
- Squint, cosmetic and visual results in, 498
- Stammering, 179
a more scientific study, 523
- Standardization of crude drugs, 494
- Staphylococcus blood-infection, 335
pyogenes aureus, 221
- Starch digestion, in mouth and stomach, 289
- State Charities Aid Association, 198
institutions, tuberculosis in, 545
prison, the, 149
regulations concerning tuberculosis, 273
- Statistics, educational, 235
the record of vital, 192
- Stenosis, lacrimal, in infants and its treatment, 543
mitral, the murmur of, 465
of the nasolacrimal duct, 317
with hypertrophy of the pylorus, 128
- Stereognosis and allied conditions, 47
- Stern, Heinrich: A hitherto undescribed reaction following the inoculation of vaccine virus, a preliminary report, 354
- Sterility and pelvic inflammation due to gonococci, 43
the increasing, of American women, 535
- Stimulants, cardiac, 243
from clinical side, 248
rheumatic, 480
the effect of external, on the deeper vessels, 289
- Stokes-Adams' disease, slow pulse, 299
- Stomach, acute dilation of, 247
and mouth, starch digestion in, 289
carcinoma of, pylorotomy for, 135
failure of free hydrochloric acid in, 289
extirpation of the, 417
hourglass, 90, 312
lavage of, for habitual constipation, 130
in children, 571
leukocytosis in carcinoma of, 40
splashing sounds in cases of atony of, 369
the fat-splitting ferment of the, 289
the mechanism of acute dilation of the, 285
treatment of carcinoma, 45
of chronic ulcer of the, 335
of hyperacidity, 606
- Stone, composition of in calculous pyelonephritis, 365
impacted in the ureter, 314
in bladder, symptoms of, 514
notes on 206 operations for, 514
- Stools and urine, analyses of, from epileptic patients treated with brominal, 515
- St. Paul meeting American Medical Association, 469
- Strabismus, convergent, cause and treatment of, 411
treatment of, 498
- Strangulated hernia, 178, 272
- Strangulation of Meckel's diverticulum, 514
- Street cleaning in Glasgow, 429
- Streets, clean, for Chicago, 475
- Streptococcal infection following labor, 535
- Streptococcus in cow's milk, 122
bronchitis, 517
pyogenes, 365
- Struma, intrathoracic, operation for, 191
thyroid, treatment of, 194
- Study, home, for school children, 101
of diphtheria, 51
postgraduate, 237
- Stumps, amputation, 286
- Stupor, melancholic, treatment by thyroid extract, 127
- Subarachnoid injection of tropococain, 215
cocainization, spinal, analgesia from, 38
- Subclavian vessels, treatment of arteriovenous aneurysms of the, 335
- Subcutaneous injections of quinin, 417
- Subepicardial overfatness, fatty infiltration of the heart secondary to, 275
- Subinvolution of the uterus, 318
- Subphrenic and splenic abscess, operation, 218
- Subscribers to medical journals, 6
- Subtrochanteric osteotomy for lengthening femur, 130
- SUCCESS OF AMERICAN MEDICINE, 101
- Sufferings of animals in war, 143
- Sugar, dietetic value of, 312, 334
metabolism of, in the body, 336
quantity of, present in urine, 567
- Sugarcoated pills, 240
- Suggestion to generous millionaires, 55
- Suggestions as to American Medical Ass'n, 141
- Suicide by suggestion, 526
- Suicides in Germany, 429
- Sulfates, urinary, estimation of, in the diagnosis of pancreatic disease, 274
- Sulfur water, 476
- Summer play-schools, 375
- Suppurating kneejoint, open treatment of, 42
- Suppuration in posterior mediastinum, 285
around ligatures, 195
- Suprapubic cystotomy, 246
operation for varicocele, 434
- Suprarenal and liver, congenital carcinoma of, 47
capsule, 316
in diseases of lower air-passages, 124
of the heart, 414
its use in rhinological operations, 133
extract, 437
in the treatment of rickets, 571
in hemorrhage in the newborn, 437
resorcin as a preservative of, 215
treatment of acne rosacea with, 172
gland, active principles of the, 540
blood-pressure-raising principle, 605
pharmacology of the, 540
medulla, extract of practical applications of, 521
- Suprasymphyseal fascia incision, 587
- Surgeon-General, to act as, 525
- Surgeons, contract, 190
dental, in the army, 238
military, instruction to, 222
sewing machine, 62
- Surgery, abdominal and pelvic, electrothermic hemostasis in, 489
special cases of, general versus local anesthesia in, 411
and anatomy of Meckel's diverticulum, 90
brain, a contribution to, 195
conservative, results immediate and remote of, 489
intestinal, the knot within the lumbar region in, 485
major, should be done in hospitals, 470
of the gall-bladder, 338
of the large intestine, 217
of the lung, development of, 337
of the spinal cord, 483
orbital, report of 2 cases of, 543
ovarian, some results of, 488
pelvic, accidents and complications, 488
photographs in, 238
relation to, of blood examination, 292
renal and ureteral, skiagraphic diagnosis of, 530
in the nineteenth century, 451
progress in, 193
significance in of sequels of gonorrhoea, 3
spinal, the present status of, 177
student fitting himself to study, 521
- Surgical and Medical Clinic, combined, 234
anesthesia by means of spinal cocainization, 315
aspects of carcinoma, 486
diagnosis, by blood examination, 279, 292, 306
diseases of the abdomen, 218
practice, the function of the laboratory in, 421
specialty, gynecology as, 432
treatment and diagnosis of prolapsed kidney, 107
of gastric hemorrhage, 124
of ascites due to cirrhosis of liver, 52, 126
of retroversion of the uterus, 534
- Survival of another age, a, 522
of a premature child weighing 2 pounds, 127
- Suture, antoplactic, in hernia, 530
of resected ulnar nerve, 15
- Sweatshops in Wisconsin, 284
- Sweating, artificial, effect on gastric secretion, 228
- Sympathetic, excision of, in eye diseases, 543
- Sympathic, cervical, removal of, 95
- Symphysiotomy, contrasted with section, 433
- Symptomatology of appendicitis, 466
- Syncytium, identity of, with epithelium of uterus, 586
- Synchronous amputation of thighs for gangrene, 510
- Syndicating the specialists, 376
- Syphilis, 224
- Syphilis, a league against, 476
acquired, corneal lesions of, 543
ancient and modern conception of, 495
and relation to blastomyecetic dermatitis, 496
and tuberculosis, the association of, 503
calomel injections in, 89
cerebral, psychoses in, 497
clinical observations in, 245
delayed heredity, 12
diagnosis of primary, 218
insontium, 92
mercuriol in, 409
of the brain, 368, 417, 497
of the liver, 246
of the lung, 290
organs of circulation in the early, stages of, 568
- Syphilitic alopecia, epidemic, taiwau bozu, 152
and tuberculous granulomas of the nose, 382
lesions of the central nervous system, 417
meningitis, 223
noses, reconstruction of, 129
- Syphilitic, parasite in glands and blood, 323
- Syringe, for urethral and vesical irrigation, 179
- Syringomyelia, and intramedullary neuroma, 139
- T**ables and general paralysis, pathologic unity, 525
Tabes dorsalis, the recognition of, 393
pathogenesis, and allied conditions in the cord, 503
- Tachypnea, nervous, 417
- Taiwau bozu, epidemic syphilitic alopecia, 152
- Tampoon, Mikulicz, new uses for the, 285
- Tarsadenitis meibomia, 498
- Taylor, John Madison: Chronic heart disease in children relieved by systematic movements, 350
- Taylor, J. Madison: Pay hospital for contagious diseases, 588
- Tellurium compounds, action of, 39
- Temperance physiology in the public schools, 378
- Temperature, reduction of by evaporation baths, 365
treatment of by drugs, 491
- Temporal lobe, encephalitis after otitis, 195
- Temporosphenooidal abscess, after otitis media, 128
- Tenaculum, new, 133
- Tenement-houses, prostitution in, 59
legislation, 148
- Tenonitis serosa, 223
- Tenonitis and tenonothecitis prolifera calcarea, 221
- Tension-Period, 370
- Tertiary manifestations, unusual and interesting, 545
- Testicle and epididymis, conservative operations, 196
operation for tuberculosis of, 196
castration of, for tuberculosis, 196
experimental studies with tuberculosis of the, 196
- Tetanus, Fourth-of-July, 517
neonatorum treated with antitetanus serum, 127
nontraumatic, 323
poison and its antitoxin, absorption of, 223
puerperalis, 313
toxin and antitoxin, absorption of, 223
- Tetany, gastric, 369
some cases of, 247
- Tetranitrol, 605
- Texas, consumptive convicts in, 12
fever, 476
- Textbooks, German, 179
- The erythrocyte, red blood-corpuscle, 99
- Therapeutic agent, digitalis as, 110, 159
indications, conditions of the blood, 493
measure, artificially produced hyperemia as a, 289
measures, the neglect of valuable, 492
use of x-rays, 126
value of heroin and aspirin, 273
- Therapeutics, heart disease, 288
of carcinoma, remarks on the, 528
of hypnotism, 288
mental, 474
practical, ichthyiform, 124
simplicity in, 396
specific, in pulmonary tuberculosis, 495
the progress of, 288
- Therapy, hydrochloric acid, logic of, 116
restoration of lost gastric HCL secretion, 162
vasomotor and cardiac, 243
- Thermometers, bacteriologic examination, 106
clinical, bacteriologic examination of, 553
- Thiocol in catarrhs and tuberculosis, 408
in pulmonary tuberculosis in children, 267
- Thoracic aneurysm, 105, 318
indications for tracheotomy in, 174
treatment of, 172
- Throat and nose diseases, limitations as to general treatment, 269
catarrhal disease, effect on the general health, 544
cultures, the value of, in diphtheria, 481
diseases, artificial feeding in, 95
thrombosis, multiple of the innominate, 105
peripheral venous, in cardiac disease, 553
- Thymus extract for treatment of Graves' disease, 540
- Thyroid extract in Graves' disease, 172
for prolonged melancholic stupor, 127
gland, pathology and diseases of the, 411, 461, 515
surgery, some illustrating, 464
total extirpation of the, 499
struma, the treatment of, 194
- Thyroglossal duct, persistence of the, 193
- Tinea versicolor, 92
- Tissue, elastic, method of staining with bematein, 106
- Toadstool agaricus torminosus, poisoning with, 317
- Tobacco as a factor in glycosuria, 220
- Toes and fingers, clubbing of, 137
- Tongue, epithelioma, smoking in the causation of, 329
- Tonics, heart, 172

- Tonsil, polypoid growth of the, 218
 Tonsillitis, membranous nondiphtherial antitoxin in, 174
 Touchstone of professional spirit, 6
 Toxemia of pregnancy, 178
 Toxic action of methyl-alcohol, 142
 of sodium cacodylate, 216
 origin of neurasthenia and melancholia, 247
 amblyopias, pathology of, 607
 Toxicologic detection of arsenic, 42
 Tetanus, and antitoxin absorption of, 223
 mixed, for inoperable sarcoma, 292
 modifications of, 139
 Trachea and larynx, thyroid tissue in, 42
 rare case of foreign bodies in the, 274
 Tracheal injections in tuberculosis, 39
 tugging in aneurysm or mediastinal tumor, 108
 Tracheloplasty, Newman's, 176
 Tracheotomy, experiences with, 220
 indications for, in thoracic aneurysm, 174
 recovery followed, 217
 Trade and scientific names of drugs, 288
 interests, 583
 Training, biologic, in medical schools, 99
 the effects of, 516
 Transfusion, infusion, autotransfusion, 263
 Transplantation, ovarian, 330
 Transportation employes, visual and aural qualifications of, 542
 Traps and pitfalls in special and general practice, 312
 Trauma as an exciting cause of paralysis agitans, 415
 Traumatic aneurysm, ruptured, of femoral artery, 133
 injury to the spine, 270
 rupture of the bladder, laparotomy and suture, 244
 malignancy, acute, 180
 neurosis, the so-called, 550
 rupture of eyeball, 265
 of right kidney, 316
 separation of the lower epiphysis of the femur, 285
 Travelers, danger to life and hardships to, by lack of
 port quarantine facilities, 51
 Treatment, conservative, of buboes, 3
 success in desperate cases by, 469
 surgical, and gastric hemorrhage, 124
 two methods of, 376
 Tremic, peripheral paralysis, 323
 Tremors, analysis, disturbances of movement, 337
 Trephining, 524
 Trichinosis, a case of, 515
 excessive eosinophilia in, 513
 Trigeminal neuralgia, intracranial operations for, 195
 Trional, multiple neuritis and hematuria, 275
 Tropacocain for subarachnoid injection, 132, 215, 267
 Tropic dysentery, 317
 Tropon and plasmon, 273
 Trusts, 472
 Truth suppression, 379
 Tubal gestation, diagnosis of, 179
 Tub-bath, the sacrosanct, 522
 Tube, eustachian, stricture of, 438
 Tubercle bacilli, disseminated by coughing, 481
 influence of coal on, 273
 bacillus, variability of the, 564
 Tubercular diseases of joints in children, 413
 meningitis, 225
 Tuberculin tests, 203
 compulsory, of all dairies, 545
 Tuberculosis, 149, 241, 248
 acute miliary, primarily splenic, 247
 and glanders, prophylaxis of, 213
 and laryngeal use of hotel in, 569
 and syphilis, the association of, 503
 as disease of, the masses, 331
 Association, The Canadian, 526
 bovine and human, 524
 British Congress on, 584
 castration of the testicle for, 196
 climatic change, 504
 climatology of Arizona, 545
 congress on, 588
 conjugal, 130
 creasote in, 495
 curious form of peritoneal, 13
 formic aldehyd in, 216
 free treatment for, 380
 hotel in treatment of, 273
 home treatment for, 266
 hospital site, 380
 hospitals for, 148
 hygienic treatment of outside of, sanitoriums, 503
 incipient, hydropathic treatment of, 567
 infection of embryo without infection of mother, 541
 in Japan, 428
 in Rio Janeiro, 87
 in state institutions, 545
 in the Middle States and its curability, 545
 intravenous injections of cinnamic acid in, 124
 iodine in, 362
 iodipin hypodermically in, 171
 joint, 129
 local treatment of wounds after operation, 194
 marriage in cases of, 5
 of animals in relation to human tuberculosis, 545
 of the fascia, 412
 of the iris, 415
 of the male generative organs, 196
 of the testicle, 196
 of the testicle and epididymis, 196
 of the testicle, experimental studies with, 196
 open-air treatment at home, 268
 Pennsylvania Society for the Prevention of, 149
 pneumonia more fatal than, 277
 Tuberculosis, practical thoughts on, 392
 prevention of, 151, 380
 in babes born of tuberculous parents, 539
 prevention in predisposed, in children, 491
 primary, of vagina, 4
 progress in the sanatorium treatment of, 236
 in children treated by muscle-serum, 606
 proper definitions of terms, 503
 pulmonary, and atypical pneumonia, 555
 formalin in, 125
 pulse rate in, 563
 renal, diagnosis and surgical treatment, 515
 sanatorium treatment, 503
 sanitarium, 400, 429
 need of national cooperation in establishing, 501
 sanitoriums, 545
 serum, diagnosis of, 418, 567
 sources of, 282
 specific therapeutics in, 495
 state regulations concerning, 373
 statistics of, 426
 the British congress on, 192
 the home treatment of, 503
 the serum diagnosis of, 289
 tracheal injections in, 39
 treatment of, 39, 334, 362, 267, 408, 495, 169, 570
 of night sweats, 407
 versus gout, 115
 Tuberculous, a census of the, 582
 a hospital for the, 427
 and syphilitic granulomas of the nose, 382
 best climate for treatment, 502
 dermatitis, 367
 disease, resection of cecum for, 411
 hospital for, 475
 joints, treatment of, 46
 kidney, nephrectomy for, 135
 lung, proper management of, 495
 number of the, 233
 otitis media, mastoiditis and meningitis, 438
 patients, homes for, 191
 pericarditis, 41, 412, 482
 selection of a proper locality for treatment, 501
 sanatorium for the, 381
 Tubes and ovaries, operation upon, 131
 elongation, with ovarian and parovarian cysts, 371
 Tumor, a solid ovarian, 182
 abdominal, accurate diagnosis, 176
 brain, 136
 extirpation of, 195
 extraperitoneal cystic, 417
 fibroid, pregnancy complicated by, 356
 in wounds, killing remnants with hot water, 198
 localization of, 181
 malignant, of the lung, 370
 mediastinal, or aneurysm, tracheal tugging, 108
 mixed, of the parotid gland, 181
 multiple, of the sciatic nerve, 133
 muscular, of the uterus, 371
 of bladder, treatment, 194
 of the uterus, 181
 ovarian, in a child, 338
 primary malignant, 519
 pyloric, disappearance after gastroenterostomy, 175
 Tunica vaginalis, inversion of the, for hydrocele, 245
 Turbinates, resection of the inferior, 223
 Turf wadding, 334
 Turpentine poisoning, 40
 Tympanic disease, mastoiditis, 544
 Typhoid, abdominal pain in, 316
 bacteriologic investigations of, 316
 complications and sequels of, 566
 complications and sequels of the well-developed
 stage, 610
 cultures, 314
 diagnosis of, in the laboratory, 490
 early diagnosis by blood-cultures, 2
 endocarditis resulting from, 105
 epidemic, 58, 224
 epididymitis and orchitis as sequels of, 413
 fever, 150, 192, 238, 427
 hemorrhagic, 47
 immunity to, 330
 in an infant, 490
 in South Africa, 428
 in the Philippines, 315
 means of infection in, 315
 modified treatment of, 481
 mortality in private practice, 58
 multiple gangrene with cholangitis, 490
 oyster as a carrier of, 108
 perforation and leukocytosis, 178
 purpura in, 108
 Remy's gelatin in diagnosis of, 315
 responsibility for, 233
 symptoms in infancy and childhood, 490
 treatment of, 125, 491
 with an intestinal perforation, early operation
 in, 39
 to prevent, 239
 urine, disinfection of, 340
 Widal test in, 314
 Typhus fever, 238, 242, 388
 Ulcer and fistula, chronic, 222
 gastric, 90, 91, 130, 224, 284, 475, 517, 605, 608
 treatment of, 539
 intractable or relapsing, 515
 of duodenum from surgical standpoint, 338
 of stomach, treatment of chronic, 335
 perforation followed by rigors, 364
 Ulcer, surgical treatment of, 515
 Ulcers, leg, 273
 Umbilical hernia, operation for radical cure, 335
 in adults, operative treatment, 413
 United States, increase of smallpox in the, 279
 leprosy in the, 577
 marine hospital service, 427
 ports, consumptive aliens barred out, 326
 Universities of Scotland, gift to, 476
 University of Paris, the, 476
 of Pennsylvania, new medical laboratories, 326
 Uranoplastic operations, 286
 Urea formation, intermittent hepatic fever on, 290
 Uremic manifestations, relation of osmotic pressure to, 479
 Ureter, stone impacted in the, 314
 Ureteral calculus, 492
 and renal calculi, diagnosis of, 434
 surgery skiagraphic diagnosis of, 530
 implantation into bowel for diversion of urine, 412
 or renal calculi, 320
 Ureterointestinal anastomosis, natural, 272
 pathology and bacteriology, 316, 414
 Ureteroureteral anastomosis, relative merits of different
 methods of, 488
 Ureters and kidneys, physiology of, 369
 Urethra and bladder, partial excision, for carcinoma, 245
 gonorrheal stricture, treatment, 368
 rupture of the, 245
 Urethral and vesical irrigation, new piston syringe, 179
 disease, fallacies in the treatment of, 531
 Urethritis, acute gonorrheal posterior, treatment of the,
 and nephritis, calculus, the indications for
 operation in, 533
 complications of, 368
 Uric acid formation in the animal body, 336
 excessive formation of, in gout, 225
 Urinary antiseptic, urotropin as a, 50
 bladder, hernia of the, 608
 removal for malignant disease, 432
 sulfates, estimation in diagnosis of pancreatic dis-
 ease, 274
 Urination, frequent, painful, gnaiccol in, 362
 Urine and stools, analyses from epileptic patients, 515
 carbohydrates of the, in diabetes insipidus, 318
 congenital incontinence of, 134
 diversion, by ureteral implantation into bowel, 412
 errors in the examination of, 180
 examination during gestation, 422
 nephritic, albumin in, 224, 317
 quantity of sugar present in, 567
 retention of, 608
 typhoid, disinfection of, 340
 Urogenital colibacillosis, 417
 Urotropin as a urinary antiseptic, 50
 the best results from, 235
 Urticaria tactitia, 223
 pleuritic, 143
 with albuminuria, 519
 Uteri, prolapsus, mechanism of, 134
 Uterine abortion, ectopic gestation diagnosed as, 314
 and mammary cancer, early diagnosis, 338
 appendages, disease relation to appendicitis, 134
 painful menstruation a factor in determining
 character of operations, 430
 cancer, methods of operating for, 418
 status of hysterectomy for, 431
 curement, 182
 displacements, intrapelvic operations for, 182
 fibroid degeneration, 199, 153
 hemorrhage, treatment of, 409
 myomas, how shall we deal with? 488
 retraction, 228
 segment, lower, 464
 Uterus bicornate, pregnancy in a, 319
 and vagina, cancer, radical operation, 527
 cancer of body of, 431
 of the, a new series of operations for, 528
 radical operation for, 527
 statistics of, and operation for, 528
 cancer, the operative treatment of, 319
 carcinoma of, 198
 early signs of carcinoma, 291
 epithelium identity, the syncytium, 586
 fibroid tumors of the, 181
 lipomyoma of, 13
 metastases from malignant diseases of tube, 587
 mobility of the, 418
 mucous membrane, effects of atokausis, 419
 muscular tumor of the, 371
 operative treatment for carcinoma, 197
 osteofibromyoma of the, 272
 paravaginal method for extirpation of the, 527
 pathologic fixation of, 138
 prolapse and proclivencia of the, 431
 pregnant, germs found in the, 587
 retrorplacements of, 47
 the, new operation for, 534
 retroversion of the, surgical treatment of, 534
 subinvolution of the, 318
 sarcoma of, 135, 365
 treatment of cancer of the, 273
 ventrosuspension of, 106
 with adhesions, treatment of displacement, 272
 Uvula, pulsation of the, in aortic insufficiency, 505
 Vacation schools, 373
 Vaccination, 13, 44, 61, 103, 150
 a little knowledge of the history of, 470
 aseptic, importance of, 94
 compulsory, 61, 240, 334, 426

- Vaccination, hitherto undescribed reaction following, 351
scar, erythema, multiforme following, 464
scar, development of a keloid on a, 315
- Vaccine, yellow fever, 425
- Vaccinia, clinical course of, 44
relationship to the inoculated form of smallpox, 410
serous, with cretinism and rickets, 364
- Vagina, primary tuberculosis of, 4
radical operation, cancer of the, 527
- Vaginal ablations, in pelvic inflammation and uterine fibroid degeneration, 153, 199,
douching in obstetrics, 363
extirpation total, a new method, 198
false membrane due to bacterium coli, 205
hemorrhages in newborn, 40
injections, use of hot-water, 179
laparotomy compared with ventral laparotomy, 197
operation in pelvic diseases in women, 79
total extirpation, new method of, 586
- Variocoele, suprapubic operation for, 434
- Variocose veins, operations for, 223
- Variola, 530
lantern slide demonstration of, 496
- Vascular diseases, relation of, to heart disease, 414
and nerve associations of the kidney, 608
- Vasectomy, 245
- Vasodilator congestions, 243
- Vasodilators, in cardiovascular disease, 249
- Vasomotor and cardiac therapy, 243
drug, value of iodine as a, 289
nerves in the brain, 327
neurosis, in varying regions same patient, 128
role of iodids, 419
- Vaughan, Victor C.: The toxin of colon bacillus, 302
- Vegetarian regime in Japan, 323
- Veins, varicose, operations for, 223
- Veld sores, 267
- Veneral disease, circumcision as a preventive of, 55
prevention of, 56, 132
the limitation of the, 500
- Venesection for gunshot wounds of chest, 268
- Venous and intraorganic injections, 492
angioma of fingers, 133
thrombosis, peripheral, in cardiac disease, 353
- Ventilation, crusade against poor, 284
- Ventral hernia, 135
laparotomy compared with vaginal, 197
- Ventrosuspension of the uterus, 106
- Veratrin in pruritus, 216
- Veratrum viride, 310
- Vermiform appendix, how to deal with, 109
- Vermont, use of narcotics in, 282
- Vertebra, cervical, fracture and dislocation of, 177
- Vesical and urethral irrigation, new syringe for, 179
calculi, 42
- Vesicles, seminal, total extirpation of the, 569
- Vesicular murmur, 366
- Vesiculitis, seminal, chronic, 565
- Vessels, the effect of external stimulation on the, 289
- Veterinary school to be closed, 103
- Vice, suppression of, in the Philippines, 477
- Victoria Cross, 150
- Virulence, morphology of bacteria, and relation to, 567
- Virus, method of preparing, 359
- Viscera abdominal, 41, 128
- Viscosity of the blood and the clinical importance of its determination, 244
- Vision, inverted, and mirror writing, 541
of the Boers, 526
- Visual and cosmetic results in squint, 498
- Vitality after severe injury, 608
acuity, economic, limitations of the, in the various trades and professions, 542
and aural qualifications of transportation employes, 542
- Vitreous humor and retina, idiopathic hemorrhage between the, 225
- Volvulus and intussusception of Meckel's diverticulum, 272
- Vomiting and nausea, the prevention of, during anesthesia, 606
recurrent, 220
- Wagoner, G. W.: Transfusion, infusion, autotransfusion, 263
- War, animals in sufferings of, 143
- Ward, Nathan G.: Formalin in the treatment of suppurative otitis media, 509
- Warning as to certain emergency cases, 99
- Warts and corns, 300
- Wash-house and public bath of Philadelphia, 59
- Water meter in public sanitation, the role of the 234
iron mineral, 317
river, pollution of, 219
supply, pure, 11
- Wealth, a useful disposition of, 421
- Weaver, W. M.: An interesting anomaly, 340
- Weeks, Stephen H.: Fractures and dislocations of the spine, 308
- Weigert's method for staining elastic fibers, 317
- Weltmerism, 190
- West Point training, the nervous exhaustion due to, 558
- Whistling, voluntary, 176
- Whoopingcough, 182
cured by irrigation of the nares, 361
treatment of, 124, 519
- Widal test, 147
a plea for uniformity of technic, 304
in mountain fever, 177
in typhoid, 314
- Wilkins, Geo. L.: Molluscum fibrosum, 15
- Willard, DeForest: Congenital deformity of wrist, osteotomy of radius, 115
- Wisconsin, sweatshops in, 284
- Wisecup, F. E.: Electrolysis in diseases of the skin, 556
- Wolbarst, Abraham L.: Conservative treatment of buboes, 383
- Womb, cancer of the, abdominal operation for, 527
- Woman, position of, during delivery, 535
- Women, complications of gonorrhoea in, 318
American, the increasing sterility of, 535
German, medical study for, 211
in medicine, 150
pelvic inflammatory diseases of, 186
physicians, medical appointments held by, 221
Women's clubs and sanitary effort, 185
sanitary league, 60
- Woodruff, Charles E.: The nervous exhaustion due to West Point training, 558
- Word of acknowledgement, 1
- Wounded in South Africa, 267
- Wounds, disinfection with pure carbolic acid, 194
gunshot, in South African campaign, 195
Krönlein's gunshot, of the skull, 195
penetrating, of the abdomen, 609
treatment after operation for local tuberculosis, 194
treatment of infected, by carbolic acid, 195
- Wrist, congenital deformity of, 115
- Wyeth, John A.: The value of clinical microscopy, bacteriology and chemistry in surgical practice, 445
- Wyeth method of operation, 365
- Xiphopagia, new case of 323
X-light, notes on, 220
- X-ray photography, 131
a method of determining the exact size and position of a foreign body, 290
therapeutic use of, 126
tubes, improved, 284
value, in diagnosis of renal stone, 245
without electricity, 9
- Yeast in diabetes, 310
sterile permanent, in gynecology, 418
- Yellow fever, 103, 238, 581
and its intermission, 129
center, Santiago as, 122
experimental, 218
in Costa Rica, 525
propagation of, 133
spread of, in houses, 565
to suppress, 57
transmission by culex mosquito, 130
vaccine, 426
- Young, H. D.: Proper medical legislation, 339
- Young, William B.: An epidemic of abdominal influenza among children, 293
- Youth at the prow, 145
- Zestokausis and atmokausis, 418
Zona, treatment of, 323
- Zoological park pathologist, 239
- Zoology in the medical school curriculum, 465
- Zugsmitz, Edwin: Some remarks on the cumulative action of digitalis with an illustrative case, 212
- Zymotic disease, immunity against, 129





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