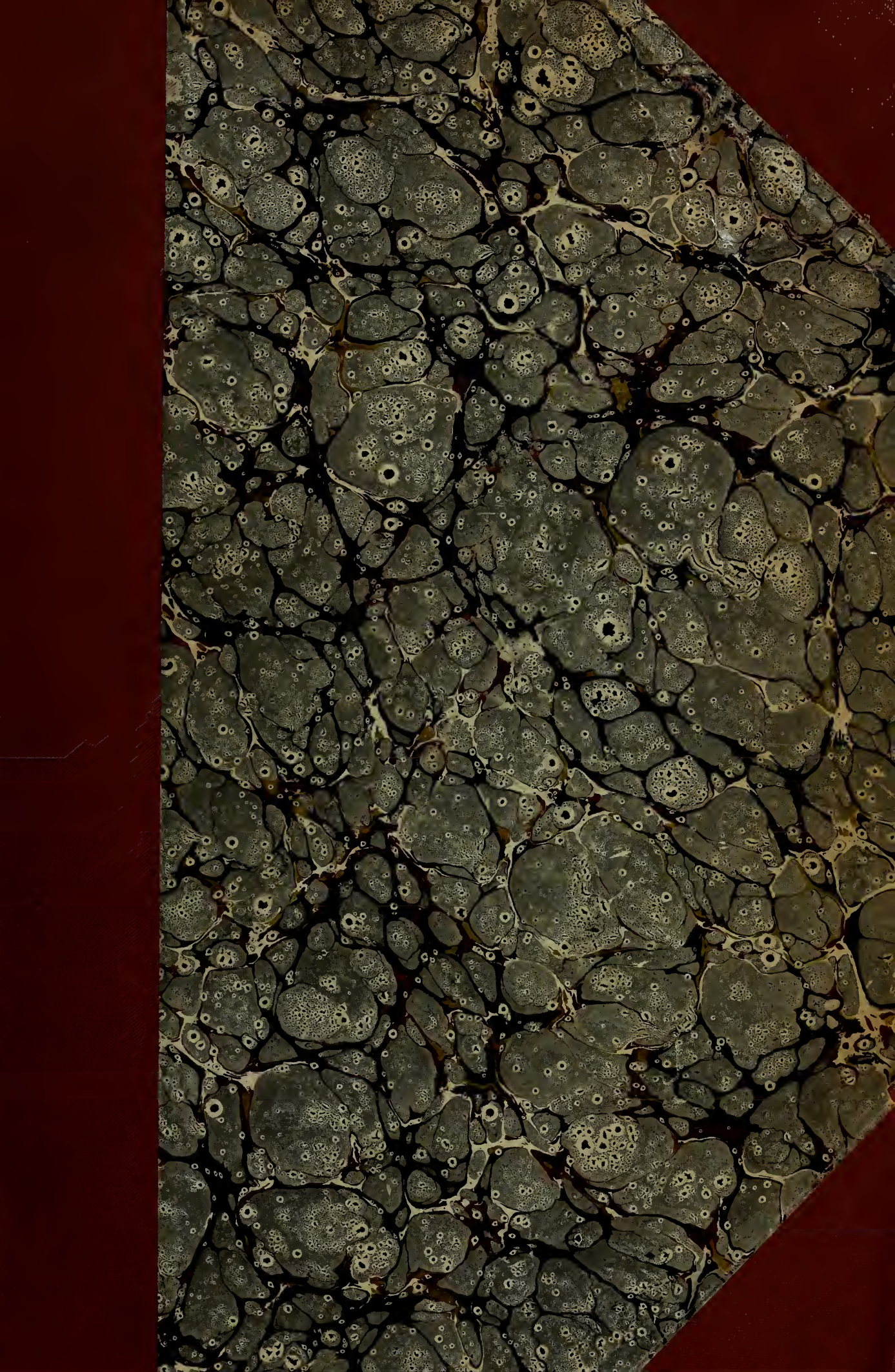

Vol. VI JANUARY, 1907 No. 1

THE CLEVELAND MEDICAL JOURNAL

MONTHLY

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THE CLEVELAND MEDICAL JOURNAL

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The Cleveland
Medical Journal

VOL VI JANUARY, 1907 NO 1

Tuberculosis of the Peritoneum

BY LEWIS S. McMURTRY, A. M., M. D., Louisville, Ky.

No disease encountered by the abdominal surgeon presents more intricate problems of infection, nor more interesting features of pathology and diagnosis, than peritoneal tuberculosis. The literature of the subject has become so enormous that the bare enumeration of titles would transcend the time usually allotted the paper of the evening. I shall not undertake the consideration of all the pathologic and bacteriologic problems which the subject affords, nor shall I report in detail my own cases; but will limit this paper to a consideration of the practical features of the disease as represented in the average clinical experience of the surgeon.

Tuberculosis of the peritoneum has but one cause—the invasion of the peritoneum by tubercle bacilli. Clinically, the disease is observed most frequently in patients between the ages of 20 and 40 years. Operation statistics show the disease is found more than twice as frequently in women as in men. The route of invasion anatomically afforded by the fallopian tubes naturally occurs to mind in explaining the greater prevalence of the disease with women.

To determine the mechanism of infection is one of the most difficult problems presented in the study of this particular exhibition of tuberculosis. While the route of invasion is most common through the lymphatics, the virus reaching the mesenteric glands and thence spreading to the peritoneum, undoubtedly the ulcerative lesions of the intestinal tract often provide direct access to the peritoneum. Many pathologists assert that infection may

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Read, by invitation, before the Academy of Medicine of Cleveland, November 16, 1906

take place through the intestinal coats without any recognizable *atrium*.

Peritoneal tuberculosis commonly presents itself independent of lesions of the thoracic organs or remote lymphatic glands. The tubercle bacillus has no saprophytic qualifications; it does not destroy primarily the tissues it invades; it is the secondary pyogenic changes which are destructive. It has been shown by Adami and others that leucocytes appear upon the surface of the upper intestinal tract and carry bacilli into the lymphatic glands and destroy them when in limited numbers. It is also accepted teaching, based both upon bacteriologic studies and clinical observations, that pathologic bacteria are carried through the portal circulation to the liver and eliminated with the bile, thus providing a common means of infecting the gall-bladder and ducts. With these facts, now well established, it is apparent that primary infection of the peritoneum may obtain directly, and also through lymphatic and venous channels. Certain structures within the peritoneal envelope have a marked susceptibility to tubercular infection. I have already mentioned the clinical fact that peritoneal tuberculosis is more than twice as frequent in women as in men, a fact due to the susceptibility of the fallopian tubes to the disease. Every gynecologic surgeon has been impressed with the affinity exhibited by these structures for Koch's bacilli. Some years ago Whitridge Williams demonstrated that many cases of salpingitis, apparently of ordinary pyogenic origin, were shown by bacteriologic examination to be tuberculous. Tuberculosis of the vulva, vagina and uterus is rare, and usually occurs in girls prior to puberty and in women past the menopause. Tuberculosis of the fallopian tubes is very common, and occurs during the child-bearing years.

The exceptional susceptibility of the tonsils to tuberculosis is generally recognized. The follicles of the tonsils correspond in structure with those of Peyer's glands in the intestine. The tonsils readily transmit tubercle bacilli to adjacent structures, and so doubtless do the corresponding intestinal follicles. The vermiform appendix has a histologic characteristic in common with the tonsils in that its lymphatic tissue lies open on the mucous membrance. Like the tonsil, the appendix has an affinity for the tubercle bacillus, and is a common focus of infection. The lower ileum and cecum are also localities of marked susceptibility as shown constantly on the operating-table. The fallopian tubes, the appendix and the intestinal areas mentioned are the common foci of tuberculous invasion of the peritoneum.

Among the sources of infection, consideration must be given the ingestion of infected food materials. While Koch has negatived the long accepted belief in infection from bovine sources, the researches of others tend to reëstablish the fact that milk from tuberculous cows is a prolific source of infection in man. After a careful study of the researches made on both sides, I am convinced that tuberculosis is transmitted to the human subject in this way. My own observations clinically have impressed me with the greater prevalence of abdominal tuberculosis in the rural districts, where uncooked milk is an almost universal food.

The pathologic changes which obtain in the peritoneum when infected by Koch's bacilli are varied. An infected area may present discrete or confluent granulations, with abundant serous or sero-sanguineous effusion; or the granulations may be enclosed in the fibrous exudate of adhesive inflammation; or the site of established infection may present caseation and ulceration. The pathologic classification of this disease so generally observed, of ascitic, fibrous, and ulcerous forms, is based upon these prevailing features of the pathologic picture presented. All phases of the disease may, generally speaking, be classified under these three heads. A convenient clinical classification may be made of three classes—the acute (febrile), the subacute, and chronic (afebrile).

The symptomatology of peritoneal tuberculosis is so varied that, in its several stages and with diverse local and systemic manifestations, the diagnosis is most difficult, and in some instances impossible. This is especially true of cases other than those associated with pulmonary tuberculosis; and other than those seen late where the history is available and advanced lesions afford characteristic clinical significance.

In very acute cases the onset of the disease may be so conspicuously marked by high temperature and acute abdominal pain as to be mistaken for appendicitis. Such painstaking clinicians as Musser and Keen report such a case, wherein abdominal section was done. Other similar cases have been reported. In subacute cases, the progress of the disease may be so insidious that fibrous deposits may be formed without disclosing the nature of the disease, and intestinal obstruction may be the first symptom presented to the medical attendant. In many instances the robust appearance of the patient may preclude any suspicion of latent tuberculosis, even when the disease has extended over a wide area of peritoneum.

I recall the case of a well nourished girl of 18, in which a boggy tumor in Douglas' space, accompanied with fever and peritoneal pain, led to a conditional diagnosis of ovarian dermoid cyst, with twisted pedicle. Abdominal section revealed extensive tuberculosis of the peritoneum, with fibrous adhesions of the intestines and other viscera. The same lesions of varied degree may readily be mistaken for suppurative salpingitis with associated pelvic peritonitis.

The extraordinary changes which the omentum undergoes in advanced stages of peritoneal tuberculosis may lead to an erroneous diagnosis of carcinoma. The omentum becomes contracted and irregularly thickened, and lies across the abdomen near the transverse colon as a solid mass. The omentum may present the same deceptive tumor mass, varying in size in the lumbar and iliac regions. Occurring in advanced cases of the fibrous and ulcerative forms, and consequently associated with emaciation and general debility, the structure closely simulates a malignant neoplasm of the adjacent viscera.

Perhaps the most prolific source of diagnostic error exhibited by any form of the disease under consideration is that of sacculated adhesions associated with the ascitic type. The simulation here to ovarian cystoma is so complete, affording a repetition of all the classic signs, that the counterfeit almost defies detection. The late Mr. Greig Smith declared that in certain cases of encysted dropsy from tuberculous peritonitis the differential diagnosis from ovarian cyst was altogether impracticable. Scarcely any experienced abdominal surgeon has escaped this error. Another source of error in diagnosis is due to the fact that peritoneal tuberculosis may be associated with a variety of other diseases, such as neoplasms and infections other than tuberculosis.

The great difficulty of accurate diagnosis in the early stages of peritoneal tuberculosis places an insurmountable obstacle in the way of early treatment, especially as regards the utilization of those hygienic measures which are so efficient in arresting and curing tubercular infection in other parts of the organism. A positive diagnosis is rarely made in any stage of the disease before resort to abdominal section. I have endeavored faithfully to utilize the various diagnostic signs in my experience with this disease, and have been impressed with their total inadequacy in the early stages. The peritoneal thickening described by Edebohls, the brown discoloration of the skin

mentioned by Osler, the vaulted abdomen, the doughy sensation on pressure, the intermittent temperature, etc., described by others, are not sufficiently pathognomonic to establish diagnosis. It is when the disease is so advanced that gross lesions simulate the familiar intraperitoneal diseases, that the surgeon usually sees the patient, and then positive diagnosis, as a rule, is established by operative intervention.

Medical treatment was advocated a few years since by Borchgrevink, whose teachings received the endorsement of the late Christian Fenger. Borchgrevink reported two almost equal series of cases; one series treated by abdominal section, the other by medical measures only. As a result of his observations he concluded that operative treatment is inferior to medical treatment. Opposed to these teachings is the overwhelming testimony of all surgeons who have reported upon the subject. The medical treatment consists in the open air life of the patient, with proper food and rest, and the usual antituberculous remedies—creosote, iodin, etc.

The surgical treatment had its beginning in 1862, when Sir Spencer Wells, mistaking the encysted dropsy of tuberculous peritonitis for an ovarian cyst, opened the abdomen. He found the peritoneum studded throughout with myriads of miliary tubercles. To his astonishment, the patient survived the operation, and, in the latest edition of his book on Ovarian Tumors, he reports the patient to be in vigorous health nineteen years afterward. It was in 1884, however, that König urged resort to abdominal section as a therapeutic measure, and in 1889 he reported 131 cases collected from his own practice and from the literature. In 1887 I had for the third abdominal section of my personal experience the case of a middle aged woman, who was supposed to have an ovarian cyst. When the abdomen was opened, the same pathology described by Sir Spencer Wells lay before me. My patient made a good recovery, and twelve years later I received the assurance of her uninterrupted good health.

To what this result is due has never been satisfactorily explained. Winckel attributes the cure to evacuation of some toxic principle. Gatti and Hildebrandt believe the cure is brought about by post-operative hyperemia and effusion of serum which has bactericidal properties, and thus the bacilli are inhibited or destroyed. Others have attributed the wonderful results of simple abdominal section to the admission of air and light to the diseased peritoneum. Many have advocated the application of iodoform

and other germicidal agents to the serous surface, but apparently with no special improvement over the results following simple section and evacuation of fluid.

It is well known, from postmortem investigations, that in many cases of peritoneal tuberculosis, as in tuberculosis elsewhere, spontaneous cure takes place. Is it not probable that in a large proportion of the cases of the ascitic variety of the disease, abdominal section may evacuate the debris remaining after Nature's successful contest, and by relieving tension and restoring normal contact aid in the cure? The explanation which most accords with the teachings of bacteriology is that of Hildebrandt and Veit, that when the accumulated serum is evacuated suddenly, it is replaced by serum possessing bactericidal properties.

However varied may be the theories offered in explanation, the clinical fact that cure follows abdominal section in a large proportion of cases is unquestionable. The percentage of cures after abdominal section, as given by various surgeons, is from 25 to 80 percent. With proper selection of cases, and especially by extending the surgical procedure in a way to be mentioned presently, it is reasonable to expect the postoperative results to reach 75 percent of cures.

In 1903, J. B. Murphy made an able contribution to our knowledge of the disease under consideration. His exhaustive paper is based upon a series of experimental investigations on monkeys, and an extensive clinical experience in the treatment of tuberculous peritonitis. This able surgeon showed by repeated observations that in the ascitic form of the disease the open fallopian tube is almost invariably found to be the constituent focus of infection. He made the important suggestion that the surgical treatment should, whenever practicable, consist in removal of the focus of infection in addition to the evacuation of fluid. W. J. Mayo has applied this suggestion in numerous cases, and states that in repeated instances, where simple section and evacuation of fluid had failed, permanent cure was effected by secondary operation with removal of the infecting focus, which is most frequently the fallopian tubes.

Murphy concludes from his studies that the cure by operation is effected by the subsequent inflammatory reaction with its cell proliferation, which encapsulates the tuberculous foci on the serous surface.

Surgery attains its best results in the disseminated serous form of the disease. It is of comparatively limited scope in the

fibrous and ulcerous varieties. In the operation the first purpose is to remove the products of the tuberculous process; second, to remove the focus of infection, and third, to prevent additional (mixed) infection. This last purpose provides a contra-indication for drainage. The marked tendency to incurable fecal fistula is an additional contra-indication to drainage.

For obvious reasons, operation should be done after, rather than during, the acute stage of the disease. The operation technically should consist, in women, of the median incision; the Trendelenburg position; evacuation of fluids and cleansing the peritoneum; packing off with gauze in the usual manner, and the removal of the fallopian tubes or other foci of infection whenever practicable. The most delicate and careful manipulation should be observed in order to avoid injury to the intestinal coats. In males, the incision should preferably be made to the right of the median line so as to afford ready access to the appendix and ileocecal structures.

Bladder and Bowel Fistulæ following an Abdominal Section—with Report of a Case

BY HUNTER ROBB, M. D., Cleveland, Ohio.

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Among the rarer complications following abdominal operations are fecal or urinary fistulæ. The fecal fistulæ that have been reported were caused by labor, in cases where there was a small pelvis, by cancer or by accidental injuries to the intestines through the vagina or the abdominal wall. Many of the cases in the last class followed abdominal sections. Many of the urinary fistulæ were caused by similar accidents; others resulted from the use of stem pessaries, from syphilis, hematoma of the septum between the bladder and the vagina, from injuries caused by coitus, pistol-ball wounds, or those inflicted upon the urinary tract during the performance of operations, *e. g.* vaginal hysterectomy, or when the blood supply to the ureter had been interfered with by the ligation of the artery to it, by the kinking of the ureter, or interference with its blood supply in the tying of large pedicles. In some instances where drainage has been carried out through the posterior cul-de-sac, and through the abdominal incision, it has been found that fecal fistulæ occurring in these cases may

Read before the Clinical and Pathological Section of the Academy of Medicine of Cleveland, November 2, 1906

discharge both through the vaginal and the abdominal openings. As a rule both the fecal and the urinary fistulæ tend to close spontaneously, if a free exit of the excreta is allowed to take place through the normal passages.

I wish to report a case that represents a rare combination of both these forms of fistulæ occurring through the abdominal incision.

The history of our case is as follows: Mrs. F., referred to me by Dr Geo. F. Zinninger, of Canton, O., married, aged 28 years, entered Lakeside Hospital October 17, complaining of backache, especially for two weeks before the menstrual periods which were irregular. She also complained of a bearing-down feeling in the lower abdomen and of a dull aching intermittent pain in the left iliac region. On vaginal examination it was found that there were adherent masses on each side of the uterus, the left one being the larger and more sensitive. From the history it seemed that this condition had been present for about 14 years. In the beginning she had some inflammatory trouble on the left side with an abscess (?) which had discharged through the vagina. Two years later she had had symptoms of a chronic cystitis, which had been relieved about four months before admission to the hospital by vesical irrigations.

On bimanual examination adherent lateral structures could be made out on either side. The abdomen was opened through a median incision; the omentum was found adherent to the structures within the pelvis and to several loops of the intestines, which were also adherent to each other. When the omental adhesions were separated, it was seen that the left tube and ovary were firmly held down by dense adhesions to the uterus and to the pelvic wall. The tube also was much thickened and closely adherent to the ovary. After separation of the adherent tube and ovary from the pelvic structures they were removed in the usual manner. The tube and ovary on the right side were firmly adherent to each other, the tube was separated and removed; the ovary which was firmly adherent to the broad ligament was left.

The appendix, which was adherent to the right tubo-ovarian mass in its distal fourth, was separated and removed. The bladder was adherent to the anterior wall of the uterus and some adherent loops of the intestines. These adhesions were separated. No injury to the intestinal or vesical walls could be detected. The abdomen was closed without drainage.

On the day following the operation the patient was fairly comfortable, although the temperature became somewhat elevated and the pulse a little quickened towards evening. From that time on until the fifth day after the operation there was an interesting distention of the abdomen, which was especially marked in the lower zone. There was also occasional nausea with vomiting. The pulse quickened to 130 to 140, and the temperature was 100.5° F. *The bowels had been moved freely, and good quantities of urine were being passed each day.* Owing to the increasing gravity of the symptoms the lower end of the abdominal incision was reopened, allowing some gas and a dark purulent fluid with a somewhat fecal odor to escape. The cavity was washed out carefully and drainage was used. A few hours after this the dressings were found to be saturated with a clear ammoniacal-smelling fluid—apparently urine. The next day the temperature and pulse dropped slightly, and urine could be detected on the abdominal dressings.

The convalescence progressed smoothly until the *sixth day after the opening of the incision* when some fecal material was noticed on the dressings. From then on the urinary discharge gradually decreased, while the fecal discharge varied in quantities for about a month, when it began to decrease.

It was evident that there were openings into the urinary and the alimentary tracts respectively. To locate these, methylene-blue solutions were injected into the bladder and also into the rectum. The solution injected into the bladder appeared immediately in the abdominal wound, showing that the opening was in the bladder itself. Although a considerable amount of the solution was injected into the rectum, we were not able to detect any of it in the fistulous tract. This opening must, therefore, have been high up in the bowel. The conditions at the time of the operation would suggest its location at the site of the stump of the appendix, or where the adhesions had been separated between the coils of the small intestines. The former site would seem doubtful, however, as the appendix was normal except at its distal end, where it came in contact with the pelvic mass, and the site of operation upon the appendix was perfectly closed. It seems much more likely that, unless some injury was done to the lower bowel at the operation, which allowed some infective material to escape into the peritoneal cavity, the opening was at the site of the loops of small intestines which were adherent to the pelvic mass and to each other and which were more or less friable.

The treatment consisted in keeping the fistulous tract irrigated, and keeping the normal path of exit for the excreta well opened; these ends were effected by catheterization of the bladder and by the use of daily enemata.

After about one month no traces of urine could be detected in the fistulous discharge, and although a slight amount of fecal material still appeared—five months after the operation—the quantity seemed to be gradually growing less. This persistence of the opening led us to consider the question of the possibility of a tuberculous inflammation of the bowel, but there were no other indications of such a condition.

This case is instructive in showing (1) the importance of opening the lower angle of the wound following an abdominal operation when the patient's condition is getting progressively worse; (2) the tolerance of the peritoneal cavity to urinary and fecal discharges, and (3) the importance of allowing nature to have a chance in the repair of such conditions, instead of subjecting the patient to an unnecessary secondary operation, which frequently is unsuccessful and is often very dangerous.

The pathological examination of the removed structures showed typical examples of a chronic salpingitis in each tube, a chronic ophoritis in the left ovary and a chronic appendicitis. In the tissues of the tubes some dimly staining areas with an infiltration of small round cells could be made out. These were suggestive of a tuberculous process. The occurrence of calcareous nodules in the right ovary might also point in the same direction.

A later report of this patient dated on May 30 (about seven months following the operation), states that the fistulous tract had entirely closed, and the patient was gaining strength daily and looked and felt well.

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"The Budding Paretic"

By JOHN D. O'BRIEN, M. D., Massillon.

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Before the invasion of established "Paresis" there is a prodromal stage which ranges within wide limits as to its scope and duration. The clinical manifestations are many and various, and are symptomatic of either a rapid, or of a slow and insidious disintegration of the intellectual, moral and affective life.

Read by invitation before the Dayton Academy of Medicine, November 9, 1906, Dayton, Ohio

Of all the prodromata, failure and decay of the moral sense are the most important, and are exemplified by acts of omission and commission against law, order and propriety.

The disease attacks all classes, and as the friends cannot nicely discriminate the changes in character, and are apt to look upon them as a temporary aberration, the disturbance to the social fabric caused by these sporadic displays of moral perversion is not inconsiderable.

The nature and extent of the disharmony and distress caused by these moral lapses depend largely on the social standing, occupation and opportunities of the diseased individual, and desolate homes, widespread ruin, unenviable publicity often follow in the train of the imaginative conceptions.

The larger ambition may lead to wild speculation, the bolder schemes to fraud. Sobriety is turned into drunkenness, and sexual excitement may result in acts of indecency. If thwarted or opposed destructiveness or violence may ensue, but in this direction serious consequences are comparatively seldom associated with the expansive prodromata.

"The Budding Paretic" is rarely vindictive, although easily aroused to anger, he is easily calmed, being in his own estimation so superior mentally and physically to his fellow man that he can afford to pity and forgive.

Protean as are the manifestations of this disease it is not strange that it should go unrecognized during its earlier stages, yet there is probably no disease in which a failure to make a diagnosis is fraught with such manifest dangers, not only to the patient, but to his family, his friends, anyone who should come in immediate contact or for instance enter into business relations with him. It is during this period in which these unfortunate occurrences are met with, so frequently, which might have been prevented, if the true condition of the patient had been recognized.

An attack of depression, excitement or melancholia is usually appreciated before any very great harm is done, but here we have a disease occurring in a healthy, strong man, at the very zenith of his physical and mental powers, insidious and creeping in its onset, yet capable of changing the character so suddenly that a previously honored and respected citizen, father of a family which occupies an enviable position, honest and upright moral man, truth-loving, sober and industrious, sinks to the very depths of debauchery and drunkenness, becomes an ardent worshipper of Venus and Bacchus, and may even stain his hands in blood.

How many heartaches, how many pangs of anguish could be saved, if the family physician could come along and recognize the disease and advise the friends what course to pursue, but it so happens that this very man, whom I have pictured to you, generally carries the "pocket book," is looked forward to, and in this case he squanders his money in ill-advised speculations, falls a prey to "confidence men" who easily recognize his faulty judgment, and finally, only after he has succeeded in making a "mess" of his business, do his friends realize his true condition, he is committed to an institution and the family awake to find themselves penniless—the rarity of a positive diagnosis of "Paresis" being made, is often seen by the character of the finding read in the physician's certificate, often gross negligence is seen.

It was for the purpose of establishing more firmly in our minds the symptoms and ease of diagnosis that I suggested a discussion of the early symptoms of "Paresis" the redoubtable foe of the twentieth century.

Before we start on a discussion of the separate symptoms on which rests a diagnosis of "Paresis" it is well to clear our minds of some of the misapprehensions regarding the disease. "Paresis" is a gross organic brain disease, with distinct pathologic features, and appreciable lesions, and its diagnosis in the beginning must rest upon an appreciation of the physical signs which these changes bring about, particularly in the field of motor disturbances.

The diagnosis of "Paresis" does not rest primarily on the mental symptoms, that every case with delusions of grandeur, power, wealth, is not to be considered "Paresis" although they are considered and hold a first place in the classical "Paresis." There are again good reasons for believing that this type is itself growing less frequent, only one-tenth of all the cases under my observation enter into this category, regarding mental symptoms and of what value they are as an aid to diagnosis. Savage reports ten cases not one of which showed a mental symptom. Now to begin with, let us consider the least important symptoms of "Paresis," the mental symptoms, the dementia, gradual progressive failure of all the latest and highest intellectual faculties, here, failure of memory, impaired judgment, inability to concentrate attention, failure of the moral sense, the picture from a mental view point is one of gradual deepening dementia, correlated with organic changes in the cerebral cortex—a true organic dementia—the "paretic" himself never notices these changes, it

is his friends who say, "He has changed, he no longer attends to his business, he looks tired and sleepy." His looks, his attitude, his walk suggest a general loss of tone, rarely does he go of his own accord to the Doctor, he is usually brought by friends who detail the symptoms, and little does he know of them unless there should be some sharp pain. tabetic or migraine like headache; he shows loss of memory, possibly a change in his handwriting, inaccuracy and change in his work; there is inability to apprehend and remember; unusual forgetfulness is especially observed as regards the smaller details of life; the patient's work becomes changed not because of impairment of co-ordination, but because he forgets how to do it; in addition to which we have those little changes of habit and lapses of conduct which are so characteristic an alteration in the mental makeup, neglect in dressing, business infractions of a long accustomed daily routine, unseemly behavior at the table when eating, gradual obtuseness of the proprieties of conduct all have but one meaning. This dulling of the finer sensibilities is further made evident by the slight impression which ordinary events, such as a business transaction of consequence, the illness of a near relative or the death of a friend, make upon the patient.

An unstable emotional attitude, a tendency to repetition in conversation, familiarity with strangers, "button-holing" and making confidants of everyone, the introduction of unrelated matter, and an occasional obscene or profane expression, improper jests, undue familiarity with ladies and servants, on the part of a man previously precise and careful in his language and habits, a gradual rise to the surface of the coarser animal qualities all are but shadows of events to come.

If upon the basis of beginning dementia there be erected symptoms of excitement or depression, delusions of a hypochondriacal or grandiose nature, these symptoms may be considered as unessential accidental accompaniments; developing as they do however upon a ground work of dementia, we would expect them to manifest themselves differently than would be the case if their foundation had been originally an unimpaired mind, this we find preeminently to be the case.

The grandiose paretic is not content with reckoning or possessing a few millions, but reckons in quintillions, has diamond mountains, gold houses, and offers me every morning quintillions of dollars.

The depressed paretic has caused the death of untold myriads of human beings, he has no stomach, no bowels, no brains.

The delusions are marked by an absurdity which can only result from the defective judgment and impaired intelligence of dementia, these advanced conditions of delusional states, however, are not what I wished particularly to dwell upon, but what I wished to illustrate fully was that the dementia of "Paresis" was the underlying and essential mental symptom. The demented type without delusions or sensory falsifications is the true typical variety of the disease, and the dementia the basal element of all forms. This dementia, while it may be apparent, you may find it necessary to seek for its manifestations. In the very early stages the outward symptoms may be those of irritability and untoward restlessness, which may exhibit itself in many ways. For instance, unusual business activities, fits of violent rage over trivial annoyances; if the reasons for all these things be inquired into, however, they will be found inadequate and often puerile.

In the above remarks I have purposely avoided dealing with the physical signs of "Paresis" for the reason that, as soon as they make their appearance, all question of diagnosis is removed.

Doctor G. R. Wilson contends there is a diathesis of "Paresis" and adduces many pertinent facts in favor of this view: "General intelligence, ambition, energy, sociability and large capacity for enjoyment, a firm believer in oneself and a preference for handsome women. To all of this we can give good weight."

Turning our attention to the physical signs of the disease which may be found in the earliest stages, and of these the change in the motor sphere, one of the first and earliest is the noticeable facial change, the pale, now flushed, countenance, effacement of the lines of expression, sleepy look, the folds about the mouth droop, loss of tone of facial muscles, a complete paralysis of expression, the speech is blurred, thick and stumbling, there is peculiar inability and difficulty with consonants, the stammering, stumbling, syllabic reduplication, omissions, explosive character, once heard is rarely ever forgotten. But when there exists this amount of trouble the diagnosis is easy.

It is in the very earliest stages when the special defects are often difficult to make out. At this time there may be only a suspicion of the true paretic speech in the slight hesitation and occasional almost unnoticeable defect in a single word. Some patients repeat test words correctly. It would seem that with the mere effort expended, as a result of conscious attention, this diffi-

culty is at times overcome, but if such words are placed in sentences the patient is often caught. Associated with this speech defect is often found a tremor of the muscles of mouth and twitching of some few muscular fibres about the face and neck.

In all doubtful cases, before the physical signs have made their appearance, there is one feature which precedes all others and by which we can always distinguish a case, and that is that curious and difficult to describe something which we term the "paretic manner." It is made up of those slight infinitesimal changes in the facial expression, the gestures and manner, which place the clinical stamp of the case as one of "Paresis," a peculiar look from the eye, the face, the gestures, which reveal the fact that the patient is not in close and accurate touch with his surroundings, with his business affairs, the facts of his illness, and for that matter with any subject.

The history of specific infection should also be considered, its relation, however, will not be dwelt upon here.

Occurring occasionally, early in the course, are the so-called paretic seizures. These may vary in severity all the way from light, syncopal attacks with pallor and temporary prostration, to severe, apoplectiform and epileptiform crises. The epileptiform may be petit mal or grand mal type, and without the history are indistinguishable from true epilepsy.

The apoplectiform seizures resemble in every way true apoplexy, but the resulting paralysis is less apt to be permanent; in fact it may entirely disappear and clear up in the most remarkable manner.

Transitory muscular paralysis, not frequently of the extrinsic eye muscles, may occur, apart from these seizures they are usually of short duration and clear up rapidly.

Of the reflexes, the only one that need here be considered is the knee-jerk. It may be normal, exaggerated, diminished or lost on one side or both sides.

The exaggerated reflex is most common, but I think that although this is so, the absence of the K K is of much greater diagnostic importance, as there are many more causes for its exaggeration other than "Paresis" than there are for its abolition. This sign depends for its importance upon the elimination of other diseases, especially tabes.

I should here mention the importance of an examination of the visual fields, which even in the very earliest stages may show some contraction, a forerunner of a more or less marked amblyopia present in advanced cases.

Of the oculo-motor phenomena, the pupillary abnormalities are most important. The loss of the light reflex or Argyll Robertson pupil is one of the most valuable diagnostic signs of beginning "Paresis" in the absence of "Tabes"—a sluggish reaction to light is also sometimes found a condition, which is probably the beginning stage of the Argyll Robertson pupil.

Lewis claims that a still earlier symptom than any of these is the loss of the sympathetic reflex. 66% of his cases showed this symptom, several of which showed normal light reflex both direct and consensual.

Voisson claims particularly good results in examination of taste and smell by graduated solutions of camphor, etc. Another important diagnostic point to which we will refer is cyto-diagnosis. In 1900, Widal-Ravaut first called our attention to cyto-diagnosis. The subject has been applied to such a degree that it has reached a point of venerability. As a diagnostic point we will only refer to its relation to Paresis, its importance lies in the application of two methods—chemically and microscopically. Under normal condition the cerebro-spinal fluid is clear and contains but few formed elements; in Paresis, which of all brain disease offers the widest deviation from normal, not only from a chemical but also from a cytologic point of view, a large increase of lymphocytes is found, and a corresponding abundance of albumin, the presence of an excess of polymorphonuclear leucocytes with a lymphocytosis is indicative of an acute process. Wolf (Paris) says, "In the presence of a lymphocytosis the first thought should be of the paraleutic affections and pre-eminently 'Paresis.' " Ravaut insists, that upon the occassion of a first nervous symptom in a patient with a suspicion of being syphilitic, lumbar puncture should be done for the purpose of an examination.

Joffroy has particularly pointed out the value of cyto-diagnosis in the early stage of "Paresis," lymphocytosis being in his opinion the earliest and most constant somatic symptom of that disease.

If now we meet a patient in middle life with Argyll Robertson pupil and tabes can be eliminated, and upon examination of cerebro-spinal fluid find a marked lymphocytosis, we may strongly suspect "Paresis." If in addition to this we learn there has been a great change in character in the individual, he has become irritable and restless, fails to remember business engagements, is less careful of his personal appearance and presents in short

a host of minor symptoms which individually mean nothing, but in their ensemble speak for mental deterioration, we need not hesitate to be convinced that we are dealing with "Paresis." The only other early symptom that is diagnostically of importance is optic nerve atrophy, but although this is often of early onset, it is, from its nature, easily overlooked. Any case which presents obscure eye symptoms, or which has difficulty in having vision corrected, should be sufficient to cause alarm and would be just cause for a further investigation by a competent ophthalmologist.

It is necessary sometimes to allude briefly to some diseases with which "Paresis" may be confounded; with alcoholism it is usually quite difficult at first to differentiate; the difficulty is due largely to the fact that many paretics manifest as one of their earliest symptoms alcoholic excess. How often do we find admitted to institutions cases simply called alcoholism which upon examination a few days later we find true cases of "Paresis." If in an alcoholic subject obtusion to the propriety and moralities is noticed we should remember that unless alcoholism be confirmed, these symptoms usually disappear during the intervals of sobriety, when the patient is free from the poison. On the other hand, these mental symptoms persist even after alcohol has been withdrawn. For some time the symptoms of an alcoholic dementia are rather those of a simple dementia, of which speech disturbances, inco-ordination and somnolence are not features. There is general psychic obtusion, slowness of thought and impairment of memory; if the alcoholism has been more profound, hallucinations, chiefly visual, with mental confusion, or it may be delusions of persecution or jealousy make their appearance. Further, it is necessary to dwell upon the common symptoms of alcoholism, the bloated and relaxed countenance, the tremor, the gastric catarrh, the morning nausea and headache, and the frequent peripheral neuritis. It is not necessary to call upon the physical signs of "Paresis" to clear up the point, still the differentiation is at times quite difficult.

In differentiation from neurasthenia, the general mental attitude of the patient is of importance. The neurasthenic exaggerates his ills, they multiply; he usually has them written on a memoranda. The "paretic" is usually indifferent, is often brought to a physician under protest and in the firm belief that it is useless, as he feels well. This is not invariable, as I have seen paretics and heard them say "they never felt better in their life," when in reality they were quite sick. They are never

concerned over their condition. In neurasthenia there is no disturbance of speech or writing, no history of seizures, pupils equal and respond readily, while in paretics they are frequently unequal with loss of reflex.. Again friends are often found to relate the symptoms of a paretic, while those of a neurasthenic are related by him to every one.

In brain tumor the symptom sometimes closely resembles "Paresis" but here we have a distinct focal lesion, and oftentimes therapeutic measures alleviate conditions, while cyto-diagnosis will remove all doubt.

The relationship between "Paresis" and "Tabes" in the early stages is one fruitful of discussion, although I am more in line with the common opinion that they are one and the same disease, the physical signs in common being one and the same, the pivotal point is again not the physical signs but the presence of mental changes. If these be absent, then it renders the diagnosis almost impossible.

"Anatomy in the Daily Press"

An interesting article entitled "Nature's Patent Office" appeared in the supplement of a recent issue of one of the leading dailies. In it the writer endeavors to show that many mechanical devices which are hailed as new discoveries have already been anticipated in the structure and functions of the human body. But, as so often happens when lay writers discourse on professional topics, some unique information is added. We are informed that the Adam's apple was the first storage cistern ever built, and it works with automatic regularity through health and sickness. It is a most important organ of the body, although for centuries it was considered a superfluous attachment. It regulates the flow of blood between the heart and the brain. When it ceases to operate somebody dies of apoplexy or a rush of blood to the brain. When the heart sends up too much blood to the head the Adam's apple steps in to check the flow and store it up for future emergencies. If the heart is temporarily weakened or put out of good running order, the blood stored in this cistern is given up and sent to the brain. The perfect working of this little device is apparent when we consider how comparatively few die of rush of blood to the brain or from a deficiency of supply. We can only add the familiar headline, "Important if True."

—*Medical Record, Dec. 29.*

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Fees for Life Insurance Examinations

The *Journal of the American Medical Association,* for December 8, contains the report of the Committee on Insurance, which should be carefully studied by every member of the medical profession. The question of the proper fee for the payment of life insurance examinations is one which has been constantly before the profession since the reduction in fees made by the three New York Companies as a result of the insurance investigation. The question is one of vital importance to the profession and has in many parts of the country received the careful thought and deliberate action of the organized profession which it demands. So far as we are aware, however, there has been no action taken upon this important question either by the Academy of Medicine or by the State Society. As the question is now brought squarely before us by the report of the National Committee, this would seem to be the right time at which to bring this matter prominently before the medical profession of the city and county as suggested by the National Committee and recommended by the Journal of the Association in its eminently just editorial on this subject in the issue referred to above.

The arbitrary reduction of medical fees for life insurance examinations by the three large New York Companies is, of course, absolutely within their right if they see fit to make this reduction. That it is a just position in its effect upon the profession is equally open to discusion. The examiner, in his relation to the life insurance company, acts in the capacity of a guardian of their risks and upon his thoroughness, accuracy and judgment must depend the ultimate profit or loss, not infrequently of large sums, to the company concerned. The flat rate of $5.00 for the examination previously paid by the three New York Companies was in our judgment a fair return for the work done when considered in the aggregate.

The reduction to a lower fee has undoubtedly worked to a disadvantage both to the companies concerned and to the examiner. It is hardly to be expected that the same thorough, interested, trained judgment can be secured for the small minimum average fee as is that available when the compensation offered bears a more rational basis in its relation to the services rendered.

A life insurance examination is essentially in the nature of a business transaction. The company seeks to be protected against bad risks and the conscientious examiner is anxious to protect his company. In his relationship to the applicant for life insurance, the examiner does not hold in the slightest degree, except in rare instances, the position of the medical adviser. It may well be argued by the insurance companies that the payment of a graded fee is in proportion to the amount of the risk and value of the policy concerned and is therefore a just arrangement. If, however, our impressions are correct, we believe that one or two of the larger companies do not even pay a graded fee but insist upon a flat minimum rate ridiculously out of proportion to the services rendered, and even in the matter of the graded fee apparently so just, the arrangement works out practically as a most unsatisfactory, if not an altogether unjust one. The minimum rate is paid for the examination of the applicant for life insurance of small amounts, as sought by the skilled mechanic, the small artisan or the street-car man, in order to examine whom the examiner must frequently make repeated visits, spending hours to complete an examination which should have taken at the most three-quarters of an hour. In the case of an applicant for a large amount, in which instance a larger fee is paid, the applicant almost always does everything in his

power to facilitate the examination, appreciating as only a business man can the value of time, making this examination therefore, which is paid for most liberally, the easiest for the examiner.

Whether or not we should stand together as an organized body for a flat fee or for a graded schedule; and, if the latter, what fees should be asked for and insisted upon, is a question of vital importance and one which should be taken up and discussed by the Academy of Medicine. As has been so clearly expressed in the report of the National Committee, unwillingness to sign any agreement that may be reached by our Academy should not bar any individual member from the rights and privileges of membership. This is a question which must be dealt with in a large way and in a broad spirit if we hope to accomplish any definite results. That there are still a large number of companies paying a flat fee of $5.00 makes the position of the three large New York Companies appear less just and less tenable than almost any other fact. We would respectfully refer this whole question to the proper committee of the Academy of Medicine for action.

The Growth of the Medical Library

We wonder if the great majority of the profession of Cleveland appreciate the growth and development which has made possible our Medical Library as we know it today. In the stress of busy routine those who are not themselves keenly interested in the specific project readily forget the amount of labor and effort spent to accomplish a given result.

Remarkable as has been the development of Cleveland in a medical way during the past ten years, it cannot be compared with the great strides in effective organization and centralization of the interest of the profession. The remarkable expansion of our Medical Library from the small collection of volumes together with the Journals housed in the old days in the Case Library, is a striking index of the wonderful advancement of the interest in the medical sciences not only among the profession of the city, but among the laity as well. While this great development of the Library, which is essentially the vital center of our medical life in its broadest relations, has been due to the unflagging efforts of a number of men, there is one name which will always be associated with this movement as preeminently

the moving spirit which has made possible the accomplished results. We are certain that the debt of appreciation and the gratitude of the profession of the city to Dr Dudley P. Allen for his constant enthusiastic and progressive efforts in the behalf of our Library are keenly appreciated by every one. Dr Allen, more than any other single individual, has made possible the present magnificent foundation and equipment and in behalf of the profession of the city we take this opportunity to publicly thank him for the work which he has so generously and unselfishly accomplished in behalf of the best interests of the profession of Cleveland.

Anti-Dysenteric Serum

Ever since the discovery by Shiga, confirmed by many others, that the main cause of dysentery in temperate climates is a bacillus and not a parasite of the amebic type, there have been efforts to produce a serum for curative and prophylactic use. The chief difficulty met with was that the organism did not produce a soluble toxin like that of diphtheria bacillus, which could be neutralized by the antitoxin, but an endotoxin which the organism carried around with it, and set free locally. Appreciating this, it was necessary to produce a serum that would kill the bacteria themselves, and several attempts were made in this direction. Kruse brought out a serum which was used with success in the Russo-Japanese war, but the results were not adequate. Vaillard and Dopter, in a recent number of the *Annales Pasteur,* report on a serum for which they claim unusual value. Their modification consists in the production of a serum which is both bactericidal and antitoxic, a result which they attain by the alternate injection of toxin and cultures once a week into horses. In the course of a few weeks a protective serum is obtained which completely immunizes rabbits, and cures them even after the infection with the dysentery bacillus is well under way. The authors treated a series of 96 cases, of more or less severity, with remarkable results. The cases were differentiated as to their severity by the number of stools, and the severity of the subjective symptoms, and ranged from cases with 15 to 228 stools. The accompanying charts show a drop in the number of the stools to normal in one or two days in the moderate cases and in three or four in the more severe. The reduction of the subjective symptoms was such that the untreated patients complained. There was only one fatality in the series as

compared with the usual 10% or over. The main claims, however, are for the rapid amelioration of the patient's condition. The serum is apparently harmless, and is claimed to be equally efficacious in cases caused by the Bacillus of Shiga, and those caused by the Bacillus of Flexner, which two are very intimately connected. This of course makes the application more simple, as all that is necessary to determine is whether the infection is bacillary or amebic.

Although there are certain difficulties in the preparation of the serum, these are such as can be readily met by the usual precautions, and if the work is satisfactorily confirmed, we shall have a very valuable adjunct to our treatment, not only of dysentery, but also of the allied summer diarrheas, etc., which have been shown by recent researches to be caused by the same organisms.

Dr Stewart's Recall

Through the generosity of H. M. Hanna, Esq., of Thomasville, Ga., and Colonel Oliver Payne, of New York, the Western Reserve University Medical School has received a gift of $200,000.00 to be devoted to the advancement of experimental medicine and research. We understand that out of this liberal fund, a laboratory is to be built, and a sufficient endowment provided, not only for its maintainance but for the support of a chair of experimental medical research.

Dr George N. Stewart, Professor of Physiology, in the Chicago University, has been called to fill this post. This gift will make possible scientific medical research along experimental lines, in a way almost unparalled in this country. Freed from the burden of detail involved in the actual teaching of students, Dr Stewart will be able to devote his entire time to the advancement of research and to the creation of a new spirit of enthusiasm in Cleveland. It is hard to estimate accurately the significance and value of this gift, but we are confident that we may look forward to definite results of far-reaching importance, not only scientifically, but in their clinical application. The Western Reserve University is to be congratulated, not only upon the receipt of this generous endowment, but also upon the return of Dr Stewart. The future of experimental medicine in Cleveland is thus assured. We hope that the day is not far distant when the value of the clinical side of medicine may be equally appreciated and placed upon as firm a foundation.

Certain Problems Concerning Medical Legislation

In the November number of this JOURNAL, the suggestion was made that the legislative committee of the Academy of Medicine should take up the question of the campaign against the advertising specialists of the city. We are all keenly alive to the evils so flagrantly flaunted in our faces. There are a number of others equally rampant in our midst, which should, in our judgment, be investigated through the Academy of Medicine.

Briefly, these may be numerated under three heads. First, the concealed charlatans within the ranks of the local profession. Regular physicians of supposedly good standing resort to quack methods by sending out printed literature to the foreigners of the population, soliciting their "trade," and treating them by mail. By using the language of the nationality appealed to, these individuals are protected in their questionable practices and their professional conduct can seldom be scrutinized by the American medical public.

Second, the rapidly increasing number of illegal practitioners and midwives. We are confident that our city is overfilled with this class, settling here in the wake of a large immigration and practicing on the ignorance and credulity of these foreigners in the worst form of quackery without any molestation. As to the midwives, we believe that, unfortunately, many of the most questionable characters known in Europe are admitted to examination without evidence of any special training. This is a serious menace.

Third, the intolerable nuisance of lodge and contract doctors, etc. It has taken a long time and hard work for the medical profession of this state to get protective medical legislation, legislation which is essentially for the protection and benefit of the public rather than for our craft. Our ability to enforce the law, by the methods at present in vogue in our city, has proved to be a failure, largely, we believe, for the sole reason that these methods have no system, and only remotely resemble the enforcement of responsibility in other spheres of human activity.

The local executive representing the State Board, although a devoted worker, cannot be expected to cover the large field requiring supervision, even if he be working every hour of the day. This may account for the general dissatisfaction with the condition of affairs now existing in our city. Realizing this

condition, and furthermore realizing that permanent good can only be accomplished by entirely reorganizing the legislative committee of the Academy on a plan adequate to the wants of our city, and which experience of other cities has proved to be a success, we respectfully suggest to the Academy the early consideration of this important matter.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Pneumonia: In the *Medical Record* for November 17, Dudley Morgan states concerning pneumonia, that there are some cases of pneumonia requiring nothing but intelligent and systematic nursing and others needing little medicine, but needing it promptly and energetically when called for. Given digitalis, strychnin and ice with its various uses, and little else will be needed even in the most trying cases. There is no question that many cases are lost from too much meddling in many ways. How often do we start strychnin on our first visit for no other reason than perhaps it may be needed the next day, or that we think we must give something. Quiet and rest, with good ventilation, unloading of the bowels, a variety of liquid nourishing food, the ice-bag to the chest in the region of the pain and congestion, and one also over the precordia if need be, is a good way to start with nearly all cases of pneumonia. In the trying and often unsatisfactory cases, as in the steady or hard drinker, the heart may begin to lag almost before apparent congestion and consolidation; the pulse becomes soft and compressible, the face ashy, the patient is restless, and soon delirious, the temperature may not be high, but there is an impending toxemia which is, and will continue to show itself in weakening and overpowering the action of the heart and the vasomotor centers. Such cases as these need digitalis and strychnin early to support the vessels, bromids to quiet the restlessness and salt solutions by hypodermoclysis, or enemata to raise the blood-pressure, and dilute the toxins. There is no more satisfactory way of keeping up proper elimination and sustaining blood-pressure than the use of frequent saline solutions. He has a great repugnance to the use of opium in pneumonia and attributes to the use of this drug most of the cases he has lost. He believes that for the cough and pain, little more is needed than the ice-bag, but it is occasionally necessary to give 1/24 of a grain of morphin with 15 grains of bromid, once or twice in 24 hours.

Saline Solution: In the *Journal A. M. A.,* for November 10, J. Madison Taylor states that increasing experience in the employment of physiologic saline solution (6-1000) by the mouth in all febrile states, encourages him to present certain conclusions. The fluid media, the body fluid, the blood, depend for their most important activities chiefly on an adequate proportion of chlorid of sodium, whatever role the other salts may play. We fail to preserve economically the integrity of the immunizing principles of the blood, if we wait until the

system is practically overwhelmed by toxins, and until the overworked kidneys can withstand no further sudden assaults of toxic waste. The saline solution should be used early and constantly from the outset to the end of all fevers. For in fever at all marked, the loss of the blood's main salt, sodium chlorid, is not replaced, owing to restricted diet, anorexia, and the many factors which cause the patient to reduce greatly the intake of normal food. His method is to give, to all children in whom a rise of temperature occurs, freely of the normal physiologic saline solution (6-1000), usually half an hour before feeding time, every three hours. They are encouraged to drink all they will. For infants the saline solution is used in the modification of milk, and in diluting whatever food is used. Children rarely object to the saline taste, which indeed is scarcely perceptible, and soon become accustomed to it. He has no exact data as to the elimination of the skin and kidneys. He hopes to interest the profession to employ this exceedingly simple, convenient, eminently rational, auxiliary treatment. It furnishes in reality a form of food and to his mind is the essential principle of febrile dietetics.

Thiosinamin: *Merck's Archives* for November (from *Wien. Klin. Woch.*) reports a case, observed by Jellinek, of Dupuytren's contraction treated by thiosinamin. The contracture was the result of continued trauma, and invovled the palmar fascia of both hands. The treatment consisted in local injections of a 15% alcoholic thiosinamin solution into the affected fascia, first at long intervals and later more frequently. In the intervals, the patient applied a 10% thiosinamin plaster mull. The treatment lasted about a year and in all 46 injections were made. The resulting cure was complete and there is now no difficulty in using the hand, while the second hand which was not treated locally is still in the original condition. The amount injected corresponds to two to five marks on the Pravaz syringe and the local use of ethyl chlorid or cocain first prevented pain.

Oxygen: C. D. Spivak, in the *Medical Record* for November 10, calls attention to the use of oxygen in asphyxia neonatorum. In two apparently hopeless cases the use of oxygen, by the nurse in attendance in one case, and at her suggestion in another, apparently saved the two infants. As he has found no record of the use of oxygen in these cases he brings it to the notice of the profession as worthy of trial.

Hemoptysis: In the *American Journal of the Medical Sciences,* for August, Lawrason Brown states that theoretically hemoptysis may be controlled by increasing the coagulability of the blood, by lessening the rapidity of its flow, by reducing the volume of blood in the weakened vessel, by lowering the blood-pressure or by constricting the affected vessel which may act in one of the ways heretofore mentioned. Calcium chlorid in his hands has not accomplished what he expected, and those agents as digitalis, ergot, and adrenalin, which contract the blood-vessels, would he believes do harm. He, however, finds in the nitrites and their allies, agents which act well in these cases, and

do so by lowering tension. Theoretically, amyl nitrite should be administered at once in the case of hemoptysis and repeated if necessary in five minutes. Following the first dose, nitroglycerin or sodium nitrite should be given and in a few minutes (20 to 30) erythrol tetranitrate should be given. This would insure a lowered pulmonary tension for some time. The great danger lies in the fact that it is difficult to tell just when to repeat the dose. It is dangerous to lower the blood-pressure too much, and dangerous not to lower it enough. Practically he uses amyl nitrite as suggested, and if the patient is nervous, gives morphin (⅛ grain) hypodermically and along with it nitroglycerin, or, as he prefers, sodium nitrite (one grain). He tries by taking the blood-pressure to keep it usually between "100 and 115 or 120 m.m. mercury." He summarizes by suggesting that the blood-pressure be frequently observed, that morphin be used when necessary to quiet the patient and so equalize blood-pressure, that sodium nitrite be given when necessary to reduce the pressure and in a sudden hemoptysis that amyl nitrite be used at once.

Typhoid Fever: In the *Medical Council,* for November, Samuel E. Carp believes that in intestinal hemorrhage in typhoid fever whatever must be done, must be done quickly. All food must be interdicted for at least 24 hours and quietude and rest must be produced by the hypodermic use of sulphate of morphia. He has used adrenalin chlorid and ergot subcutaneously and, he believes, with good results. In typhoid fever he uses the tub-bath, but when hemorrhage occurs, he stops it, and when temperature is high has the patient sponged with cold water, but not rubbed dry, believing that the evaporation yields an advantage. He questions the value of the Leiter coil on the abdomen and if any medicine is given by the mouth, it should be benzosol, salol or sulphocarbolate of zinc, though it may be wise to withhold these for 48 hours. Water may be given in moderation and the usual morning enema stopped. He deems it proper, however, to relieve the bowels by an antiseptic enema as soon as the condition will permit. In such conditions he uses 60 grains of the chlorid of calcium to a quart of hot water twice a day by means of the fountain syringe at an elevation of 20 inches. For three days, 30 grains are given in a quart of water once a day. Between the third and fifth day sulphocarbolate of zinc or benzosol may be given in three grain doses, three times a day, and he is partial at this time to the use of 15 drops of turpentine in emulsion every four hours. If absolutely necessary, sulphate of strychnin and the normal salt solution may be used and it may be necessary to use light liquid diet, especially if exhaustion is threatened. He advises the use of intestinal antiseptics after the hemorrhage has disappeared and as a rule he uses the tub-bath again when there have been one or two bowel ejections with no evidence of blood.

Caffein: In the *New York Medical Journal* for November 17 (from La Clinique), Claise calls attention to the grave symptoms and even serious results following the use of caffein in large doses, and especially in certain conditions. Triloubet also declares that caffein, although a valued therapeutic agent, is a brutal medicament,

the action of which is extremely difficult to regulate. In the first place, when given hypodermically, it often excites local inflammation when the drug is deposited too superficially under the skin. Secondly it is a powerful cerebral excitant, and capable of causing maniacal delirium, especially in aged persons. In elderly persons a primary stimulation with caffein is liable to be followed by weakness of the myocardium. Although serviceable in urgent cases of grippe to avert a tendency to collapse, and in typhoid fever in young subjects, it is a remedy that should always be mistrusted, and one should be careful in exceeding the ordinary dose, and be always on his guard.

Salicylic Acid: The *Therapeutic Gazette,* for November, quotes Stockman in regard to the elimination of salicylic acid. A large portion of the drug, as is well known, escapes from the body as salicyluric acid and he was never able to find a trace of the salicylate in the saliva, and only occasionally in the sweat; but he found the drug in the joint fluid in the serum of blisters, in bronchial mucus, and in pleural effusions, when the patient was taking sodium salicylate in ordinary doses. He found salicyluric acid to be very feeble in its action. Salicylates act in at least two ways in the body. In the case of acute articular rheumatism, in which they are supposed to exert a specific influence, they probably act deleteriously upon the micro-organism, which is responsible for the malady, whereas in the case of chronic rheumatism or gouty conditions depending upon diathetic states they produce some influence upon metabolism, or the oxidation processes in the body which we do not understand, but of which we are therapeutically certain. In the same number of the *Gazette* a case of poisoning by the oil of wintergreen is reported by H. J. Fischer. A robust healthy boy two years of age swallowed about one dram of the oil, although a cup of milk was immediately given, and he vomited within a few hours, the physician found him in a state of collapse; convulsions followed, and he died eight hours after having taken one teaspoonful of the oil.

Carcinoma: Robert Reyburn, in the *Journal A. M. A.* for November 10, comments on the apparent helplessness of most physicians in cases of cancer; generally no attempt is made to treat these patients by medication or to improve their hygiene, the whole treatment being confined to the knife, the X-rays, or some form of electricity. He believes that success in these cases would be far greater if we would combine with them some form of appropriate medical treatment. Each case must be studied individually and treated accordingly. The most potent cause of the failure of our treatment is the neglect of the patient to apply for treatment until the disease has so far advanced that treatment is hopeless. He believes there are two types of patients suffering from cancer who can be benefited by our counsel. The first is the anemic variety. The physician will of course give them iron in large and rapidly increasing doses, as much Vallet's mass, tincture of the chlorid of iron or Blaud's pills as their stomach will assimilate, correct any trouble with the generative organs, regulate the action of the bowels and try to bring the patient into the highest condition of personal health and excellence of

hygiene. The second type he terms the plethoric; they are generally stout, indolent and consume too much animal food; they require purgatives, starvation, and enforced exercise. Jacobi, in the same *Journal* calls attention to the value of methylthionin hydrochlorid (methylene blue) in inoperable cancer. He formerly used it by injection as formerly recommended, but found the injection painful and inadmissible, and hence for 14 or 15 years he has given it internally. He is positive that it has rendered him a great deal of good service in at least 120 to 150 cases during the last 15 years and the remedy is well tolerated. He gives the drug in small pills, two grains a day, and runs up slowly to three, four and six grains a day. He has heard of bigger doses being given but he has never required larger ones. He thinks the two or four grains should be made up in pills, with a dose of three-fourths of a grain of extract of belladonna daily. He has found that the extract of belladonna will relieve the dysuria much better than the nutmeg usually recommended for that purpose. He frequently combines it with arsenous acid (arseni trioxid). The dose would be from 1-40 to 1-20 grain of arsenous acid three times a day with the methylene blue and belladonna, and he sometimes adds extract of nux vomica or strychnin, best given after meals and one at bed time, so the patient will get daily about 1-10 grain of strychnin and 1-10 grain or more of the arsenous acid. Apart from staining the urine there is no inconvenience and dysuria is complained of in less than one in 20. He has certainly restored many people to their work, and has kept a number alive from two to eight years longer than would have been their share. In the *Medical Record*, for November 24, Clarence C. Rice reports a supposed carcinoma of the larynx cured by the subcutaneous injection of pancreatic extract (trypsin). The solution used contained the trypsin enzyme in its natural association with the other gland constituents, notably amylopsin, so following Beard's suggestion. Five minims diluted with equal parts of water were injected under the skin of the abdomen each day for the first 10 days. After that the dose was increased to seven and one-half minims every other day for one week; later 10 minims every other day and later seven minims every day and finally 10 minims every day were used. With these injections holadin, which also is an extract of the pancreatic gland, was given in three grain capsules, one three times a day. No other treatment was employed, and there is no doubt in his mind that the trypsin injections produced a very marked and prompt effect upon the growth. The earlier the case is put under the trypsin treatment, the greater the chance of success. In three other cases the results were not satisfactory.

Solanin: Wm. F. Waugh, in the *Journal A. M. A.* for November 3, calls attention to the value of solanin as an anesthetic, sedative and antispasmodic. It is an alkaloid found in several species of the solanaceæ, as dulcamara and the solanum carolinense, the horse or bull nettle. It is also found in the young shoots of the potato and in tubers that have grown while exposed to direct sunlight and those that have sprouted. Waugh brings out the close similarity between the effects of solanin and the bromids as to their general depressive powers. The chief differences are that the bromids act specifically on the cerebral centers, cause acne, depress the vitality, etc., while

solanin acts more on the cord, less on the brain, has no action on the skin, nor interference with digestion, and does not depress vitality or the sexual function. It will thus be seen that in the desirable range of effect, solanin admirably replaces the bromids, without their most marked undesirable action, and so occupies practically the same therapeutic field. Solanin is of great interest as a remedy for epilepsy.. Employed emperically in crude preparations it has not inconsiderable popular and some professional favor. Waugh has received 23 reports on it in epilepsy, all of which were favorable excepting one in which it was alternated weekly with the bromids and hence cannot be accepted. In children the paroxysms, without exception, have ceased within three weeks, the accessory treatment being diet, etc., and hygienic in general. As to the dosage, he has found that with a chemically pure alkaloid, the average adult dose is 1-12 grain and as yet he has not found it necessary to exceed one grain per diem. No undesirable effects have been observed from these doses. The probably fatal dose is placed by Reiley at six grains. Poisoning should be met by washing out the stomach, the use of strong tea or coffee, sustaining the temperature and strength by heat externally, with strychnin hypodermically in sufficient doses. Merck suggests tannic acid as an antidote. For children the dose may be regulated in the usual manner. It is necessary in all cases to push the remedy till constitutional effects are seen.

Academy of Medicine of Cleveland

The thirty-seventh regular meeting of the Clinical and Pathological Section was held at 8 p. m., Friday, December 7th, 1906, at the Cleveland Medical Library. Program: "Removal of Foreign Body from Right Bronchus by use of Bronchoscope," S. H. Large, M. D.; "Demonstration of Mechanical Models to Illustrate the Relation between the Tendencies of Normal Posture and Distortions of Lateral Curvature," H. O. Feiss, M. D.; "An Unusual Case of a Dermoid Tumor," W. H. Humiston, M. D.; "Report—Direct Transfusion of Blood in, (a) Pernicious Anemia, (b) Cholemic Hemorrhage, (c) Tuberculosis, (d) Carcinoma," G. W. Crile, M. D.

JUNIUS H. MCHENRY, M. D., Secretary.

St. Alexis Hospital Alumni Association

An Annual Open Meeting and Smoker of the St. Alexis Hospital Alumni Association was held at the Hollenden Hotel Parlors O. and P., Thursday, December 6th, 8:30 p. m. Address: "The Preparations of the New Pharmacopœia and of the National Formulary," by Prof. H. V. Arny of the Cleveland School of Pharmacy.

Report of the Milk Commission of the City of Cleveland, December, 1906

The Milk Commission in its second annual report, the first report of an entire year, wishes to recapitulate the facts of its organization and work to date. Succeeding reports will, in all probability, be briefer summaries of the work of single years.

In 1903, the formation of a Milk Commission was suggested to the Council of the Academy of Medicine of Cleveland, action not being taken at that time. In November, 1904, the matter was again brought to the attention of the Council, and steps were taken which resulted in the organization of a Commission of seven members, from the Academy of Medicine, the Homeopathic Medical Society and the Chamber of Commerce. These gentlemen are Dr E. F. Cushing, Dr Samuel W. Kelley, Dr H. H. Powell and Dr J. J. Thomas, from the Academy, Dr E. O. Adams and Dr Hudson D. Bishop from the Homeopathic Medical Society and Mr. Samuel Mather, Esq., from the Cleveland Chamber of Commerce.

The Commission began its labor at once and organized December 2, 1904, by the election of Mr. Samuel Mather as chairman, Dr E. F. Cushing as vice-chairman, and Dr J. J. Thomas as secretary-treasurer. Dr G. W. Moorehouse was later appointed assistant secretary.

After organizing, the Commission adopted rules and regulations for the management of dairies, determined the method of meeting the necessary expenses of its work and selected its experts. The regulations adopted were based upon the fifty dairy rules formulated by the Department of Agriculture of the United States Government.

The method of capping and sealing is that employed by the Milk Commission of the Medical Society of the County of Kings, New York, (The Brooklyn Commission). The caps are sold by the Commission to the dairymen. They bear the seal of the Commission, are controlled by it, and serve as the Commission's guarantee upon each bottle of certified milk. Through the sale of its caps the Commission provides for its routine expenses.

The experts selected by the Commission were Dr Samuel Burrows, a graduate of the University of Pensylvania, veterinarian; Dr John G. Spenzer, of the Medical Department of the Ohio Wesleyan University Medical School, chemist; and Dr Roger G. Perkins, of the Western Reserve Medical School, bacteriologist.

The Commission soon decided to send the veterinarian and the assistant secretary on a tour of inspection through the East. The officers and a certain number of representative producers for the Commission in Philadelphia, New York City and Brooklyn were visited, and much valuable information was secured. Much of the success which the Commission has met in putting upon the market a certified milk of exceptional quality, is doubtless due to this visit.

Upon his return a number of farms were awaiting examination by the veterinarian. The farms of all possible applicants for certification were carefully inspected. Most of these, either from the standpoint of physical surroundings or on account of poor management, were entirely unsuited for the production of high grade milk. In some cases the farms could have been put into proper shape, but for one reason or another the

owners decided not to do so. The Commission, however, was fortunate in finding, in Mr. Geo. R. Canfield, a man whose interest in the matter has been sufficient to cause him to put his farm at Novelty, Ohio, into condition to produce milk of the highest quality. After slight changes specified by the Commission, his herd, barns and dairy house were suitable for the production of certified milk. To the energy, enthusiasm and persistence of Mr. Canfield the Milk Commission is greatly indebted for its success, since each bottle of certified milk is nothing else than the tested product of a single dairy operated in the most approved and painstaking manner.

According to the rules of the Commission, the examinations by experts are to be made at intervals not greater than two months, and at least once a month in hot weather. Monthly bacteriological examinations have been the rule. Since the Commission was not certain what results would be attained under the conditions which existed in Cleveland, a maximum limit of 30,000 bacteria to the cubic centimeter was adopted as the bacterial standard of the Commission at the time of its organization.

The first bacterial-count, before the routine at the farm was working smoothly, was but little more than one-half the maximum permitted by the Commission. During the year 1905 the count exceeded 30,000 in but one instance and with this exception the first count was the only one to exceed 10,000. Excluding these two counts, one above the maximum permitted and one about half this maximum, the remaining six counts, upon which the milk was certified during the year 1905, averaged 2,658 bacteria to the cubic centimeter. As a result of this experience the Commission decided to reduce its bacterial standard for the certification of milk produced under its direction from 30,000 to 10,000 bacteria per cubic centimeter. The new standard became operative January 1. During 1906, four bacterial counts above the new standard have been reported. These were 10,400, 12,000, 13,055 and 27,231. It is worthy of note that the milk did not exceed 30,000 bacteria to the cubic centimeter during the year, and in each instance would have been certified without question had the bacterial standard not been changed. The average of ten counts upon which the milk was certified during 1906 is 5,050.

The bacterial counts of certified milk during 1906 have shown a higher average than did those made in 1905. For this increase several reasons may be offered, and the more important of these suggest that the counts are more correct for the milk as received by patrons, rather than that the milk has actually a higher bacterial content. Some of the counts made during the first year were from bottles taken from the car at its entrance to the city and carried to the laboratory, where cultures were made at once. In this way milk was received earlier by our bacteriologist than it could have been by patrons. At present the milk is taken from delivery wagons, and corresponds in every respect with that of ordinary deliveries. Further, during the first year of the Commission's work, the samples for examination were taken from the lower layers of the bottle. It is stated on what appears to be good authority, that cream contains a greater number of bacteria than does the milk from which it is taken. During 1906 the samples for examination have been mixed specimens, and higher counts may be expected for these than for samples from the lower layers of the same bottle. During the last of August and forepart of September, the milk had a higher count than 10,000. That the conditions

were not satisfactory at the farm was known before the fact was shown by high counts, and every effort was being made to remedy them by securing more efficient help. When high counts were found redoubled efforts, with the assistance of the veterinarian, were made and the next sample taken showed a bacterial content below 5,000.

It may be of interest to tell what steps are taken by the Commission when a bacterial count higher than the standard is reported. In making routine examinations samples are taken from only one bottle and a high count is not accepted as positive proof of the existence of errors of technic causing general contamination nor does it necessarily indicate improper handling in distribution. It may be purely the result of accident, and may affect merely the bottle examined or a single milking. When a high count occurs, therefore, it is the signal for a repetition of the bacteriologic examination. This is ordered immediately, and, if the result is satisfactory, the second is supposed to be the correct count. If, however, the second count is also high the veterinarian is sent on a search for errors of technic. We may say, further, that a count of 5,000 has come to be considered an average maximum for milk produced under the direction of the Commission; if above this the dairy endeavors to make such improvements as well bring it down; if above 10,000 the Commission, through its veterinarian, joins the dairy in this effort.

The inspections of the veterinarian and the examinations by the chemist have not been made with the frequency of bacteriological examinations. Since the onset of cool weather in the fall of 1905, the assistant secretary has alternated with the veterinarian in monthly visits to the farm, making the formal inspections at intervals of two months. The veterinarian is charged both with the management of the farm and the production and handling of the milk. The veterinarian has tested with tuberculin all animals of the original herd, and more than 100 added since May, 1905, when certified milk was placed upon the market. Retests of the herd are being made annually and no animal giving the tuberculin reaction will be added to the herd or permitted to remain in it. When the herd was tested for tuberculosis before certification several animals reacted to tuberculin. At the annual test of the herd in April, 1906, no animal was found tuberculous, the clearing of the herd from infected animals at the beginning and the tests of all cows added to the herd having sufficed to keep it free from tuberculous animals.

The chemical examinations have been made at bimonthly intervals. With reference to the chemical characteristics of this milk the Commission is satisfied that adulteration and the adding of preservatives would not be attempted, as it would result in immediate withdrawal of certification. The reports of the chemist confirm the Commission in this belief. During the first year, however, the herd was somewhat deficient in cows producing milk rich in fat. In making additions to the herd to meet the increasing demands upon the dairy this fact has been borne in mind, and, since March 1906, the fat of this milk has averaged well above four per cent. Failure to pass the tuberculin test has made additions to the herd a difficult matter, since animals that promised well from the standpoint of fat production have seemed to react more frequently than have less highly bred cows. The neglect of tuberculin tests in Ohio has increased the difficulty experienced by the dairyman, who has found it utterly impracticable to purchase

cows which have been tested, or to purchase them subject to test, and has, therefore, met with large losses from all animals which have reacted.

The sales of certified milk have depended almost solely upon the recommendation of physicians, and while they have not reached a total attained in some cities with which Cleveland may properly be compared, yet a steady and fairly rapid increase in demand is shown. This milk is sold in quart and pint bottles, and the following table gives the total shipments from the beginning:

MONTHLY SHIPMENTS OF CERTIFIED MILK

Month	Quarts	Pints	Bottles	Total Quarts
1905			45 (3)	35 (3)
May (1) (2)	253	198	451	352
			105	82
June (2)	1770	1390	3160	2465
			237	185
July (2)	4118	3235	7353	5736
			256	192
Aug.	3936	4014	7950	5943
			320	250
Sept.	5408	4209	9617	7513
			320	252
Oct.	5614	4317	9931	7773
			340	270
Nov.	5998	4208	10206	8102
			355	280
Dec.	6358	4649	11007	8683
1906			365	294
Jan.	6903	4415	11318	9111
			364	297
Feb	6408	3792	10200	8304
			394	322
Mar.	7757	4454	12211	9984
			408	335
Apl.	7893	4342	12235	10064
			396	333
May (4)	8382	3900	12282	10332
			420	345
June	8098	4491	12589	10354
			441	363
July	8822	4854	13676	11249
			512	421
Aug.	10173	5710	15883	13038
			563	477
Sept.	11050	6543	17598	14324
			643	500
Oct.	11697	7584	19281	15489
			606	493
Nov.	11376	6818	18194	14785
			585	479
Dec. (5)	11597	6529	18126	14860

(1) Ten days only. (2) Amount estimated. (3) Daily average. (4) Price raised from 12 to 15 cents per quart. (5) Estimated from the shipments of the first 15 days.

To provide milk for the increasing sales it has of course been necessary to increase the size of the milking herd. In the original stable, from

which milk of very low bacterial count was produced, about 24 cows could be kept. During the summer of 1905 a stable of most approved design with accommodation for 60 cows was erected. This stable was first used in November, 1905. In November the herd consisted of 38 milking cows; in April, 1906, 50 cows; and since August of this year the stable has been filled to capacity. It is practically impossible to predict the future demand for certified milk. Last winter there was a slow but constant gain in sales. This summer the gain has been rapid. A slight falling off has begun, but the demand next summer should be greater than the dairy can supply at present. If it seems warranted, the original stable will be put in condition to care for 20 or more additional milking cows or a total herd of about 80.

Several changes in the regulations of the Commission have been authorized since its organization or are about to be authorized, and they will be mentioned in this place. That relating to the bacterial standard of certified milk has already been noted.

The Commission desires an income which will merely meet its budget of expenses and insure solvency. From this standpoint a most important modification of the regulations has been made since the last report. Of the expenses assumed by the Commission at the time of its organization, the frequency of routine inspections, examinations, and tuberculin tests was specified and their cost known, and the cost of caps, cap containers, postage, etc., may be estimated with reasonable accuracy. This, however, is not true of all expenses assumed by the Commission. While it specified that all cows must be tested with tuberculin before being added to the herd, and that recounts of the milk, and in some cases additional inspection of the dairy, must be made when the milk failed to reach the Commission's standard, the occurrence of these additional expenses cannot be predicted, although they add largely to the budget. When the sale of caps covered such expenses of the Commission as could be predicted, it was realized that under this plan of operation a considerable balance would be necessary to meet expenses over which the Commission had no control. To accumulate a surplus, however, would be undesirable, so, while the Commission still pays directly for all tuberculin tests, inspections and examinations, the dairyman reimburses the Commission for tests of animals added to the herd, and for extra inspections and examinations made necessary by a failure to reach the standard set. Without this change the Commission would not be able to present a favorable financial statement at the end of the year. Under this rule it has been able, with increasing sales, to reduce the price of caps to the dairyman one-fifth, and still finish the year free of debt. Should the Commission not be able to meet its obligations on this basis, caps will again be sold at the former price.

Another modification of the regulations is that permitting a change from hand to machine milking. The permission to make this change is contingent upon the production of milk which shall not involve any change in bacterial standard. The Cleveland Commission is not the first to authorize this experiment. It has been tried at one of the dairies of the Philadelphia Commission, which reports that no increase in bacterial content has been noted.

When the shipment of certified milk began, the Cleveland and Eastern, the farm's only means of communication with the city, had a morning car upon which milk was carried. Since the regulations of the Commission required that the parchment circle covering the neck of each bottle should be stamped with the date of milking, any day's supply consisted of that morning's and the previous evening's milk, and had two dates. In delivery it was obviously impossible to distinguish between these dates, and a customer might, and actually did, receive either milk. Notwithstanding explanations offered, the occasional alternation between yesterday's and today's date brought out repeated objections on the part of customers. The producer and the distributers, therefore, united in a request to the Commission that the evening and morning milk should be considered one day's milk and be given the morning's date as the day of milking. The criticism which called forth this request seemed so unjust and unreasonable that the Commission assented to the change in substance though not in form and authorized that any evening's and succeeding morning's milk be given the morning's date as "day for delivery." At the present time, however, each day's milk is shipped in the evening, yet a change in the method of dating would cause so much confusion and would require so much explanation to patrons that the dairy is directed to mark each bottle with the succeeding day's date as "day for delivery." A glance at the bottle, therefore, will show that the milk is delivered according to the Commission's requirements.

The Commission has added somewhat to the definiteness of its regulations governing tuberculin examinations. Annual examinations of all animals in the herd, exclusive of stock under six months of age, will be made. Animals brought to the farm for the tuberculin test shall not be added to the herd or allowed to mingle with it until tested, and this shall be done within the shortest practicable time. No animal shall be allowed upon the farm after reacting to tuberculin. Until a cow has been proven free from tuberculosis, or after it has reacted to tuberculin, no use detrimental to the health of the herd shall be made of its milk upon the farm, nor shall its milk be shipped from the farm.

The Commission in its rules has provided for certified cream. Such cream shall be separated and bottled at the farm under the direction of the Commission from the milk of the certified herd. The bottles shall be closed with the regular cap of the Commission and covered with a parchment circle bearing the date of milking and stating the percentage of fat. The standard for fat shall be 20 per cent and shall not vary more than two per cent from the amount stated. In bacterial content it shall not exceed that allowed in certified milk. Most if not all of the Eastern commissions have a bacterial standard for cream greater than that for milk. The rule of the Cleveland Commission was based upon the experience of the Milwaukee Commission which found practically identical counts for its milk and cream. In view of the reasonable doubt of our ability to produce cream with a bacterial standard of 10,000 from our certified milk, this rule should be considered tentative. The time seems to have arrived when the best cream should be available and the Commission wishes to announce that certified cream will, in all probability, be on

the market January 1, 1907, or shortly thereafter. The price will be 13 cents per half pint or 25 cents a pint.

The product of Canfield's Certified Dairy is still distributed by the Belle-Vernon-Mapes Dairy Company, the Cloverdale Dairy Company and the Walker-Gordon Laboratory. Each of these distributers deserves the consideration of the Commission and the profession in their entire territory, since through them all the milk reaches territory not touched by any one firm, and not to be economically covered by a delivery exclusively confined to this milk. The Commission does not believe that the distributers have ever made changes in the dating of certified milk, but without this change the milk has, sometimes, been delivered at a date later than that authorized. Physicians will confer a favor upon the Commission by reporting to it promptly any facts concerning certified milk which may need attention, especially errors in delivery.* If any dealer persists in the distribution of milk which has been held over, the Commission will not allow him to continue its distribution. During the year 1906 Mr. Canfield, with associates, has purchased the Walker-Gordon Laboratory. It has in consequence become the most active center for the distribution of certified milk.

In addition to fulfilling its primary function in placing upon the market a certified milk, the Commission has accomplished something for the improvement of the general milk supply of the city. Since its organization the regulations of the Board of Health, affecting the production and distribution of milk, have been revised, and the advice of the Commission's officers was secured concerning these provisions. The Commission believes that these regulations furnish an ideal, rather than a goal which may be promptly reached. Certain municipalities, however, having health officials interested in this subject, have made great improvement in their general milk supply, and the Cleveland provisions now permit any possible advances here. While the Milk Commission has no official supervision of the Walker-Gordon Laboratory, except such as applies to it as a distributer of certified milk, it feels that the new management is endeavoring to still farther improve its sources of supply, and to conduct all its operations in a way which will meet the approval of the medical profession. Since the purchase of the laboratory by Mr. Canfield and associates, several visits have been made to the dairies, particularly that furnishing the milk used by the laboratory in modifying. Monthly bacteriological examinations have been made of all milks received, and these are used as guides to the improvement of methods of production and handling. More extended bacteriological examinations have been instituted of the milk used by the laboratory for modification, first to determine whether a more satisfactory product can be turned out, and, second, to maintain the best standard which can be attained. Those making the bacterial counts and inspections mentioned are in close touch with the Commission, so that the conditions will at all times be known to it. The Commission feels, therefore, that it can assure the profession that the safeguards thrown around the milk used for modification are superior to those which obtained in former years. Both as to the general supply of the city, and, also, the

*The report should be made by telephone or letter to the office of the Secretary of the Commission, Dr J. J. Thomas.

special milk business, as represented by the Walker-Gordon Laboratory, the Commission believes that its influence has been exerted on the side of a more satisfactory milk supply.

By way of warning, the Commission feels that it is necessary to speak of a company which has taken to itself a name in which the word "certified" appears. It should be remembered by all physicians that the product of this company, which is sold by it as certified milk and cream, is not certified by the Commission.

The Commission is indebted to the daily papers of Cleveland for their record of the organization and purposes of the Commission. It is under special obligations to the *Cleveland Plain Dealer* for an illustrated article in a Sunday edition early in the summer of 1905, and for the publication of a communication from the Commission at a later date. From time to time Mr. W. E. Cushing has given the Commission legal advice which has been of great value. To Mr. Samuel Mather, chairman of the Commission, and to Messrs. E. W. Oglebay and W. S. Tyler, the Commission and the public are indebted for generous contributions which made it possible to start the work of the Commission on its present basis.

The Commission would ask a still more general use of certified milk, and its continued and increased use is in the hands of the medical profession. The exceptional cleanliness that is practiced at the farm under the supervision of the Commission, the proper cooling of the milk, and the promptness of delivery, which has been insisted upon and which can be still better maintained with the cooperation of physicians, ensures a milk of low bacterial count. A healthy infant is much more likely to remain healthy upon certified than upon ordinary market milk. When it is again safe to feed an infant with gastro-intestinal disturbance upon milk, it does better upon certified than upon other milks. In Cleveland, as elsewhere, to secure proper milk for some infants requires the assistance of charitable organizations. Certified milk, however, is not disproportionately high in price and many parents will gladly take this measure of insurance for their child if the matter is presented to them, and a very large proportion will be only too glad to turn to it when in difficulty.

Respectfully submitted,

THE MILK COMMISSION OF THE CITY OF CLEVELAND.

Samuel Mather, Esq., President. J. J. Thomas, M. D., Secretary.

Book Reviews

The National Formulary of Unofficial Preparations. Third Edition. Thoroughly revised and enlarged. By authority of the American Pharmaceutical Association. Published by the American Pharmaceutical Association, Baltimore, Maryland, 1906.

Through the courtesy of Mr. L. C. Hopp, of the Mayell Hopp Company, we have received the National Formulary of Unofficial Preparations. This volume is published under the direction of a committee on National Formulary of the National Pharmacopœia Association. The present edition includes whatever revisions are made necessary by the revised edition of the Pharmacopœia. The formulæ given in this volume are presented in both apothecary's system of weights and in the metric system. A further

extremely valuable addition is the including of the average dose of the formula given.

While this work is primarily intended as a guide for pharmacists, it is really of great value to the practicing physician and should, in our judgment, be better known among the profession in the future than it has been in the past. There has been too much blind prescribing on the part of the profession and how few of us have the slightest idea of the method of preparation of many of the formulæ which we use constantly.

A Primer of Psychology and Mental Disease. For Use in Training Schools for Attendants and Nurses and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M. D., Medical Director of Oak Grove Hospital (Flint, Mich.) for Mental and Nervous Diseases; Formerly Medical Superintendent of the Eastern Michigan Asylum; Member of the American Medico-Psychological Association; of the American Medical Association; Foreign Associate Member Societie Medico-Psychologique of Paris, etc. Third Edition. Thoroughly Revised, with Illustrations. Pages viii-183, 12 mo. Bound in Extra Vellum Cloth, $1.25 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

Dr C. B. Burr, of the Oak Grove Hospital at Flint, Michigan, has published a third edition of his well known Primer upon Psychology and Mental Disease. This little volume is intended primarily for use in training schools for attendants and nurses or for use in medical teaching and as a ready reference volume for practitioners. It is a wonderfully clear and simple presentation of this important subject and should prove of great service as an adjunct to the more exhaustive text-books.

The Ear and its Diseases. A text-book for Students and Physicians. By Seth Scott Bishop, B. S., M. D., LL. D., Honorary President of the Faculty and Professor in the Post-Gradute School and Hospital of Chicago; Surgeon to the Post-Graduate Hospital and to the Illinois Hospital, etc. Illustrated with 27 Colored Lithographs and 200 additional illustrations. Royal Octavo, 440 pages. Bound in extra cloth. Price, $4.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

This volume is really a supplement to the author's well known work upon the diseases of the nose, throat and ear; comprising in a single volume the pathology and therapeutics of diseases of the ear, together with those abnormal conditions of the nasopharynx which follow as a sequel to the diseases of the ear. The first five chapters are devoted to the anatomy of the ear, a very thorough and exhaustive review of the subject. The next chapter is devoted to the physiology of the ear, then follows two chapters upon the examination of the patient, the description of the apparatus necessary in treatment of diseases of the ear, and their methods of use. The main body of the work is then given up to discussion of various diseases and their treatment. The author even includes accurate description of the radical mastoid operations. A helpful appendix is included, containing a large number of formulae for sprays and remedies. The illustrations throughout the text are very full and descriptive, while the clear plates are reproduced by permission from the Atlas containing

Dr Politzer's plates of the diseased conditions of the ear and are very helpful. The volume is sufficiently exhaustive and thorough and should meet with great favor from all students and those physicians who have occasion to need a text-book of this character.

A Compend of Genito-Urinary Diseases and Syphilis, including their surgery and treatment, by Charles S. Hirsch, M. D., Assistant in the Genito-Urinary Surgical Department Jefferson Medical College Hospital. Illustrated. Philadelphia. P. Blakiston's Son & Co., 1012 Walnut St., 1906.

In Blakiston's Quiz-Compends we have to acknowledge that upon Genito-Urinary Diseases and Syphilis, by Chas. S. Hirsch. A small volume of 350 odd pages, including an index, which covers in sufficient detail, in a work of this sort, the well known subject of genito-urinary diseases and syphilis. While we have never been in sympathy with the demand which creates these quiz compends or short epitomes, the volume under consideration fulfills admirably the primary purpose for which it was intended.

The Medical Students Manual of Chemistry, by R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology in Cornell University. Sixth edition. New York. William Wood & Company. 1906.

Through the courtesy of the publisher, we have received this sixth edition of Professor Witthaus's Manual of Chemistry prepared especially for medical students. This volume is too well known to need any detailed review. In this last edition, the section on organic chemistry has been rearranged in accordance with the modern advances in this field. Of more importance to the student and physician is the section devoted to the physiologic chemistry which has been largely rewritten and greatly enlarged. Among the works of similar character no single volume has perhaps been accorded a more popular approval than has this volume, and the latest edition represents the present knowledge of the subject in a most exhaustive way.

It is to be hoped, however, that the irregularity found in the volume received by us does not exist in any large number of volumes put upon the market. The index which is apparently very complete begins at page 783, skips from 784 "sub heading acid," to page 803 "glucososazorie," then follows in sequence to page 818 "tropidin," then goes back to page 801, repeats all the text between pages 803 and 818 but gives in addition pages 819 and 820, while pages 785 to 800 inclusive are absolutely wanting from the volume, a very important omission from a work of this character.

Second report of the Wellcome Research Laboratories, at the Gordon Memorial College at Khartoum.

The report of the first year's work was printed in 1904, and the present one carries the record to date. The general impression of the volume is extremely favorable, on account of the tasteful binding, the excellence of the paper and typography, and the clearness of the illustrations. The

marginal summaries add greatly to the convenience of the reader. The table of contents includes extensive mosquito work and in association a large amount of information concerning the other biting pests, accompanied by descriptions and drawings which leave no difficulties for such as desire to identify them. Besides these are articles on a hemogregarine of mammals, and the trypanosomes of the district, both by the director of laboratory, Andrew Balfour: these articles are very complete and well illustrated by drawings and photographs. The report of the traveling pathologist is less complete, for obvious reasons, but forms a valuable catalogue of the wealth of material at hand and is to be supplemented by the use of a steamer with a laboratory on board, which will explore the branches of the rivers and examine the fresh material at once. The report of the chemical laboratory deals with the usual subjects of water and milk, but adds also valuable remarks on the mineral resources of the country and data as to the various poisons and magic powders in use among the natives.

The whole volume is a record of conscientious work, and shows that with this laboratory and the School of Tropical Medicine the material in Northern Africa will begin to get the attention it deserves.

Correspondence

Cleveland, O., December 20, 1906.

Editor Cleveland Medical Journal:

Will you kindly accord me space for a word in regard to the Cleveland Medical Library.

Although sincerely of the opinion that I had fulfilled my usefulness to the Library, I have been asked to assume a still larger responsibility; I shall not question the wisdom of the decision and shall yield cheerfully to the demands imposed. The kind consideration of those who have placed me in this responsible and honorable position requires that I should express my very great appreciation of the distinction conferred upon me.

It shall be my aim to maintain and advance the splendid results achieved under my predecessors, which we all recognize and for which we are duly grateful.

But I cannot help thinking that the interest and value attached to membership in the Library can be greatly enhanced by the individual work of every member, and I ask that each member pledge himself to add at least one new name to the membership list and impress upon all who wish to keep in touch with the contemporaneous thought of the day in matters pertaining to medicine and surgery the advisability of becoming a member of the Library Association at once.

Let us all pull together to make the Cleveland Medical Library Association larger, more democratic and useful, indeed such a need, that a physician's standing in this community shall be determined by his affiliation with the library.

H. J. Sherman.

Resolutions adopted by the American Urological Association in Memory of Dr Wm. K. Otis

At the regular meeting of the Second Section of the American Urological Association, held in New York on Wednesday, October 24th, 1906.

The President, Winfield Ayres, M. D., officially announced the death of the Vice-President of the Second Section, William K. Otis, and called for a report by the Committee appointed for the purpose, to present a memorial on the Association's bereavement. In presenting the report, a member of the Committee said:

"The ties of life-long intimacy which bound most of us to Dr Otis, make his death a subject of grief to each individual. The usual set form of preamble and resolutions, therefore, were deemed inadequate by your Committee to express our sorrow. 'Billy's' demise is, to the older members of the Association, as if a much loved brother had gone from us. Your Committee begs to submit:

William Kelly Otis' earthly career ended on September 22nd, 1906.

To the members of the American Urological Association, his death is a threefold blow.

Most of us knew him intimately from his childhood; by his decease we lose a consistent friend, a charming companion, a most estimable colleague.

To the Science of Urology his death means an irreparable loss. Cut off in the midst of his career, his inventive genius is stopped; the new and useful instruments he was continually devising must now be perfected by other hands. The advances in our work, he can no longer aid in developing.

The American Urological Association loses one of its founders, one of its most active coadjutors, one of its truest adherents.

Our Association shares with the family of William K. Otis, with the Profession at large, and with that world in which true manhood is understood and appreciated, that deep grief which the death of so noble a character inspires.

RAMON GUITERAS,
A. ERNEST GALLANT,
FERD. C. VALENTINE,
Committee.

Follen Cabot, M. D., moved, and G. K. Swinburne, M. D., seconded, that the report be accepted and the Committee discharged. Carried.

Augustin H. Goelet, M. D., moved, and George M. Muren, M. D., seconded, that the introductory remarks with which the memorial was presented, together with the memorial, be spread upon the minutes, published in the medical journals, and a copy furnished the family of the deceased. Carried.

The President appointed Ferd. C. Valentine a Committee with full powers to execute the behests of the above resolutions.

A true copy from the minutes.

WINFIELD AYRES, M. D., President.

W. S. REYNOLDS, M. D., Secretary.

Medical News

H. E. Dunn, of Elyria, is laid up with a sprained ankle.

J. W. N. Vogt, of Delaware, is suffering from a dislocated shoulder.

M. M. Keep, of Wapakoneta, is in Bellefontaine, suffering from an attack of typhoid fever.

G. W. Smith, of Newark, has returned from the Chicago Polyclinic, where he has been taking a special course.

The Pickaway County Medical Association met in regular session December 7. H. E. Jones and O. H. Dunton read interesting papers.

E. S. Wright and wife have left Conneaut for Chicago, where the doctor will spend a short time in the Chicago Hospitals and at Clinics.

James M. McGeorge, of New Galilee, Pa., who has for some years been a physician at the Massillon State Hospital, expects to locate in Salem about the first of the year.

Claude B. Maddox, of Ironton, who sometime ago moved to Broken Arrow, Indian Territory, will take a post-graduate course in New York and then locate in Portsmouth.

The Hancock Medical Society held its meeting December 6, at which the following officers were elected: President J. V. Hartman; Vice-president, Don C. Hughes; Secretary, Nellie B. Kennedy; Treasurer, J. A. Kimmel.

The annual meeting of the Columbiana County Medical Society was held in Lisbon, December 14. Geo. F. Zinninger, of Canton, read a fine paper on "Diabetes Millitus." Election of officers was deferred until the next meeting for lack of time.

The December meeting of the Lawrence County Medical Society was held December 6, at Ashland. The papers read were as follows: "Enuresis," H. J. Brown, Ironton; "The Field of the General Practician," W. F. Marting, Ironton; "Child-birth Story," Dan Gray, Ironton.

The regular monthly meeting of the Muskingum County Medical Society was held December 12 with the following program: "Materia Medica and Therapeutics by Suggestion," Dr Burton; "Proper Preparation for Operations and Technique of After-Treatment." Dr McDowell; Reports of several cases; Report of District meeting.

The Coshocton County Medical Society held their meeting December 20. Program: "The diagnosis and surgical treatment of tuberculosis of the kidneys," a Clinical Report by William E. Lower, Cleveland; "Christian Science," W. C. Frew, Coshocton; "Pneumonia," R. C. Edwards, West Carlisle; Election of officers and miscellaneous business.

The Greene County Medical Society met December 6. A very interesting paper on "The Use and Misuse of some Cardiac Remedies," was read by L. M. Jones, of Jamestown. The election for officers for 1907 is as follows: President, W. H. Finley; Vice-president, W. A. Galloway; Secretary, W. H. Grube; Treasurer, D. E. Spahr. A few new names were added to the membership.

Following is the program of the Lake County Medical Society, held in Painesville, December 3: Reports and presentation of Clinical Cases: "The Limitations of the more Common Gynecological Procedures," Hunter Robb, Cleveland; Discussion opened by H. E. York and H. N. Amidon; Nominations and election of officers for 1907; Addresses and reports of retiring officers; Arrangements for the Annual Banquet.

The Fairfield County Medical Society held its regular meeting December 18. The annual election of officers is as follows: President, G. O. Beery, Lancaster; Vice-president, T. R. Mason, Sugar Grove; Secretary, J. Frances Trout, Lancaster; Treasurer, S. A. D. Miller, Lancaster; Censors, J. T. Farley and H. M. Samson, Lancaster. Excellent papers were read by S. A. D. Miller on "The Treatment of Appendicitis," and W. S. Samson on "Glaucoma."

The Belmont Medical Society held an important meeting December 26. Officers were elected for the ensuing year as follows: President, Dr D. O. Shepherd, of Barnesville; Vice-president, Dr A. W. Diven, of Martin's Ferry; Secretary, Dr J. S. McClellan, of Bellaire; Treasurer, Dr A. C. Beetham, Bellaire; Board of Censors, Drs A. W. Diven, J. O. Howell and D. W. Boone. Dr B. O. Williams, of Martin's Ferry, was elected delegate to represent the society at the meeting of the State Medical Society.

Arthur P. Hitchens, M. D., succeeds J. J. Kinyoun, M. D., as Director of the Biological Laboratories of H. K. Mulford Company. Dr Hitchens has been connected with the Mulford Biological Laboratories for the past eight years, during the greater period of that time having had personal charge of the preparation of Antitoxins and Curative Sera. He is well qualified to conduct scientific work connected with the production of Antitoxins and Biological Products. W. F. Elgin, M. D., continues in charge and direction of the Mulford Vaccine Laboratories. E. D. Reed, M. D., of Ann Arbor, Mich., has been engaged to direct research work, particularly in pharmacology and physiological chemistry.

Deaths

F. S. Franks, of North Robinson, died suddenly very recently.

J. M. Miller, one of Springfield's oldest practitioners is dead at his home.

The Cleveland Medical Journal

VOL VI FEBRUARY, 1907 NO 2

The Histology of the Thyroid in Simple and Toxic (Exophthalmic) Goitre, with Remarks on Similar Changes in the Dog

BY DAVID MARINE, A. M., M. D.,

Demonstrator in Neuropathology, Western Reserve University,
Visiting Pathologist to the Cleveland State Hospital

The object of this paper is to present briefly the present views as to the embryology of the thyroid and parathyroid glands; also the present views as to the histology of simple and toxic (exophthalmic) goitres, and to record notes of similar changes occurring in dogs.

Embryology of the Thyroid. The first observers, working with the lower vertebrates, taught that the gland developed from a single *Anlage,* centrally placed in the 1st gill cleft (2nd of Born) and manifested itself as an entodermal bud from the floor of the pharynx. Later Steida and Wölfler expressed the view that the organ was of bilateral origin but that both *Anlagen* were derived from the 1st gill cleft. This view was supported by His. The other view, supported by Born, Schreiber, Kohn, Grochuff, Tourneux, *et al.*, states that it arises from three distinct *Anlagen;* (1) the median, from the entoderm of the 1st gill cleft, (2 and 3) the lateral pair from symmetrical parts of the 4th pair of gill clefts. The balance of data favors the second view. Born was the first to observe that these three *Anlagen* fuse at a given period in embryonic life. This fusion in the human embryo takes place in the 7th week. The histologic differentiation into gland tubules begins before fusion takes place. Some observers think this change begins in the centre of the body and extends to the periphery.

Read before the Academy of Medicine of Cleveland, December 14, 1906

The development of colloid also begins in embryonic life and is normally well advanced at birth.

Embryology of the Parathyroid. They originate as paired structures from the 4th pair of gill clefts: according to one view (represented by Schaper, Podak and Baber) they arise as parts of the lateral thyroid *Anlagen* and are only undifferentiated portions of the same, while according to the second view (represented by Kohn, Grochuff, Tourneux, Schreiber, *et. al.*) they arise from symmetrical independent *Anlagen* lateral to the lateral thyroid *Anlagen.* This latter view is the more recent and is more in accord with the data of observation. One noteworthy observation in support of the 2nd view is the great frequency with which duct-like remnants are to be found in or adjoining the parathyroid gland. This was present in some 25 of the 200 dogs I examined.

The Normal Thyroid. It is impossible to state any narrow detailed description applicable to all regions as to size and histologic appearance, because the structure differs so markedly in different localities and at different ages. To illustrate—I may say that by using the same standard of normal for Cleveland as for Baltimore I have not seen one normal thyroid histologically out of 67 specimens from adult subjects. The gland is generally larger in goitrous districts. The normal gland weighs from 30-60 grams, being slightly heavier in infants and in females per body weights; *i. e.,* 1 to 100-700 in infants as opposed to 1 to 1800-2200 in adults (Huschke). The usual dimensions are: transverse 50-60 mm. (2-2½ in.), thickness of lateral lobes 18-20 mm. (¾ in.), length of lateral lobes 50-60 mm. (2-2½ in.)

Microscopically the gland is a closed system of more or less tubular and saccular alveoli distended with a substance, the color and consistency of honey. This so-called colloid makes up over ½ of the bulk of a normal gland. It sharply abuts the alveolar epithelium and stains a clear uniform pink with eosin. Adjoining alveoli frequently stain of different intensity. The alveoli range from 1/3 mm. to 1 mm. in diameter. The epithelial cells lining the alveolus are generally cubical or flat-cubical, though this varies for different districts, in goitrous localities a low columnar epithelium is normal.

Histologists have distinguished two types of gland cells; (1) "chief cells," comprising the greater number, are finely granular with no clear cut cell boundaries and their free ends seemingly are continuous with the colloid, (2) "colloid cells," fewer in num-

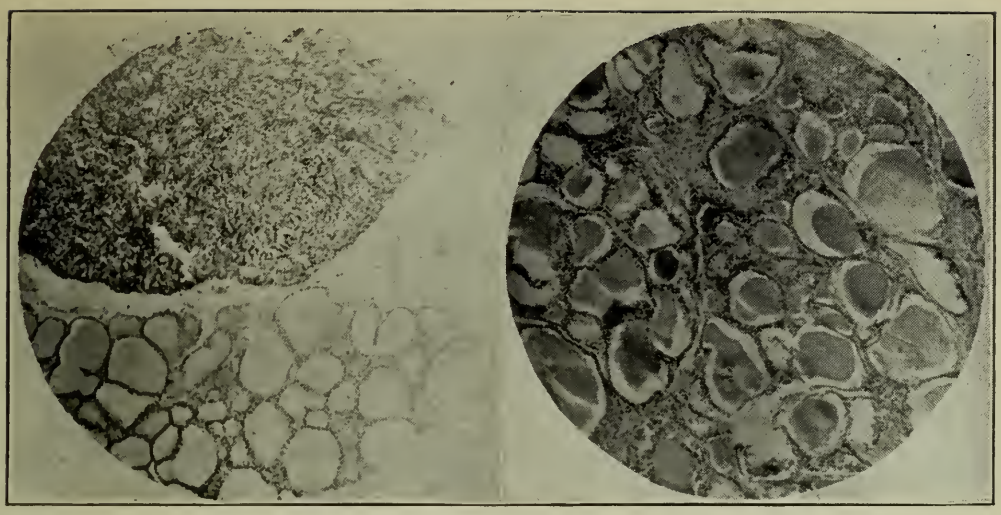

Fig. I.

Normal Thyroid and Parathyroid (dog)

Fig. II.

Normal Adult Human Thyroid (Baltimore), Zenker

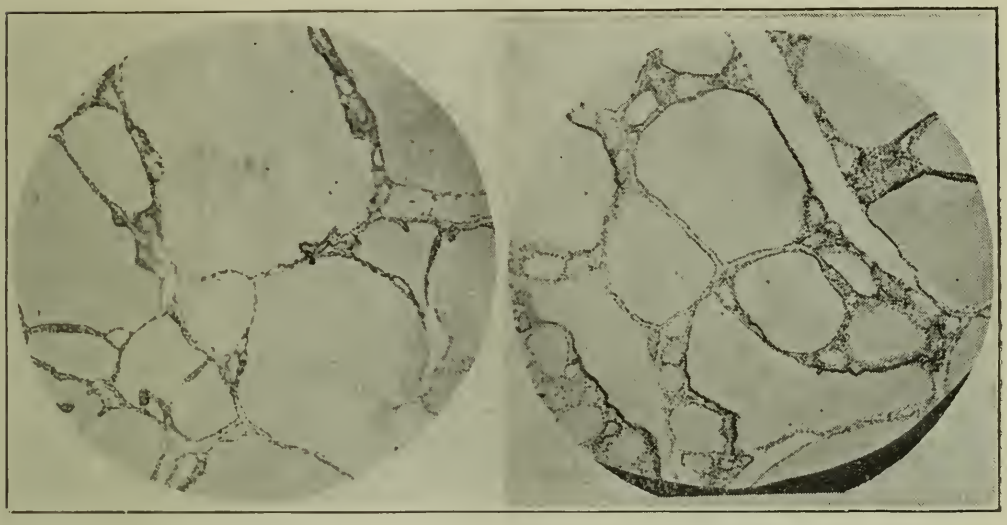

Fig. III.

Colloid Adenoma (dog)

Fig. IV.

Colloid Adenoma (human)

Fig. V.

Marked Glandular Hyperplasia (dog)

Fig. VI.

Primary Toxic (Exophthalmic) Goitre (human)

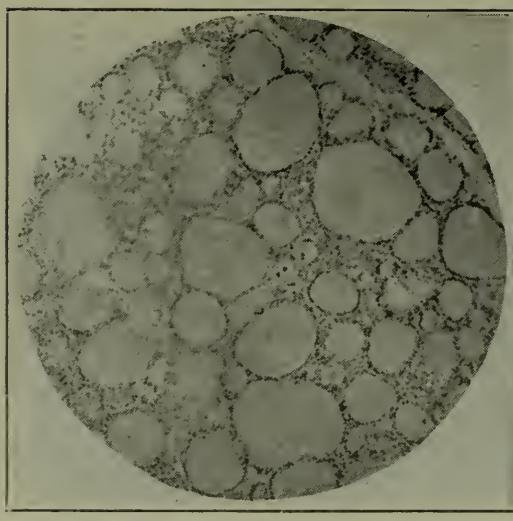

Fig. VII.

Normal Adult Human Thyroid (Cleveland), Formalin

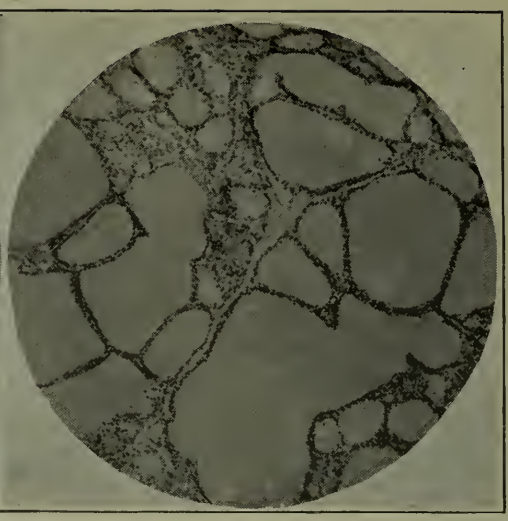

Fig. VIII.

Secondary Toxic (Exophthalmic) Goitre (human)

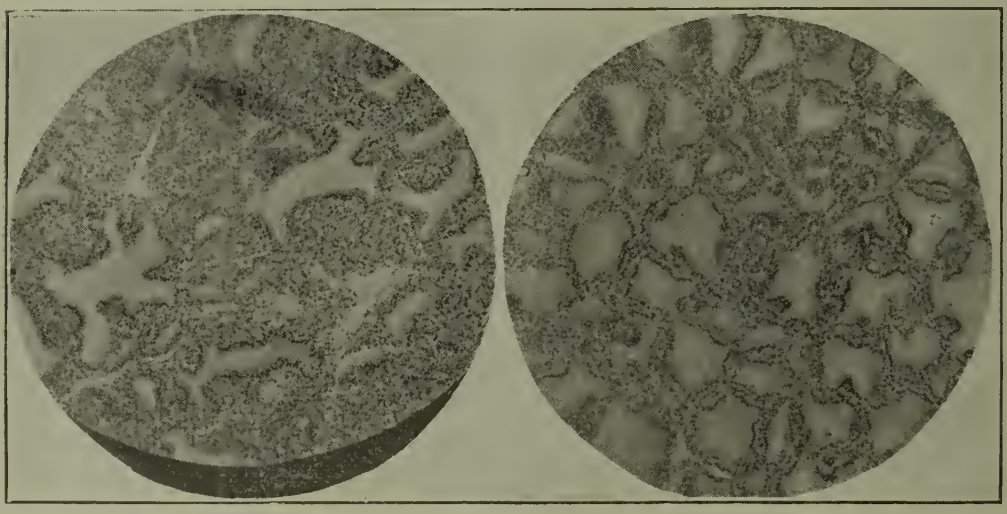

Fig. IX.

Marked Glandular Hyperplasia (dog)

Fig. X.

Moderate Glandular Hyperplasia (dog)

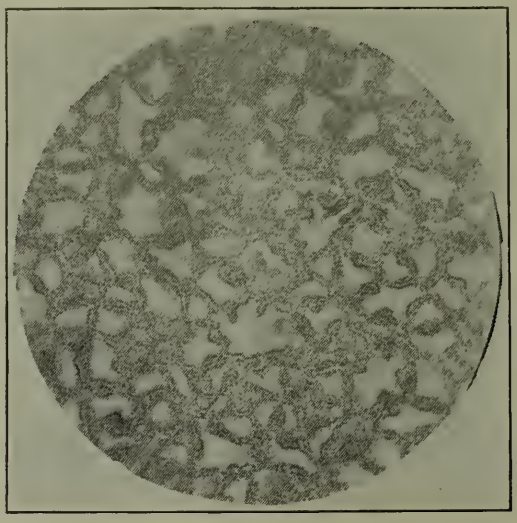

Fig. XI.

Moderate Glandular Hyperplasia (dog)

ber, coarsely granular and the granules taking a colloid like stain. These cells are thought to be derived from the chief cells.

The gland stroma is usually scanty but is increased in goitrous districts. It appears as trabeculae passing in from the capsule and supporting a very rich blood supply together with numerous lymphatic channels which may contain colloid like material. The nerves accompany the vessels and Berkeley has found them very meagerly distributed to epithelial cells as compared with a known actively secreting gland like the pancreas.

The colloid may contain epithelial cells, red blood cells, and more frequently blood pigment which is usually ascribed to the occasional rupture of alveoli. There are normally some very small collections of lymphoid cells which are exaggerated in the hypertrophies.

Changes in Simple Goitre. By simple goitre is meant the simple adenoma or parenchymatous goitre or colloid adenoma. Generally speaking it is the exaggeration of the normal gland. Complications and secondary changes often make up a most complex picture. The most notable change is the distension of the alveoli with colloid; the alveolar distension sometimes reaching 20 mm. in diameter. This increase in colloid makes up the great bulk of the tumor. It also stains more densely with eosin or Van Gieson's than does normal colloid. There is some increase in fibrous tissue which may be diffuse or confined to the trabeculae. The inter-acinar tissue may be reduced to a mere line with a row of flat epithelial cells on each side. In general the epithelium is flatter than normal and compression suggests itself as the most probable cause.

This uncomplicated form is the common form clinically, in goitrous districts, but rarely reaches the laboratory. As we see them they are nearly always complicated either by hemorrhage, cystic change, calcareous deposits, secondary infections or by extensive new-formation of alveoli.

Changes in Toxic (Exophthalmic) Goitre. There are still confusion and differences of opinion expressed in the descriptions of the anatomic changes in the thyroid associated with toxic goitre symptoms. This confusion is equally as great in the anatomy as in the clinical types of toxic goitre. There is no single, definite, anatomic description that characterizes the changes in the thyroid associated clinically with toxic manifestations (Kocher, Brissaud, Langhans, Reinbach). In other words the

anatomic changes are quite as variable as the clinical manifestations.

As Kocher, Halsted, Ehrlich, *et al.*, have seen and noted the necessity of recognizing all gradations of toxic manifestations from the slightest to the most marked, so anatomically we have to deal with the same necessity of formulating a working classification of toxic goitre. Ehrlich, Kocher, Lewis, Reinbach, *et al.*, divide the cases tentatively into two elementary forms; 1st, Primary Exophthalmic (Toxic) Goitre; 2nd, Secondary Exophthalmic (Toxic) Goitre.

The Primary Form, or that form occurring in young individuals with toxic symptoms from the first appearance of goitre, has a quite uniform anatomic picture (Lubarsch, MacCallum, Askanazy, Greenfield, *et al.*) The changes occur in (1) the form and size of the alveoli, (2) the character of the epithelial cells, (3) the character of the colloid, (4) the vascular supply, (5) the fibrous tissue framework and (6) the lymphoid tissue. The changes in brief are: in the gross the gland is moderately and quite uniformly enlarged, very vascular and moderately firm. On section the surface has a granular, finely lobulated appearance of a pink, opaque, fleshy color with the colloid greatly reduced or totally absent. Histologically the appearance is characterized by the absence of, or a great reduction in, the "stainable colloid"; the papillomatous like ingrowths distorting the normal round or polygonal alveoli; the change to high columnar epithelium, the general increase in fibrous tissue both diffuse and in bands, the increased vascularity, and the accumulation of lymphoid tissue in the stroma. This form is essentially glandular and has been likened to cyst-adenoma of the ovary, and by Halsted and Horsley to the form occurring in the dog following partial excision of the thyroid.

The Secondary Form, or that form in which toxic manifestations are engrafted upon a preexisting goitre. In this group we have (1) those that macroscopically and microscopically are like simple or parenchymatous goitre, the alveoli are widely distended with uniform dense colloid, the epithelium is cubical or flat-cubical but with increased vascularity (*Struma Vasculosa,* Kocher).

(2) those that have nodular growths in or upon an old parenchymatous goitre and on microscopic examination these areas appear as newly formed gland alveoli with high columnar epithelium, and with reduction or absence of stainable colloid.

(3) those developing from cysts of hemorrhagic or other origin, or from other complications in a parenchymatous goitre,

associated with the formation of new thyroid tissue of the glandular type.

The above classification may be *tentatively* made, for later work may show that the essential changes, both anatomic and physiologic, are the same in the primary and secondary forms. There are certainly great differences in the degree of change—so great indeed that they cannot be distinguished in many cases from colloid adenomata.

Dock's statement that the glandular change may involve only islands of tissue is important to bear in mind and it may be that, in sectioning, the characteristic areas were missed. In my experience with the secondary type I must admit that there is in many instances evidence for believing that the two types are associated with similar changes, but for clinical and pathologic clearness, in the present state of our knowledge, we should divide the cases.

I agree with Lewis that the reason for the two schools is afforded by the goitrous and non-goitrous districts. In a goitrous district we see both types with the secondary form predominating, while in non-goitrous districts there is but the one type—the primary, and as is well known this type is seen with about the same frequency in both goitrous and non-goitrous districts.

As regards the changes noted in the dog's thyroid in the district of Cleveland, it may be said that we have observed all the primary changes that have been described for man. It is also noteworthy that complications, so frequent in man, are not present in the dog to render difficult an interpretation of the primary essential changes. That is, the dog offers an opportunity for the study of pure types of change, unmarred by the effects of natural or induced complications or of medication direct or indirect and possibly by other effects as yet of seemingly small import, such as food variety, the social complex, emigration, increased transportation facilities, etc.

I have examined the thyroid and parathyroid glands of over 200 dogs obtained from the various laboratories of the Western Reserve University. I recognize that in many respects this method gives insufficient data, but this deficiency, while affecting seriously the use of the material for clinical inferences, is not such an hindrance to an anatomic study of the changes. And I think that the kind and ratio of change will be found to be quite constant.

It is not necessary to repeat the embryology and normal structure, since they are similar to those for man.

The changes noted in simple goitre, or simple adenoma, or parenchymatous goitre, are briefly as follows: there is symmetrical enlargement of the lobes, the capsule is thickened moderately, the vessels are enlarged. On section, the alveoli are large, well defined and filled with dense uniform colloid and occasionally some blood pigment. The tissue has a clear, translucent, yellowish-brown appearance and is not vascular. Microscopically, the colloid stains uniformly and densely, and sharply abuts the epithelium. The epithelium is low cubical or flat, the nuclei small and dark. The acinar walls are often reduced to mere lines and in some glands there is no increase in the fibrous frame-work, indeed it may seem reduced. There is also evidence of extensive pressure atrophy or rupture of the alveolar walls which gives to a section the appearance of multilocular alveoli.

The Second Type of Change, the "Glandular Hyperplasia," is similar to the changes in primary (exophthalmic) toxic goitre and is identical with the change noted by Halsted following partial excision. Of this type there are all gradations from the normal gland to the most extreme change in which there is no resemblance to thyroid at all. This change may be briefly described as follows: The glands in the main show enlargement proportional to the degree of glandular hyperplasia. In a typical example the gland is enlarged uniformly and symmetrically, the capsule is thickened, and the vessels are large, tortuous and thick walled. On section the tissue is very vascular. It has a fleshy, opaque, gray-red appearance and a finely granular cut-surface. There is no visible colloid. Microscopically stainable colloid is absent—there being only a small amount of pink granular material in its place. The alveoli show extensive papillomatous ingrowths and invaginations more or less occluding the alveolar lumina. The epithelium is high columnar in type, and arranged in a single layer. The epithelial nuclei are large, pale, round, vesicular and basal. The cytoplasm is finely granular. The stroma is generally increased, contains numerous, large blood and lymph channels and small collections of lymphoid cells.

As above mentioned, this is an example of the moderate change, there being all gradations from the normal gland up to the extreme type in which the sections appear as solid epithelial fields without lumina, without colloid and with only the semblance of an alveolar arrangement.

A summary of the histologic changes according to the structure and to the degree of change is shown in the accompanying table of analysis of 202 dogs' thyroids.

TABLE OF ANALYSIS OF 202 DOGS.

Glands, size of	normal	112
	slightly enlarged	53
	much enlarged	38
Capsule	normal	108
	slightly thickened	61
	much thickened	33
Vessels	normal	101
	slightly enlarged	66
	much enlarged	35
Stroma	normal	64
	slightly increased	91
	much increased	45
Stainable colloid	normal	52
	increased	18
	reduced (all degrees)	117
	absent	18
Alveoli	normal	34
	distorted by papillomatous ingrowths: slight	45
	distorted by papillomatous ingrowths: moderate	44
	distorted by papillomatous ingrowths: marked	69
	increased in size	20
Alveolar epithelium	normal (low cubical)	31
	uniform cubical	41
	low columnar	61
	high columnar	69
	desquamation	33
Cell nuclei	normal (small dark)	65
	moderate size, pale vesicular	19
	large size, pale vesicular	118
Glands, condition of	normal	19
	colloid hypertrophy	15
	glandular hypertrophy	168

Some conclusions suggested by a careful study of over 200 dogs' thyroids may be given here.

(1) That histologic changes in the thyroid are not associated with histologic changes in the parathyroid, except by mechanical stretching and pressure (the parathyroids are often normally found in clefts of the thyroid capsule).

(2) That "Glandular Hyperplasia" in varying degrees is present in about 90% of all Cleveland dogs.

(3) That this glandular hyperplasia is a physiologic reaction on the part of the gland to a demand from the body tissues. What this deficiency is, is not clear. There is some evidence that it is a reaction to a deficiency however, for I have observed certain changes in the thyroid that make me suspect that glands which once showed the glandular hyperplasia have changed over to the colloid type. This would suggest that in some cases this deficiency has been met.

(4) That, in the nature of an hypothesis, another sugges-

tion arises. While we have every reason to believe that glands showing this glandular hyperplasia are physiologically hyperactive, yet since a secretion has no more physiologic value than the least amount of any essential ingredient, no matter what the total amount of secretion is, may it not be a hyper-secretion quantitatively but a hypo-secretion qualitatively? As an illustration let us suppose the gland normally secretes three substances A, B, C. In health these three substances are adjusted to the bodily needs but when conditions arise which demand an increased secretion, the gland responds, the condition is met and equilibrium is established. But the reaction may not meet the tissues' demand although the gland is seemingly hyper-active. Here we have reason to suspect that the secretion is deficient in some important ingredient let us say "C" and that while trying to increase "C," both "A" and "B" are secreted in excess which excess produces toxic symptoms. We cannot lose sight of this view, although it be an old one, as it certainly accords more closely with the observed phenomena than does the pure hyper-secretion theory.

Experimental Research in Connection with the Transplantation of Carcinoma in Mice

G. H. A. CLOWES, PH. D., Buffalo, N. Y.

Experimental research in cancer has received an enormous stimulus in the course of the last few years, through the discovery of the ease with which mouse tumors may be transplanted from one individual to another. A large number of primary tumors have come into the possession of the New York Cancer Laboratory in the course of the last three years. During this period numerous experiments have been carried out in this institution, having in view the determination of the exact conditions under which physical and chemical agents inhibit the development of rapidly proliferating tumor material, and also of the conditions under which immunity against cancer occurs.

Three main types of tumor have been employed, possessed of low, of intermediate and of extremely high virulence respectively. In the latter series a yield of over 95% of tumors is obtained and the average period of time required for a fatal development is 25 days from the date of inoculation.

In order that records of the experiments carried out might

Summary of remarks at the Cleveland Academy of Medicine, January 11, 1907

be rendered permanent, a system of making charted diagrams of the tumors in individual mice was adopted from the start, and owing to this system it was discovered at an early stage that a considerable number of mice recovered even after their tumors had reached considerable dimensions. The occurrence of such spontaneous recoveries was found to be most frequent in those groups inoculated with the least virulent materials and less frequent in those treated with the highly virulent, rapidly-growing tumor referred to above. The subsequent inoculation of mice which had recovered spontaneously, with tumors of an equal or even greater virulence than that first employed demonstrated that the animals in question were possessed of a marked immunity, practically no tumors occurring in such cases, whilst control animals showed a normal percentage.

The tumor cells have been shown to be very resistant to the action of chemicals, withstanding the treatment with mercuric chloride, potassium cyanide and other bodies of this nature, of a concentration sufficiently great to destroy bacteria. They also show a considerable resistance when incubated at relatively high temperatures, ranging from 40° C. to 45° C.; in fact, tumors possessed of a very low grade of virulence may be stimulated to increased activity by incubation at temperatures ranging from 38° C. to 41° C. for half an hour previous to inoculation.

Evidence of the existence of immunity against cancer was presented as follows:

1. The occurrence of spontaneous recovery from true tumors.

2. After such spontaneous recovery mice are not reinoculable.

3. The reduced percentage of tumors obtained on reinoculation of those mice which failed to take after the first injection of tumor material.

4. The reinoculation with highly virulent materials of mice which have been previously treated with a weak strain, which according to Ehrlich leads to a considerable reduction in the percentage of tumors, as compared with normal untreated mice.

5. An experiment was carried out as follows: 100 mice were inoculated in the neighborhood of the head with a virulent tumor strain referred to above, with the result that over 95% showed tumors of considerable size in 10 to 14 days, at which time they were reinoculated in the region of the tail, with tumor strains of an equal or greater virulence than that originally employed, whilst in all cases a series of unused mice were employed as control. After a further period of ten days it was found that large tumors had developed in all the control animals, but that

those animals in which tumors were already developing before the second inoculation showed relatively little signs of tumor development at the second point of inoculation. This experiment, together with the fact that metastases seldom occur in the early stages of tumor development in mice, would indicate the probable existence of anti-bodies in the serum antagonistic to the development of isolated tumor cells.

6. The serum of mice which have spontaneously recovered appears to exert a slight effect upon growing tumors when injected directly and also to interfere to a certain extent with the development of tumor cells when admixed with the latter previous to inoculation.

In our experience no immunity has so far been obtained by means of inanimate materials, as, for example, tumor cells destroyed by heat, tumor cells treated with an overdose of chemicals, and nucleoproteids extracted from virulent tumors following the procedure adopted by Beebe in his work on exophthalmic goiter.

The evidence so far obtained may be said to harmonize most readily with the parasitic theory of cancer. Ehrlich's recently advanced theory, that cancer cells proliferate in virtue of their possessing side chains having greater affinity for food than have those of the normal body cells, is perfectly compatible with the parasitic theory, providing the parasite or its excretory products be looked upon as the X-body of Ehrlich playing the part of a stimulating or sensitizing agent.

In conclusion it should be stated that all the evidence thus far obtained of the existence of an immunity against cancer would indicate that that immunity is brought about by a process analogous to vaccination, the individual infected with an attenuated or mild form of the disease, from which it recovers, being found on subsequent inoculation to possess an immunity against cancer strains of equal or even greater virulence.

Results of Recent Investigations into the Etiology of Cancer

By HARVEY R. GAYLORD, M. D., Buffalo, N. Y.

Dr Gaylord called attention to the observations made in the New York State Cancer Laboratory in which a cage had become infected from rats affected with sarcoma and in which in the course of two years three cases of sarcoma had developed in

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Summary of remarks at the Cleveland Academy of Medicine, January 11, 1907

eight rats thus exposed. These cases developed a year apart, and the cage is known to have been infected for a period of three years. Heredity played no part in these occurrences. He further described an infected cage which was purchased from a dealer and brought to the State Cancer Laboratory, out of which 60 or more tumor mice had been taken in the course of three years by the dealer, and in which five cases of cancer had developed after the cage was brought to the State Laboratory.

With these facts so strongly indicating the infectiousness and the contagiousness of cancer, the reader reported that in the State Laboratory since the beginning of 1905 a typical small spirochæta was to be found in all the transplanted tumors thus far examined. Up to date some 20 odd mouse tumors have been cut, giving positive results, using the silver method of Levaditi. In the more virulent tumors the organisms were present in great numbers distributed in the connective tissue around the margins of the tumors and in the connective tissue stroma. They are occasionally found between the epithelial cells and are known to have been present in one of the strains in 1905, when they were first detected in large numbers in vacuoles in the epithelial cells of one of the transplanted tumors. They are now apparently constantly present in three separate strains of transplanted tumors, one being the Jensen tumor and two tumors of American origin. The presence of these organisms is interesting from the fact that they have constantly accompanied these transplanted tumors for so long a period and that in preparations stained in the ordinary way there are no alterations in the histology of the tumors which can be deliberately attributed to the presence of the spirochætæ.

Having found the organisms over twenty times consecutively by the Levaditi method, three primary mouse tumors, of small size, which did not communicate with the air, being entirely enclosed and movable beneath the skin, were removed aseptically and carefully sectioned after impregnation with silver. In two of these tumors the impregnation method was obviously not successful. In one of these occasional badly fixed organisms could be found. The condition of the tissue in the other made it obvious that the method was not successful. The third tumor examined was properly impregnated and contained large numbers of organisms scattered through the tumor, but most plentifully in the actively growing portions. Here they were found among the epithelial cells, usually surrounded by small vacuoles. They are invariably present in the larger cysts of the tumor, which is an

adeno-carcinoma. They are characteristic in appearance, from four to six microns long, with very closely wound, abrupt gyrations, each measuring not over one-half a micromillimeter. Involution forms are not infrequent and fields showing active phagocytosis on the part of the epithelial cells are to be found. In these cells the organisms are found curled into rings or irregular masses, making inclusions such as have already been described by Prowazek for the organism producing spirochætosis in the fowl (Brazil).

By careful examination of the transplanted tumors this organism can be seen in the fresh state. It is very small, very actively motile, moving rapidly forward and backward. It occasionally comes to rest, when the gyrations can be seen, but its dimensions are so minute that neither flagellæ nor an undulating membrane can be seen. All attempts to stain this organism with Giemsa or other aniline stains have been fruitless. In this respect it appears to differ from similar organisms seen in ulcerating tumors described by Loewenthal and by Borrel in unulcerated mouse tumors in the Pasteur Institute, one from Ehrlich's laboratory. Similar organisms have been found by Friedenthal in an unulcerated human cancer. Loewenthal and Ewing and Beebe have found them in smears from dog tumors and there is every reason to believe that this organism or similar organisms are widely distributed.

In connection with the possibility of these organisms having an etiological relation to these tumors, Dr Gaylord pointed out that the recent work of Fischer showing that Scarlet R would induce proliferation of the epidermal epithelium of the rabbit's ear when injected beneath the skin, might afford a possible explanation of how an organism like a spirochæta could induce proliferation through the medium of some toxic substance. The distribution of the organisms around the periphery of the transplanted tumors, in the light of Fischer's work, is suggestive, and the evidences of phagocytosis on the part of the epithelial cells would explain how the organism could be transported by the cells and continue the irritation necessary to the development of metastases.

The reader suggested that the task before us consisted in careful examination of uncontaminated human tumors for the purpose of determining with what regularity these or similar organisms are present, bearing in mind that, in the light of Fischer's work, very few organisms could produce extensive

proliferation, and that inasmuch as Scarlet R affected only the epithelium of the epidermis in the rabbit and had no effect upon the epithelium of other regions in the rabbit, it was highly probable that we were dealing with a large group of organisms, each of which produced a toxin, or, as Fischer calls it, an attraxine, for certain kinds of epithelium. It is therefore not necessary to look for a specific organism but rather an organism of a specific group, and it must be borne in mind that there are difficulties in distinguishing between the different spirochætæ thus far described.

A Clinical Report on Some Causes of Hematuria

BY WILLIAM E. LOWER, M. D.

The causes of hematuria are many and varied. This report does not include all the causes that may produce blood in the urine but only such cases as have come under my personal observation, and these I believe represent the more common causes. The various surgical operations for the relief of many of the conditions producing hematuria herein described will not be considered in this report but will be reserved for a later communication.

I have examined 87 patients because of blood in their urine. The diagnosis of the bleeding in most cases was first observed accidentally by the patients themselves but the exact source of the bleeding was seldom determined, even by the physicians, from the physical signs present. In a few cases the exact cause of the bleeding could not be determined. The hematuria was painless and only accidentally discovered in 43 of the cases. It was attended with pain in 25%, the pain being due to clots in the bladder. In 25% the *first* symptom was pain, the bleeding being secondary. In the great majority of cases there were no symptoms, large tumors of the bladder and kidneys often never causing any symptoms except the bleeding. In some of the kidney cases the severe renal colic was an index to the probable source.

The diagnosis of the origin of the bleeding, in this series, was made by the use of the cystoscope and the ureteral catheter; and in the kidney cases when the cause could not be determined, the X-ray proved of great aid in detecting the presence or absence of stone. In a few cases the probable diagnosis, made from physical signs, was verified by the methods before described.

Read before the Clinical and Pathological Section of the Academy of Medicine of Cleveland, January 4, 1907

CLASSIFICATION

Sex.—There were 65 males and 22 females, practically three times as many men as women, but after deducting the prostatic cases and most of the vesical calculi the other conditions producing the bleeding were about equally divided in regard to sex.

Age.—The oldest case was 76 years of age; the youngest, 15; the average, 43+. The oldest female was 70 years; the youngest, 21; average 41+. The oldest male was 76 years; the youngest, 15; average, 45.

Social Condition.—There were 46 married men and 19 single. There were 19 married women and 3 single.

Occupation.—

Physician 3	Stenographer 1	Nurse 1
Retired 2	Machine hand..... 1	Telegraph operator. 1
Merchant 2	Peddler... 1	Molder 1
Cigar maker..... 1	Engineer 2	Blacksmith 1
Farmer 10	Salesman 3	Fireman 1
Laborer 12	Mechanic 11	Student 1
Office work..... 2	Agent 3	Painter 3
Brakeman 1	Minister 2	Clerk 1
Barber 1	Tailor 2	Houseworkers 17
	Janitor 1	

It will be noted that the non-professional predominates, but there seems to be nothing in the occupation predisposing to conditions producing hematuria.

Duration of Hemorrhage and Amount.—The longest time from the appearance of the first hemorrhage to the time of examination was 16 years, the average period being from one to two years. The amount varied from microscopic findings to profuse hemorrhage causing pronounced anemia.

Symptoms.—Aside from the bleeding there were no uniform symptoms to indicate the source and cause.

Causes.—

Prostatic hypertrophy 7	Essential hemorrhage 2
Papillomata 11	Pyonephrosis 2
Cystitis 11	Sarcoma of kidney 2
Tuberculosis 4	Horseshoe kidney 1
Vesical calculi 6	Urethral polyp 1
Ulcer of bladder..... 3	Ureteral stone 2
Malignant growth of prostate.. 3	Carcinoma of bladder..... 2
Renal calculi 10	Pregnancy 1
Hemorrhagic nephritis 3	Pyelonephritis 1
Cyst of kidney 2	Injury of kidney 2
Renal (unclassified) 10	Post typhoidal hemorrhage..... 1

An analysis of the causes shows that there were seven cases of prostatic hypertrophy in which there was considerable bleeding. This constitutes about 15% of all the prostatic cases that have come under my observation. There were three cases of carcinoma

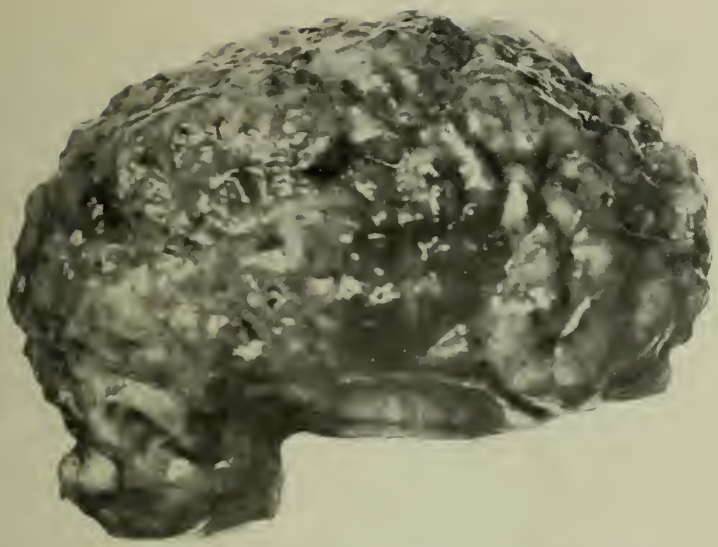

Fig. I. Large papilloma of bladder, natural size—Removed from case 33 of this series. The only symptom in this case was bleeding.

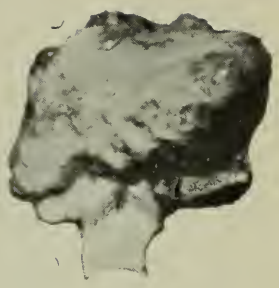

Fig. II. Malignant tumor of bladder with no other symptom than bleeding.

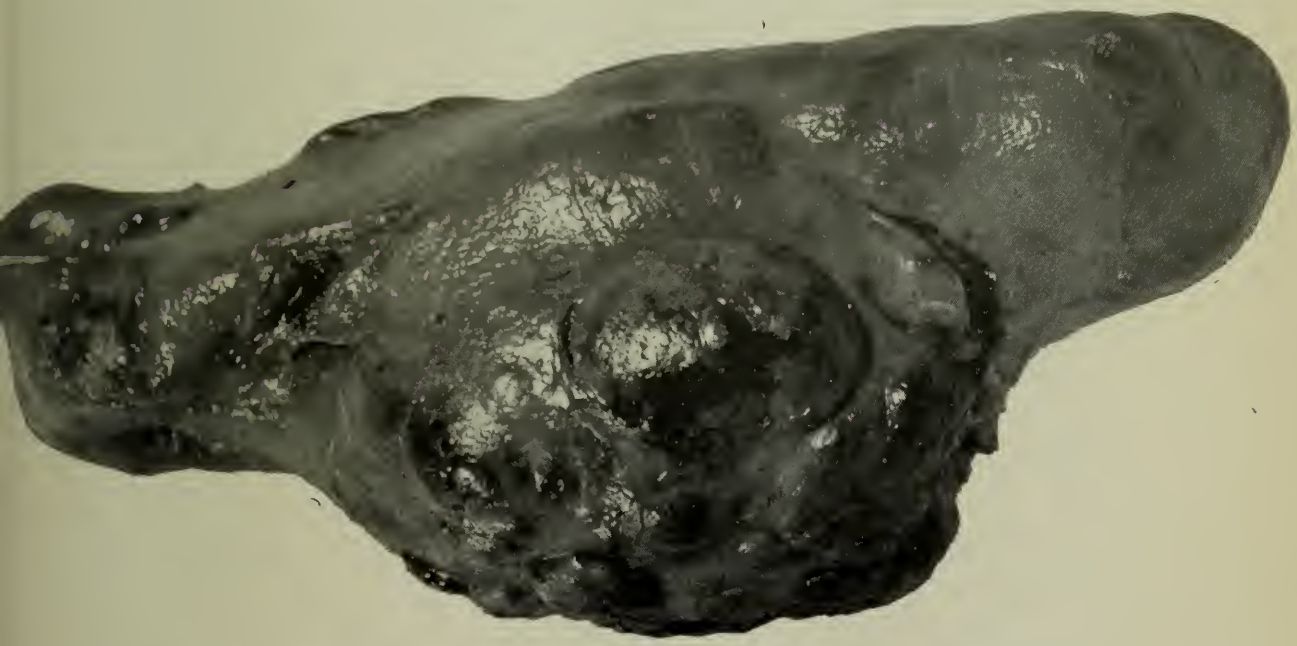

Fig. IV. Sarcoma of kidney—the only symptom for several months was hematuria.

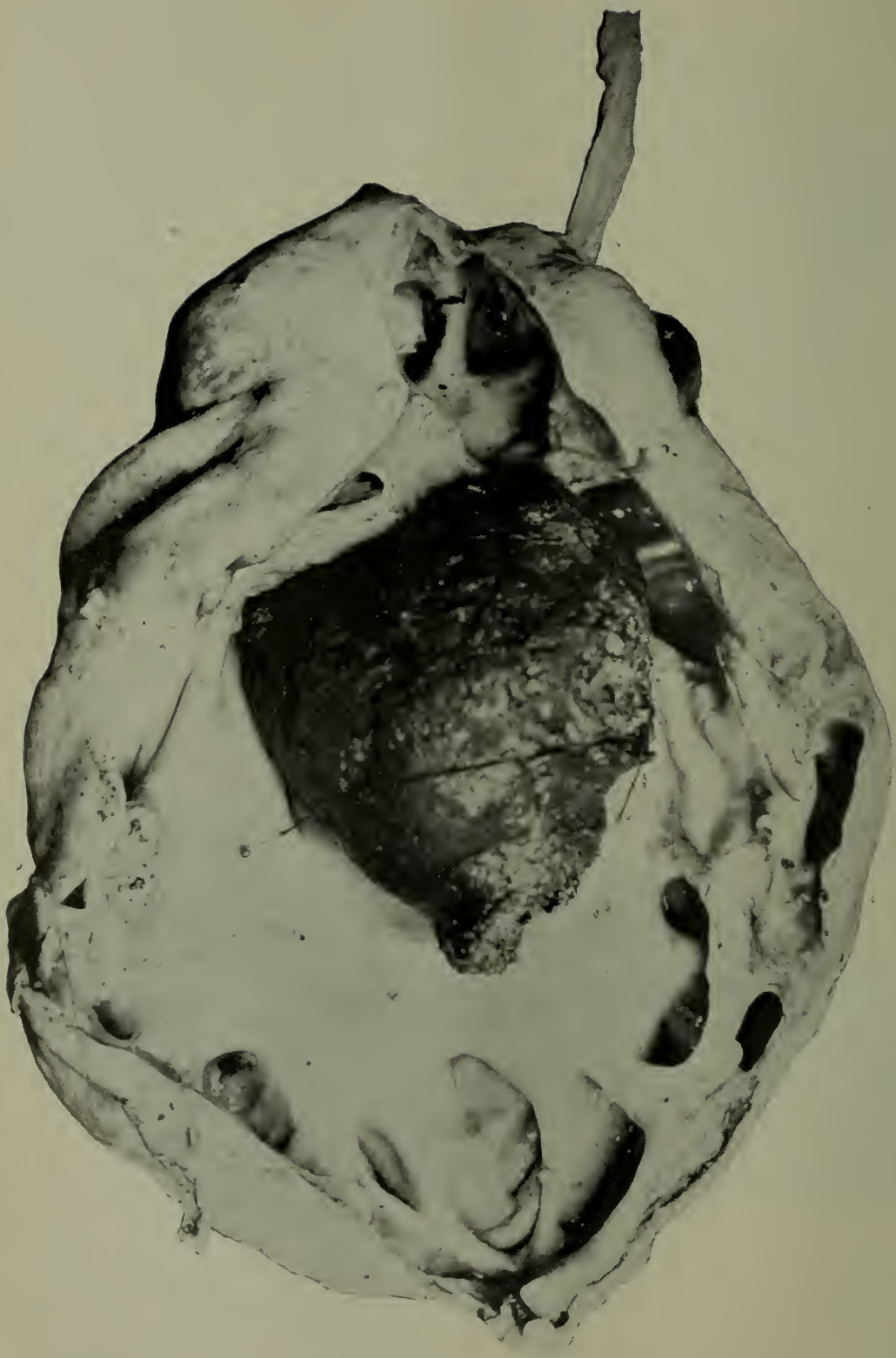

Fig. III. Showing large renal calculus, which caused hemorrhage but no pain.

of the prostate involving the bladder with profuse hemorrhage. Cancer of the prostate constitutes 6% of all prostatics. The combined hypertrophied and malignant prostates were 10.5% of the causes producing hematuria. In 12.5% of the cases the cause of hemorrhage was papillomata of the bladder. In no case were there any vesical symptoms before infection took place and the first symptom in all cases was bleeding. After infection, vesical irritation and tenesmus were marked. Tumors of large size may be present in the bladder without any symptoms, as will be noted in the specimen from case 33 (Fig. I). In this case there was no symptom other than the bleeding, yet the growth must have been there for years. In case 67 the first hemorrhage occurred 16 years ago, evidently the beginning of the trouble; the symptoms in this case became annoying only after the bladder was infected. In case 24 the bleeding extended over a period of nine years. In three cases the papillomata had undergone malignant changes. Figure II shows such a tumor. In 12.5% the cause of the hemorrhage was severe cystitis, some of the cases being gonococcus infections and others mixed infections. Tuberculosis of the bladder and kidney was the cause in 4.5%. Vesical calculi caused bleeding in 7%. Ulcer of the bladder (simple ulcer) in 3.4%. Renal calculi were responsible for the bleeding in 10.5%, and in two of these cases there was no recent history of renal colic (cases 11 and 16). This, I think, can be explained by the size of the stone (case 11, Fig. III). Hemorrhagic nephritis caused bleeding in 3.4%, from one kidney in two cases and from both kidneys in one case. Cyst of the kidney was responsible in 2.2%. There were two cases (2.2%) of the so-called essential hemorrhage of the kidney; *i. e.,* no pathological condition could be found in the kidney. Both cases were operated upon and both recovered without any recurrence. In one case a nephrotomy was done, in the other a nephrectomy. Pyonephrosis caused the bleeding in 2.2%. Sarcoma of the kidney was the cause in 2.2%; Fig. IV shows one of the specimens. Fusion of the kidneys, or horseshoe kidney, 1.1%. Ureteral stone was found as the cause in 2.2%. Carcinoma of the bladder, inoperable, in 2.2%. There was one case of bleeding due to pregnancy, 1.1%. Pyelonephritis was the cause in 1.1%. Traumatism of the kidney, in 2.2%, both cases having received a blow on the kidney. The bleeding in these injury cases continued for some days and stopped spontaneously in both without operation. There was one case (1.1%) in which the bleeding was post typhoidal. This was a boy 15 years of age.

After convalescence was well established but while he was still in bed he had a rather profuse hematuria, which was painless. Typhoid bacilli were found in the urine. The bleeding gradually lessened and diappeared in about a week. In 10.5% of the cases the source of the bleeding was demonstrated to be the kidney but the exact cause could not be determined at the time. In several of these cases the bleeding stopped and did not recur again and the other cases did not return for further advice or treatment and were lost sight of.

Of the 87 cases, 46, or 53%, were operated upon; 8, or a little less than 10%, were inoperable; 22, or 25.2%, were treated locally or medicinally. This includes the 11 cystitis cases, two cases of ulcer of the bladder, two cases of injury to the kidney, one case of pregnancy, and one post typhoidal. In the remaining 11 cases, in a few the bleeding never recurred and the rest could not be traced.

It will be noted from the foregoing that in from 85% to 90% of the cases of hematuria there were serious pathological conditions responsible for the bleeding and requiring treatment. Subtracting the renal cases that could not be traced, but which probably required treatment, there remains but a small per cent of this series of cases of hematuria in which the bleeding was not significant. From this clinical report it would seem that the following deductions are warranted:

1. Hematuria is, in the great majority of cases, unaccompanied by any physical signs which would lead to a diagnosis of the source and cause of the bleeding.

2. Blood in the urine with few exceptions indicates a serious pathologic lesion somewhere in the genito-urinary tract.

3. Illumination of the bladder and ureteral catheterization are the best means for determining the source of the bleeding, and aided by the X-ray in doubtful kidney cases the cause can nearly always be determined.

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The Effects of Hot, Humid Atmospheres on the Animal Body

DR J. J. R. MACLEOD and MR J. D. KNOX

In a recent communication, Haldane* has drawn attention to the fact that very little investigation of the effect of warm humid atmospheres on man is on record. To know definitely to what the hurtful influence of such an atmosphere is due, and to determine

*Haldane: Journal of Hygiene, Vol. V, p. 494 (1905)

what are the limits of safety in this regard is evidently of enormous importance from a hygienic point of view. In many industries (stoking in large vessels, work in laundries and work in certain mines) man is subjected to the above conditions and we do not know with what risk to health.

It is usually believed that it is by preventing the evaporation of sweat from the surface of the body that a moisture-laden atmosphere affects man. Normally when the atmosphere is hot we sweat profusely and in evaporating this sweat much heat is lost from the body and a rise in the (rectal) temperature is prevented. When this evaporation is hindered by the atmosphere's being already laden with moisture the body does not lose heat quickly enough and consequently the rectal temperature rises.

To determine the limits of safety with regard to these points, Haldane made observations on his rectal temperature during visits to a deep tin mine in Cornwall, England, or while he stayed in a warmed room, the atmosphere of which was either dry or moist. He recorded the temperature and humidity of the atmosphere by means of wet and dry bulb thermometers and found that for all practical purposes the reading of the wet bulb thermometer was the important one. This instrument consists of an ordinary thermometer, the bulb of which is kept constantly moist by a damp cloth; evaporation therefore takes place from it and tends to keep it cooler than the dry bulb thermometer and the amount of this difference is a measure of the humidity. He found that the rectal temperature began to rise under the following conditions: when the wet bulb thermometer recorded 88° F. during bodily rest and in quiet air; when it recorded 93° F. during bodily rest and in moving air; when it recorded 78° F. during muscular work and in still air; when it recorded 85° F. during muscular work and in moving air. Haldane noticed further that the rectal temperature often continued to rise for some hours after coming out of the hot atmosphere and that the uncomfortable symptoms experienced by one unaccustomed to such an atmosphere were not entirely due to rise in body temperature, and that by repeating the experience these symptoms became less marked.

In the present research, which was started before Haldane's paper appeared, investigations were made on the rectal temperature and excretion of carbonic acid of rats subjected to the above conditions. Such animals do not sweat, and, their surface area (in relation to body weight) being much greater than it is in man, they depend mainly on radiation, conduction and convection of heat from the surface of the body for their means of heat loss.

We thought it of interest therefore to see if such animals would show any difference in the behavior of their body temperatures when they were placed in wet or dry atmospheres, so warm as greatly to reduce radiation, conduction and convection. The carbonic acid excretion was taken as an indication of the extent of tissue katabolism, as it would, of course, rise parallel with the body temperature. The rats were placed in a large sized desiccator submersed in a water bath at constant temperature. Inlet and outlet tubes were connected with the desiccator, and the CO_2 given off by the rat was determined by the gravimetric process. To compel the rats to do muscular work, a revolving platform was constructed in the desiccator, from the lid of which was also suspended a partition to obviate their riding with the platform. In one group of experiments the air in the desiccator was as moist as possible, in another group it was as dry as possible. The rectal temperature was taken immediately after removal from the desiccator.

Regarding the rectal temperature, it was soon found that both in dry and in moist air this rose very rapidly when the temperature in the desiccator was above 37° C. Within an hour at such temperatures the rats invariably died. To see if the moist air was more hurtful in this respect than the dry, the rats were kept for only half an hour in the desiccator. It was found that after this time the rectal temperature rose to an equal extent in both kinds of air. At lower temperatures, namely, 33°-35° C., they could be kept for long periods of time and did not suffer any more in wet than they did in dry air.

The average results of the observations on the *excretion of carbon dioxid* are given in the following table.

CO_2 EXCRETION PER MINUTE AND KILOGRAM BODY WEIGHT.

Temperature of Air	Dry Air	Moist Air	Remarks
30	0.031	0.036	At rest
33	0.034	0.037	At rest
33-36	0.073	0.075	At work
AVERAGE FOR RAT WEIGHING 204 GRAMS.			
30	0.0325	0.0306	
AVERAGE FOR RAT WEIGHING 135 GRAMS.			
30	0.029	0.034	

The following points of interest are to be noted:

a. There is no difference in the excretion according to whether the air is moist or dry.

b. The excretion increases with a rise in the temperature of the chamber.

c. Muscular work greatly increases the excretion of CO_2, but to an equal extent in dry and moist air.

d. Body weight has no influence on the excretion of CO_2.

It is only the last of these observations that requires further explanation. At ordinary temperatures, the animals of less weight excrete a greater proportionate amount of CO_2. This is due to the fact that their surface area is, in relation to body mass, greater than in larger animals, and therefore the amount of heat lost by radiation, conduction and convection is greater, and to keep the body temperature constant there has to be more active tissue metabolism and consequently a greater excretion of CO_2. But, in our experiments the heat loss by radiation, conduction and convection is reduced to a minimum, indeed it must be almost absent, and consequently the smaller animals will lose no more heat by this means than the large, so that their CO_2 excretion will be the same.

The results show us that small animals do not depend to any extent upon evaporation in regulating their body temperature, and, further, that they can withstand a hot atmosphere as well when it is moist as when it is dry. They probably could not withstand a dry atmosphere at so high a temperature as man can for similar reasons.

Further Observations on Experimental Glycosuria

DR. J. J. R. MACLEOD and DR C. E. BRIGGS

When the floor of the fourth ventricle of the brain is punctured or the central end of certain sensory nerves is stimulated, a distinct glycosuria is usually established within an hour. The cause of this is that the glycogen in the liver becomes so quickly converted into dextrose that the organism cannot oxidise it. Dextrose, therefore, accumulates in the blood, raising the percentage in this until hyperglycemia is established and consequently glycosuria.

It is commonly believed that this abnormal transformation of glycogen into dextrose in the liver is due to efferent nerve impulses transmitted to that organ from a so-called diabetic center in the medulla. The evidence, however, that such efferent fibers actually exist is very unsatisfactory, so that we have undertaken a reinvestigation of the whole question. If such efferent nerve impulses are actually transmitted to the liver, their path must be by the upper portion of the spinal cord and then *via* the sympathetic chain and splanchnic nerves to the liver. It cannot be through the vagi that the impulses travel, for section of these nerves does not abolish the effect of puncture, etc.

Pavy and others have brought forward evidence which is supposed to show that the above path does contain the fibers in question. Their evidence briefly is as follows: stimulation of the

spinal cord in the cervical region causes glycosuria; cutting the splanchnic nerves or the nerve roots connecting them with the spinal cord makes it impossible to produce glycosuria by puncture of the medulla, etc. On the other hand, it has been known for some time that stimulation of the greater splanchnic nerve produces no glycosuria. We have confirmed this.

In the present investigation we have stimulated the supposed efferent fibers at various parts of their course and have determined the percentage of reducing substance (dextrose) in the blood. This, we believe, is much more reliable than examination of the urine.

The average of the results, so far obtained, are given in the following table:

Nature of experiment	No. of experiments	Blood sugar in grams % before stimulating	Blood sugar in grams % after stimulating
Splanchnic nerve	6	0.133	0.145
Dorsal and lumbar spinal cord	7	0.163	0.160
Cervical cord without any precautions against dyspnea	2	0.189	0.276
Cervical cord with O_2 freely administered by Hirsch's* method	2	0.140	0.150

*Hirsch has recently shown that if oxygen be introduced into the trachea at the bifurcation by means of a catheter, the blood remains arterial even although the respiratory movements are absent, as after curare poisoning.

It will be seen that the only experiments in which an increase in blood sugar was observed are those in which dyspnea must have been present. By stimulating the spinal cord in the cervical region, the intercostal muscles are thrown into tetanus, hence the dyspnea. When this dyspnea is prevented by the liberal administration of oxygen, stimulation of the cervical cord no longer affects the blood sugar. In the other experiments reported, no dyspnea was present and hence apparently no hyperglycemia.

That dyspnea itself greatly raises the percentage of sugar in the blood is well known, and indeed it is most probable that it is to this cause that many drugs, such as curare, strychnin, salines, etc., owe their glycosuria-producing effects.

Certain forms of glycosuria in man are of nervous origin, for example, that accompanying certain brain tumors, neuralgias, etc., in which cases it is probable that the administration of oxygen will remove the symptom. For diabetes mellitus, however, such treatment would be useless, since in this disease the chemical pathology is entirely different from that of experimental or nervous diabetes.

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

The Typhoid Mortality of Cleveland in 1906

During the past two or three years the JOURNAL has been noting annually the typhoid mortality of the city. In order to determine the mortality from any cause it is necessary to make an estimate of the probable population. Such estimates are notoriously unsatisfactory, with great temptation to be over sanguine. A characteristic estimate was shown in Cleveland several years before the last census in 1900, at which time the estimated population, upon which the reported mortality of the city was based, was much in excess of the city's actual population in 1900. While it must be confessed that estimates of population are uncertain at best, it may be said that in its entire history Cleveland has enjoyed a very unusually uniform rate of growth as compared with most large cities of the country. In connection with the notes on Cleveland's typhoid mortality[1], estimates of Cleveland's future population were given. These were based not upon hopes or expectations, but upon previous rates of growth and, until the present year, they have been used by the Health Office in its determinations of the city's mortality. Granted that

(1) Cleveland Medical Journal, August, 1904, p. 356.

these estimates once correctly represented the population of the city, they do so no longer, on account of additions made by annexation since the estimates were made, and the Health Office has abandoned them in favor of an estimated population of 500,000 for the year 1906.

In this consideration of the typhoid mortality of the city the Health Office estimate of population will not be used, but rather a revision of our former estimates, accepting the population of added territory at figures furnished by the City Clerk's office, and supposing further that the rate of growth of the entire city from the time of each addition of territory will be the rate previously adopted. The following figures show the former and revised estimates of the future population of Cleveland to 1910, the next census period.

	1906	1907	1908	1909	1910
Former estimate	465,468	479,418	493,368	507,318	521,268
Revised estimate	476,152	490,437	505,150	520,305	535,914

The average number of deaths from typhoid fever in eleven years, 1892 to 1902 inclusive, was 133.2, which is equivalent to a mortality of 38.9 to each 100,000 of the estimated population for these years.

The year 1903 was one of exceptional severity from the standpoint of typhoid mortality, 472 citizens losing their lives from this cause, or 111.5 in each 100,000 living. During the year 1904 the city water was improved by securing, early in the year, first a part, and then the total supply from the new intake. During the first six months of the year 1904 the mortality was 36.4 as compared with 62.7 for the corresponding months of the preceding year. The improvement over the abnormal conditions existing in 1903 may, however, be considered more apparent than real, since the mortality of the first six months of the years 1892 to 1902 was but 18.1.

The benefits resulting from the change in the source of our water supply became evident in the last six months of 1904 which had a typhoid mortality of 10.1 per 100,000, as compared with 48.8 in the preceding year, and 20.8 in the years 1892 to 1902. The total mortality for 1904 was high, 48.8, nevertheless it is certain that the mortality of the first six months was excessive for the former water supply and that in the last six months the benefits of the new source of supply had been secured.

The typhoid mortality of the year 1905 was 14.9; the first six months 6.4, the last six months 8.5.

The foregoing statements have been made for the sake of comparison with the year 1906. Its typhoid mortality has been greater than that for 1905. With an estimated population of 476,000 in round numbers, the 93 deaths classified by the Health Office as typhoid fever is equivalent to a mortality of 19.5 per 100,000. The mortality of the first six months of 1906 was 7.1 while that for the last six months was 12.4. This increase, and the notable excess in number of deaths in September and October 1906 over that of the corresponding months of 1905, coupled with the large amount of visible sediment in Cleveland's water during recent months, leads one to speculate on the possibility of some accident to, or deterioration of the supply, or to a temporary pumpage from the old intake. During July and August, colon bacilli, or members of the colon group, were found quite frequently in our water, and this may have some bearing upon the question. On the other hand a number of wells have been condemned during the year, particularly in newly added territory, and to some of these wells a number of cases of typhoid fever can be traced. Nothing but time, therefore, can determine with certainty whether in the difference between the mortalities of 1905 and 1906 we have only the natural variation to be expected, or a deterioration of the municipal supply in 1906 as compared with the previous year.

Meeting of the Association of Ohio Medical Teachers

The second annual meeting of the Association of Ohio Medical Teachers was held at Columbus on December 26, 1906. This Association was organized in 1905 with the object of bringing together the teachers in the Medical Schools of Ohio in order to exchange opinions and discuss the many problems which are found in medical education. It is not the object to take up those subjects which are tenets of one school of practice or of another, since discussion of these could lead only to unpleasantness, but rather to discuss the questions which are common to all medical education.

The membership in the Association is open to all professors, associate professors and assistant professors—and also to instructors and lecturers of one year's service—in any of the medical colleges of the state.

At the meeting of last month several questions of large interest were presented through papers and general discussion. Probably the question of largest import was as to the advisability

of the examinations for licensure being given in two parts, a preliminary after the first two years of the medical course, and a final after graduation. The majority of those who took part in the discussion believed this to be the wiser course, and a resolution was adopted asking the State Board of Examination to bring this about. This Board is helpless in the matter until such time as the statute is changed, since the present statute provides that the student must have completed his medical course before he may come up for examination. It is at the present time an unwise thing to attempt to amend the medical practice act of Ohio in any way, but when the time comes that amendments are in order, it is to be hoped that the law will provide for a division of the examinations. Such is already the provision of the law in several states and it is contemplated in some other states in the near future.

Another question of considerable importance that was discussed was that of the time in the medical course when Materia Medica should be taught. There seemed to be some confusion of ideas as to just what constitutes Materia Medica as a study, and for this reason there was a division of opinion as to its place in the curriculum. The majority seemed to feel that an elementary course in the subject should be given to first year men.

The question of the time in the medical course when the student can profitably begin to attend clinics was discussed. There seemed to be a general opinion that he is not prepared for clinical work before the third year.

The propriety of members of medical faculties holding appointments on the State Board was discussed. It was shown statistically that such a practice obtains in but nine states in the country and that of 489 members of all Boards in the country, but 16 are on medical college faculties. Two of these 16 are accredited to Ohio. In many of the states this condition is prohibited by statute, and in many others is an unwritten law that it is not proper for a man to hold these two appointments at the same time.

No discussion of Medical Education in the past few years can be considered complete without the question of the giving of advanced standing in the medical course to the graduates of colleges of liberal arts and science. In pursuance of this custom, the entire evening session of the meeting was occupied with this question.

It seems to be evident that each year the attitude toward

such a practice is becoming more prohibitive, and that it will be but a short time until all reputable schools will require four years of medical residence regardless of preparation Such an attitude does not mean that medical educators decry the benefit of a college education, but that they believe that the colleges cannot give the professional turn to the teaching of medical subjects. From the standpoint of the undergraduate this is a gross injustice, since it is without doubt true that the college graduate is more efficient than the sort of men that most medical schools accept, namely men from between the plow handles and at best with but a high school education. This attitude of the medical educators has various interpretations, and some of them are not entirely worthy. The entire question is still in discussion and it will be some years before it is settled.

The meeting of the Association was a thoroughly successful one. The papers and discussions will be published as the transactions of the Association. Dr J. C. Oliver, of Miami Medical College, Cincinnati, was elected President for the next year. The attendance was about 80.

Latent Infections

Increasing knowledge as to the various means of transmission of infectious diseases leads to increased ability to prevent their spread, and research in this line is of inestimable value to the hygienist. C. F. Craig, of the U. S. Army, has an article in the January number of the *Journal of Infectious Diseases*, dealing especially with malaria. Examination of a large series of cases of soldiers returning from the Philippines, as well as a large number of natives in the villages near the army camps, has shown that a surprising percentage of persons apparently in health harbor the malarial parasite in their blood. The type found for the most part is the estivo-autumnal, which is by far the most resistant to treatment. He has worked out an additional feature in the life cycle of the parasite, whereby, in his opinion, there is an asexual conjugation which produces a resistant body able to tide over quite a period of unsuitable conditions, such as may be induced by the use of quinine, this body retains the ability to carry on the usual reproduction as soon as this condition is removed. The facts brought forth lead to very definite and practical conclusions, not dissimilar to some reached in other diseases. Treatment begun early enough and carried on to a satisfactory extent prevents these recurrences, and adequate

prophylactic treatment tends to preserve the locality from the spread of disease. The importance of this in regard to malaria can hardly be overestimated. Since it has been found that the infection is carried by mosquitoes of certain definite varieties, which are found also in non-malarial districts, it becomes obvious that one of these latent cases can start a focus which may lead to the more or less permanent infection of the locality. We have analogies to this in other diseases, in which the infection may be latent under insufficient treatment and later break forth in new series of cases. This is always true in syphilis and in gonorrhea, and is especially noteworthy in such an acute disease as diphtheria. In this, as exemplified by a number of cases in the city this winter, the organisms may persist in the throat for a number of days after all signs of the disease have disappeared. In one case this was true over a period of more than a month. *Inasmuch as the antitoxin does not in any way injure the bacteria themselves,* it is well, in view of these facts, to use a local antiseptic in the throat for some time after the clearing up of the membrane. The organisms latent in these cases are quite able to cause acute attacks of diphtheria in other persons, as much as though they came from an active case. All these things go to show that epidemics cannot be stamped out by ordinary methods of quarantine, unless the attending physician pays adequate attention to the latent cases of infection which are capable of starting new foci.

State Hospital Investigation

The attention of the general public has of late been centered upon the State Hospital at Newburg. A series of articles recently appeared in the *Cleveland Press,* written by one of its reporters who obtained a position as attendant at this institution. This enabled him to observe for himself whether certain rumors as to the ill treatment of patients by the attendants could be substantiated. His detailed reports of numerous specific instances of brutal treatment of the insane patients resulted in the appointment of a commission by the Governor of the State to investigate the condition of the affairs at the Hospital.

As would naturally be expected, the evidence submitted proved most contradictory. A reporter searching for instances of ill treatment would even unconsciously perhaps exaggerate what he had seen and, upon the other hand, the attendants might easily overstep the bounds of self-restraint in dealing with

obstreperous patients and at a later date would have entirely forgotten the incident. Nevertheless that there is some ill treatment is admitted by all, but it is exceedingly difficult to detect it or yet to prevent it; obviously the statements of the patients themselves have to be taken at a discount, and naturally when the medical officers are in evidence the attendants would be upon their best behavior. We believe that Dr Howard has conscientiously tried to furnish the best service available for the scanty pay granted by the legislature for salaries. The life of the attendant is by no means a sinecure and the daily contact with numbers of insane patients would, in time, tend to irritate the most humane and tender hearted individual. How much more irritating would it be in the case of a man following such a calling merely as a temporary employment and with no idea of making it a life work, as the facts would usually seem to indicate to be the case. The pay is not sufficient to attract men of much ability and the necessary restrictions as to hours, conduct, etc., inseparable from institution life, prove exceedingly irksome to the average man.

At the time of going to press the report of the commission has not been made public, but it can hardly do less than advise a higher salary for the attendants, so that a superior class of men may be obtained. This will, of course, introduce the danger of political favoritism, so that the Superintendent should be given an absolutely free hand in engaging or dismissing an attendant for the good of the service alone and entirely free from outside political influences.

That charges of cruelty will always be made in the conduct of insane asylums will always be true, and unfortunately, as in this instance, there will probably be more or less ground for complaint, no matter how earnestly those in authority may try to prevent it.

The Infants' Clinic and Hospital of Cleveland

During the summer just past there was established in rooms at the Friendly Inn an Infants' Clinic and dispensary to secure medical oversight and nursing care and to provide clean and properly modified milk for the sick babies of the poor.

The dispensary was planned somewhat on the lines of the French "Goutte de lait" and the German "Fürsorgestelle" which have proved so useful in the fight to control infantile mortality in these countries.

Visiting nurses on duty at the Clinic have followed the patients to their homes to see that necessary treatment was carried out, and this part of the work of the Clinic has proved of great value.

The existing Infants' Clinic has increased steadily during the winter months, and has outgrown its present quarters. The need of a permanent and an enlarged organization became so apparent that steps have been taken to establish a dispensary with its own milk laboratory, and a hospital for babies, to be known as the Infants' Clinic and Hospital of Cleveland.

Such interest has been aroused that the building of such a dispensary and hospital in the near future is assured.

Journalistic Changes

With the new year we are pleased to note changes in two of our contemporaries. *The Journal of the Association of Military Surgeons* changes its title to *The Military Journal.* During the past six years this *Journal* has made for itself a most creditable place among American medical publications. Military medicine presents certain features differing from those found in the ordinary routine of medical practice and the necessity for a journal particularly devoted to this sort of work has been shown by the past success of this publication.

The American Journal of Dermatology and Genito-Urinary Diseases has been considerably enlarged and improved, although the subscription price remains the same.

Both these journals have done excellent work in their respective fields and have our hearty good wishes for an increased measure of success in the future.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Heart Disease: In the *British Medical Journal,* for October 20, Robert Saundby treats of advanced heart disease and asserts, concerning the much debated question of the use of digitalis in aortic disease, that it has not been settled by Foster's discovery that when it slows the heart, the prolongation affects the diastolic period more than the rest of the cardiac cycle, as when the heart's action is slowed from any cause whatever the diastolic period is lengthened disproportionately. In all cases of aortic disease the pulse should beat more quickly than normal in order to keep up the circulation, but so long as digitalis does not reduce its rate below 80, the good

effects are as apparent in aortic disease as in other conditions. His experience with strophanthus is that it has practically the same action as digitalis, but is not more manageable or trustworthy. He at one time gave it up from using unsatisfactory preparations but now uses it occasionally when digitalis fails, but knows no indications for giving preference to it. So far as the vasodilators are concerned, erythrol tetranitrate is the drug upon which he now relies to produce a permanent unloading of the weight on the heart. He has used nitroglycerin for this result, and likes it in solution rather then in tablets, but prefers the erythrol tetranitrate, which has the advantage of lengthened action, the lowering of the pulse tension from a single does lasting fully four hours, and he is convinced that it can afford relief to patients who derive no benefit from other cardiac remedies. The usual dose of the tetranitrate is one-half grain in a tablet, which he prefers; it should be given every four hours while the patient is awake, and while it may produce headache occasionally, it is rarely so severe that the drug has to be stopped. Sometimes he combines it with Nativelle's digitalis, giving the drugs alternately with four hours interval between the doses of each.

Epilepsy: Matthew Woods, in the *Monthly Cyclopedia of Practical Medicine* for November, 1906, reports a case of epilepsy of 52 years duration with recovery. The patient was placed on an almost vegetable diet, only a very little meat being given in the middle of the day and each meal being as abstemious as possible, as in epilepsy especially, the digestive organs should never be embarrassed by excessive food. A capule containing 1-10 grain capsicum, 1-30 grain strychnin sulphate and one-half grain hydrocyanate of iron was to be taken before each meal and at bedtime. He asserts that the effect of capsicum in epilepsy with nausea or sick headache is very satisfactory and hydrocyanate of iron is the only chalybeate that can be used without hurt for the often concomitant anemia of this disorder. Tincture of the chlorid of iron will increase rather than diminish the paroxysms, and he believes it should never be used in epilepsy. He gave potassic bromid a dram and a half a day in four doses, highly diluted in water, at eight, twelve, four and eight o'clock. The first week, the doses should be given in four ounces of water each, unless the attacks are nocturnal, when after a month, the two last doses should be united and taken at nine o'clock in a pint of water to favor exosmosis and excretion. This is the method, somewhat modified, of administering the bromids briefly alluded to by Professor Niemeyer, and by which can be obtained such good results. In high dilution it is not necessary to use such large doses of the drug and it is not so likely to produce bromism. The bromids in concentrated solution sometimes increase convulsions in epilepsy, and should be avoided in this form. Capsicum, strychnin, arsenic, belladonna, digitalis, and hydrocyanate of iron are to be given as indicated, in addition to the bromid.

Olive Oil: *The Medical Record* for December 8, 1906, comments on the fact that the favorable effects of oil in the presence of gastric hyperacidity has long been recognized. The sedative and anodyne action of oil on inflamed tissues is

well known and in the case of olive oil there is also a high nutritive value to be considered, so that it should prove of great value in gastric ulcerations. In a recent report by Merkel (*Deut. Archiv für Klin. Medizin*) we find that it may be given about half an hour before meals through a tube or by spoonful doses, and the administration may be kept up for from six to eight days, together with lavage and an appropriate diet. In this manner the oil has been used with success in cases of pyloric stenosis following gastric ulcer, chronic ulcerations with hyperacidity, pyrosis, and simple ulcer of the stomach. In the latter case it was possible to prevent entirely the occurrence of pain after eating.

Exophthalmic Goitre: Jams Ewing, in the *New York Medical Journal* for December 8, 1906, points out the limitations of serum therapy in Graves's disease. While there is a good theoretical basis for the use of antitoxic serum against the thyroglobulin, and a somewhat less certain outlook for the action of an antibody prepared against the nucleoproteid of the thyroid gland, there are many considerations pointing to extensive limitations in the use of such a serum in all stages of the disease. He states that it is by no means certain that the thyroid gland is the sole primary source of disturbance in the disease, and that whatever may prove to be the connection between constitutio lymphatica with its enlarged thymus, and Graves's disease, the existence of this condition in the majority of fatal cases stands as an obscure factor, which may escape the influence of a serum directed against the thyroid. The lesions in the thyroid itself in the advanced cases of the disease seem to constitute a more serious limitation to serum therapy. With the extensive changes and degenerations present in such cases, it is difficult to see how any therapeutic agent can permanently affect the disordered function of the gland. A serum treatment designed to influence the earlier stages of Graves's disease, if really effective in those stages, must become less and less potent as the character of the morbid process changes, and in the latter stages of prolonged cases it may even do harm. The serum treatment must apparently be adjusted to each case and stage of the disease, and this requirement opens up a new and practical field for the clinical and chemical study of the disease. Finally, in Graves's disease, which is so often associated with the other functional and organic diseases, the action of a serum can be safely judged only in earlier or uncomplicated cases. In the later stages so many self perpetuating functional and organic sequelæ arise that effective influence over the original disorder seems much less likely to be secured.

Renal Insufficiency: Robert B. Preble, in the *American Journal of Medical Sciences*, for December 1906, in considering the treatment of renal insufficiency, says first a word in regard to those cases in which the urinary insufficiency is merely one of quantity, cases in which there is no diminution in the excretion of the more essential elements of the urine, the water only being lessened. These cases are of two types, the concentrated urine of cardiac failure, and that seen in the various acute infectious diseases. In the former, the treatment is that of the cardiac failure; rest, with digitalis or other cardiac stimulants, combined with vasodilators or vasoconstrict-

ors, according to the cause which underlies the heart exhaustion. Here a restriction of the amount of fluids with exclusion of the chlorids from the diet is of great importance when the edema is marked. In the latter group, that of the acute infectious diseases, the administration of large amounts of water is of great importance, for in this way the excretion of the toxic products of the infecting agent is favored, and they are diluted in their passage through the kidneys. Another class of cases are those grouped under the term uremia. The rational things to do here are to prevent or limit the further introduction of the toxic bodies and to further their removal. In the cases with the socalled prodromal symptoms of uremia present, to lessen the introduction is of more importance than to hasten the removal of the toxic bodies; while in the severe cases, the maniacal, convulsive or comatose, the reverse is true. To influence the production, regulation of the diet is of major importance, and the best food is milk. To check the source of toxins in the gastro intestinal canal, intestinal antiseptics may be employed and care should be taken to avoid those which when excreted may irritate the kidneys. Free purgation is demanded not only because the bowel bears to some extent a compensatory relation to the kidney, but because in this way absorption of toxins is lessened. In exciting purgation it is better to use the vegetable rather than the saline purgatives, especially if large amounts are required, because the salines have the same influence upon the molecular concentration of the blood or body fluids that the sodium chlorid has. To lessen the effects of the toxic material by hastening its removal, moderate purgation and sweating are sufficient in the milder cases, but in severer cases there is nothing so useful as venesection. Bleed early and as often and as much as the symptoms demand. The bleeding is done for the distinct purpose of removing as large an amount of toxic bodies as possible and should not be reserved for cases with high pressure. Sweating and purgation are far less effective, and mention should be made of the withdrawal of fluid from the thoracic or abdominal cavity or from the edematous legs by hollow needles, sometimes a life-saving operation.

Opsonic Therapy: Charles D. Aaron, in the *N. Y. Medical Journal* for December 1, 1906, reports a clinician's observations of opsonic therapy. According to the revised views which Wright now holds and which came step by step through his use of various bacterial substances in the form of vaccines, opsonin is an ingredient of the blood serum, which aids phagocytosis by its inhibiting action on a given microorganism. That is to say it acts on the microbe, and prepares it to be ingested by the protective body cells or phagocytes, chief among which are the polymorphonuclear leucocytes of the circulating blood. The blood serum of man contains opsonins for various pathogenic bacteria, and in a state of health this opsonic content, or "opsonic index" as it is termed, is at a certain or normal level. Now the opsonic power, or in other words the opsonic index, fluctuates, rises and falls, and during infection by a certain bacterial species the opsonic index for this particular species is usually below normal, or to use one of Wright's phrases, the individual's serum is in a "negative phase" of opsonic power. By his natural recuperative power, that is by his spontaneous active

immunity, the infected individual may generate opsonins of sufficiently increased potency to overcome the invading bacteria, and to permit the phagocytes to destroy them, when natural recovery ensues. Similarly by hygienic or therapeutic measures this opsonic activity of the blood serum may be increased. But the chief merit of Wright's work lies in the fact that he succeeds, by the use of his bacterial vaccines, in artificially stimulating the flagging opsonic power of the infected individual's blood, and of arousing it to a point at which healing processes begin and progress to recovery. As prepared at the present time these vaccines are suspensions in sterile normal salt solution of pure cultures of various bacteria grown on the surface of agar only to the height of vegetative activity, and killed by heating for 30 to 60 minutes at 60° C. Practically most striking results are attained in cases of acne in which we have to deal, as all are aware, with an invasion of the skin follicles by one or more of the staphylococcus pyogenes group. Cases of long standing, in which all internal and external remedies had been tried in vain by skilled specialists, yielded to inoculation by the appropriate staphylococcus vaccine. In one case of furunculosis of chronic character, of six years duration, staphylococcus vaccine given under guidance of the opsonic index produced complete recovery in two months. Sycosis barbae of an aggravated form treated with epilation and antiseptics for over a year with no benefit, yielded within a week after the second inoculation with staphylococcus vaccine. Equally good results have been obtained in chronic or local infections with the streptococcus, pneumococcus and colon bacillus. Pneumococcus vaccine has been used in chronic empyema following pneumonia with good results, and malignant growths seemed benefited. Many cases of lupus improved and one had all the lesions healed and the patient was marvelously well.

Oxygen: In the *Medical Review of Reviews* for November, 1906, Dumas (Thèse de Lyon) believes that the treatment of bronchopneumonia in children still leaves room for improvement and new contributions. The oxygen inhalations proposed by the author would seem to be of especial advantage for the symptom of dyspnea, but they also have a favorable influence upon the entire condition of the patient aside from the lack of air. The anxiety, cyanosis and convulsive inspirations subside and are replaced by a restful sensation. The little patients usually fall quietly asleep after the inhalation. The pulse becomes more full and regular and the number of respirations per minute notably decreases. The oxygen appears to have a favorable local effect on the infection of the air passages. Very young patients must first be trained to the sucking tube, and will frequently ask for it of their own accord.

Alcohol: *The Therapeutic Gazette* for December, 1906, asserts that there is still some confusion as to the position of alcohol, as evidenced by the discussion upon this drug at the British Medical Meeting at Toronto. That it is doubtless prejudicial in the treatment of shock is probably correct. Dr Blackader, while believing that the value of alcohol as a heart stimulant has been overrated, believes that the drug does increase the bactericidal properties of the blood and its proper use enables a patient suffering from infectious disease to combat his infection. Further it possesses a distinct food value and used in conditions

of exhaustion it adds to the force of the body. The employment of alcohol in health is an entirely different proposition from its employment in disease, as in health it may be poison but in disease it is beneficial. Dr Hare states that he is convinced that in many diseased conditions alcohol is a most valuable drug. He does not believe that it acts as a stimulant in the ordinary sense of the term, in that it increases the activity of the heart, respiration or nervous system, but it is a stimulant in the sense that it supports the vital processes in disease, although not in all cases of disease. The experience of the profession that it is a valuable adjunct to quinin and iron in combating septicemia in many cases, has not in his mind been in the slightest degree controverted by the scientific investigations which have been carried out upon healthy animals and healthy men within the last few years.

Chromic Acid: *The Medical Council* for December, 1906, quotes Sabourand (*La Clinique*) as to the value of chromic acid in three special conditions: (1) In syphilitic glossitis with fissures and irregularly bosselated surface, the application twice a week to the ulcers and rhagades of a 20% solution works a miracle in combination with the constitutional treatment. (2) In syphilis or venereal vegetations of the anus or genital organs, the application by an expert hand of pure chromic acid causes prompt shriveling and disappearance of these growths. It should be applied with the greatest care without any excess. In the hands of those not experienced in its use a 20% solution is to be preferred. (3) In plantar bromidrosis, or disagreeable sweating of the feet, a four percent solution in distilled water gives successful results; applied on a little absorbent cotton, moistening the entire surface but especially the interdigital folds and under the toes at first every day, then every second day and finally every third day.

Annual Meeting of the Staff of the Mount Sinai Hospital of Cleveland

This meeting was held January 15, 1907. In 1906, 479 patients were admitted, about equally divided between the medical and surgical sides. There were eight deaths in the medical service. One each from acute dilatation of the heart, mitral insufficiency, lobar pneumonia and pregnancy (moribund on admission, cause of death unknown), two from pulmonary tuberculosis and two from typhoid fever (one from hemorrhage, the other from perforation).

On the surgical side were three deaths; two from severe burns and one from empyema. Two hundred and seventeen major operations were performed with but two deaths, one of which followed celiotomy for perforation of the bowel during typhoid, the other after thoracotomy for empyema. Ether anesthesia was given in 246 cases. No clean cases were infected during the years 1903 to 1906, inclusive.

The former officers were reelected: F. A. Bunts, president; C. A. Hamann, vice-president; W. G. Stern, secretary.

Academy of Medicine of Cleveland

The forty-fourth meeting of the Academy was held at 8 p. m., Friday, January 18th, 1907, in the Auditorium of the Cleveland Medical Library. Program: The Differential Diagnosis of Syphilis, illustrated by Lantern Slides, together with a short consideration of the most approved Methods of Treatment, Wm. T. Corlett, M. D.

CLYDE E. FORD, M. D. Secretary.

THE OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION

The twenty-fourth regular meeting of this Section was held Friday, January 25, 1907, at 8 p. m., at the Cleveland Medical Library. Program: McReynolds Operation for Pterygium with Presentation of Patient, Dr Wm. E. Bruner; The Use of Paraffin in relieving small degrees of Entropion of the Lower Lid, Dr Mark D. Stevenson; Extra-dural Abscess complicated with Herpes Zoster Auris, Dr Secord H. Large.

C. C. STUART, M. D., Secretary.

EXPERIMENTAL MEDICINE SECTION

The regular meeting of this Section is held on the second Friday of each month. The thirty-first regular meeting of the Experimental Section was held at 8 p. m., Friday, January 11th, 1907, at the Cleveland Medical Library. Program: The Results of Recent Investigations into the Etiology of Cancer, Illustrated by a number of Stereopticon Photographs and Microphotographs, Harvey R. Gaylord, M. D.; The Present Aspect of the Question of Immunity in Cancer, illustrated by Stereopticon Charts, G. H. A. Clowes, Ph. D., Buffalo, N. Y.

J. J. R. MACLEOD, M. D., Chairman.
OSCAR T. SCHULTZ, M. D., Secretary.

CLINICAL AND PATHOLOGICAL SECTION

The thirty-eighth regular meeting was held at 8 p. m., Friday, January 4th, at Charity Hospital, the Medical Library Assembly Room being unavailable owing to the interference with the gas supply. Program: H. B. Kurtz presented a case of Glossitis; "A Clinical Report on some of the Causes of Hematuria," W. E. Lower (given in full in this issue); "Report of a Case of Ovarian Fibroid with Demonstration of Specimen," M. Rosenwasser; "Peptic Ulcer following Gastrojejunostomy," C. A. Hamann; "Mediastinal Tumor; Report of a Case with Demonstration of Specimen," M. J. Lichty.

FREDERIC WADE HITCHINGS, Secretary.

Annual Meeting of the Academy of Medicine of Cleveland

The annual meeting of the Academy of Medicine was held December 21, 1906, at the Cleveland Medical Library. The president C. A. Hamann in the chair. The following officers were elected by ballott for the ensuing year: President, J. B. McGee; vice-president, J. J. Thomas; secretary, Clyde E. Ford; treasurer, W. S. Hobson; trustees, J. N. Lenker and Chas. Gentsch. The report of the secretary which included the report of the Council was read by Clyde E. Ford. The treasurer's report was read by O. T. Thomas. Reports of the various committees were given

by R. E. Skeel for the Legislative Committee, J. J. Thomas for the Milk Commission and also for the Membership Committee. W. H. Merriam for the Program Committee, F. C. Taylor for the Auditing Committee. Dan Millikin, of Hamilton, Ohio, gave the address of the evening "The Medicine Man." C. A. Hamann concluded with the president's address which summarized the events of the past year with recommendations for the future, especially with reference to legislation.

The following committees were appointed by the Council: Legislative, E. P. Carter, chairman, G. W. Crile, R. E. Skeel, J. F. Hobson and Chas. Gentsch. Public Health, R. G. Perkins, chairman, H. E. Handerson, L. W. Ladd, H. O. Feiss and E. O. Houck. Membership, E. S. Lauder, chairman, A F. Furrer, A. H. Bill, A. I. Ludlow, H. J. Hartzell, C. A. Lenhart and W. A. Schlessinger. Program, W. H. Merriam, chairman, O. T. Schultz, F. W. Hitchings, C. E. Ford, J. E. Tuckerman, C. C. Stewart and C. G. Foote.

Annual Meeting of the Lakeside Hospital Alumni Association

The annual meeting and banquet of the Lakeside Hospital Alumni Association was held at Lakeside Hospital Wednesday evening, January 16, 1907, R. H. Birge presiding. The following officers were elected for the ensuing year: president, Howard Dittrick; vice-president, A. I. Ludlow; secretary-treasurer, A. Eisenbrey; member of the executive committee to serve for three years, J. H. Lowman.

The Infants' Clinic and Hospital of Cleveland

In June, 1906, a clinic for babies was established in the Haymarket district of Cleveland. The object of this clinic is to assume the care of the babies in the neighborhood.

The infant, often a physical wreck at the age of a few months, when it is first brought by its mother to the dispensary, becomes from this time forward a ward of this organization.

The dispensary furnishes three things that until this time the poor baby has lacked and because of which lack it has lost the shape, the flesh and the color with which it came into the world.

These three things are:

1st. Instruction to the mother concerning the care of a baby.

2d. Pure milk.

3d. Supervision and care in the home.

So far this little baby's only knowledge of life has been through the sensation of starvation, a starvation which reveals itself in every part of the wasted little body which was intended for happy childhood and useful manhood and womanhood.

It is well worth while to ask through what means this child has lost its chances of life or of health and happiness.

One out of every three babies among the poor dies before it is a year old, and the other two, alas! who shall say how many are misshapen and deformed by the action of wholly preventable disease?

Every epidemic except infant mortality—and it may be called that—has decreased during these last twenty years, so rich in revelations of truth to the scientific world. Alone babies have been allowed to survive only when fit, and mothers have been allowed to suffer three times the pain of childbirth and endure once the pangs of a broken heart in order to send out into the working world two children, one of whom may be so feeble or misshapen as to be a burden rather than a help to the community.

Within the last few years certain European countries have been so impressed by the economic significance of this waste of life that especially in France and Germany there has been a concerted and successful attempt to save the babies. It is being abundantly proved that this can be done and that the overwhelmingly high rate of infant mortality will yield to earnest and practically directed measures for its suppression.

We have at present in Cleveland an opportunity to correlate certain forces that have never before at any time or in any place been correlated in exactly the same manner. And if our ears are opened so that we can hear the wailing not of the three or four hundred children who perished in Bethlehem, but of the five thousand babies who in our own city are victims of disease and starvation, we can accomplish a work which we are perhaps unusually prepared to undertake, because of the close sympathy which exists between laymen and physicians.

We must have an infants' hospital attached to the dispensary—a hospital right down in the neighborhood where these poor babies live and to which their mothers can have easy access.

Such a hospital will be specialized to meet the needs of infants.

In a general hospital such care is not possible. A young baby must have human hands in frequent touch with it. It needs much contact with its caretaker, and such cannot be afforded unless the hospital is especially equipped for the care of infants.

An infants' hospital must supply nurses enough to afford this life-restoring care to the sick child. An infants' hospital with an out work of dispensaries, and still beyond that point of contact through the district nurse in the home, will bring the most powerful of all measures to bear on this question of infant mortality. In fact, this gracious circle of mercy beginning and ending in the home and which considers the little baby in its human relationship to life and to its family furnishes what has heretofore been lacking: consecutive and responsible care of the baby whether it be sick or well to the end of its second year.

The way we work now is to leave the baby in the care of an ignorant, if loving, mother, let it drink unclean milk and then direct our efforts to straightening crooked bones that might have been straight, to dressing sores and ulcers that need never have appeared. But in spite of every care illness will occur, especially among the very poor. And we must have our hospital and when the mother leaves her baby within its walls for a little while it must be with a well founded hope of carrying the little one forth in health again.

Let us take health at its source and preserve it. Do not let us allow its pure stream to be fouled with the uncleanliness of disease.

An outline of the work of this Society for the Preservation of Infants is as follows:

The sick baby is brought to the dispensary by its mother. If the baby is not too sick to be cared for by its own mother in its home, the physician gives the mother such instructions as mothers among the well-to-do receive from their physician. If the mother can nurse her own baby, efforts are made to arrange her time so that she can give it this natural food instead of the poison she so frequently buys for milk. If she cannot nurse her baby, provision is made to furnish her with pure milk on prescription.

Many mothers do not know that undiluted cow's milk may bring the gravest trouble on their babies even when it is pure milk, and when it is dirty and diseased the baby has little chance of resisting its effects. After instructing the mother and prescribing proper food for the infant a nurse goes into the home and keeps watch of mother and child until the mother understands the fundamental facts concerning the care of her baby. The nurse goes every few days to the baby's home and every week or every two weeks the infant is brought to the dispensary. When the mother sees a rosy baby blooming from the wilted, wizened little bud that she brought to the clinic or hospital she believes enthusiastically in the doctors and nurses. The miracle has been accomplished before her very eyes, and seeing is believing in her case certainly. It is very easy to persuade her to bring the next baby at birth to be weighed and examined at the dispensary and to have its care outlined, and she will bring her babies at intervals right through their babyhood. But the babies are so numerous and the mothers so eager to walk in this new path of hope that only the magic purse which refills itself when empty can supply the need, and this we hope to have in the hearts of the fathers and mothers whose children are born for life and health and happiness instead of death and blight and misery.

Give these babies a hospital in the slum that is their home, a hospital in working human relationship with the sorrows and cares of its neighborhood. A hospital where the baby will go to get well, a hospital where mercy and science can work their dual miracle of healing and loving care.

Book Reviews

Examination of the Urine. By G. A. De Santos Saxe, M. D., Pathologist to the Columbus Hospital, New York City. 12mo volume of 391 pages, fully illustrated, including 8 colored plates. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Flexible leather, $1.50, net.

Dr Saxe has presented a work on examination of the urine unusually complete, absolutely up-to-date, concise, yet explicit in all its parts; and it will be found to meet fully the requirements of the student and practitioner without burdening him with unnecessary analytic procedures. Special attention has been paid to the interpretation of findings as applied to clinical diagnosis, and the student is told what each chemical element and each microscopic structure means when found in the urine. The character of the urine in various diseases is also described in detail. Descriptions of technic have been made very explicit, and the author has inserted some new methods of working developed in his own experience. Cryoscopy and other means of functional diagnosis have been given their proper places. The text is fully illustrated, including eight colored plates of the various urinary crystals. The work will be useful because it is practical.

The Principles of Hygiene: A Practical Manual for Students, Physicians, and Health Officers. By D. H. Bergey, A. M., M. D., Assistant Professor of Bacteriology, University of Pennsylvania. Octavo volume of 536 pages, illustrated. Cloth, $3.00, net.

This book is intended to meet the needs of students of medicine in the acquirement of a knowledge of those principles upon which modern hygienic practices are based, and to aid physicians and health officers in familiarizing themselves with the advances made in hygiene and sanitation in recent years. The book is based on the most recent discoveries, and represents the practical advances made in the science of hygiene up to date. The rapid strides made in our knowledge of the entire subject has rendered such a book, reflecting the more recent discoveries, a necessity to physicians and students of medicine.

The Four Epochs of Woman's Life. Second edition. Maidenhood, Marriage, Maternity, Menopause. By Anna M. Galbraith, M. D., Author of Hygiene and Physical Culture for Women; Fellow of the New York Academy of Medicine, etc. With an Introductory Note by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. 12mo volume of 247 pages. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $1.50, net.

This work, written for the instruction of the laity on subjects of which every woman should have a thorough knowledge, is indeed a timely and excellent one. The fact that a second edition has been demanded in such a short time is sufficient proof that women have at last awakened to a sense of the penalties they have paid for their ignorance of those laws of nature which govern the epochs of their lives. The language used is clear and comprehensive, yet, withal, modest, and the meaning easily grasped even by those unfamiliar with medical subjects. As a further aid a comprehensive glossary of medical terms has been appended.

In this new edition the author has made some excellent additions, viz: A section on "The Hygiene of Puberty;" one on "Hemorrhage at the Menopause a Significant Symptom of Cancer;" and one on "The Hygiene of the Menopause." These sections make the work the very best on the subject we have seen, and physicians will be doing a real service by recommending it to their patients.

A Text-Book of Histology, by Frederick R. Bailey, A. M., M. D., Adjunct Professor of Normal Histology, College of Physicians and Surgeons, Medical Department, Columbia University, New York City. Second edition. Wm. Wood & Company, 1906. $3.00.

The second edition of this text has followed the first after a lapse of but two years. It is somewhat enlarged and some new figures have been introduced.

The text seems to be accurate but there is a tendency to terseness and brevity which frequently leads to obscurity. This is perhaps a less serious fault than the lack of balance in the treatment of the different organ systems. To the student who is preparing for pathology and physiology the knowledge of the urino-genital system seems fully as important as that of the central nervous system, yet the treatment of the former is contained in forty pages while the central nervous system occupies eighty pages. The same comparison may be made with other systems. The striking feature of the book is this extensive treatment of

the central nervous system, a thing that is very commendable and valuable, but that here seems to have been at the expense of proper attention to other systems.

Another criticism that may well be made is that the author holds to the definition of the directions in the upright position of the body. With the advances in comparative anatomy, embryology and histology it seems time to abandon this artificial scheme and describe all organs in the quadruped position, *i. e.,* to speak of the dorsal horns in the cord rather than of the posterior horns. Such a nomenclature certainly avoids much confusion.

One commendable feature of the book is that the bones and muscles are treated as organs rather than simply as tissues, as is the usage in most Histologies.

The figures are diagrammatic, but instructive and not difficult to interpret. Such figures are far better for an elementary text than are photo-micrographs. The typographical work and the making of the book from the printer's and binder's standpoint is beyond reproach.

Altogether this book must be considered as one of the four or five standard and up-to-date text-books of Histology in the English language.

A Syllabus of Materia Medica, compiled by Warren Colemen, M. D., Professor of Clinical Medicine and Instructor in Materia Medica and Therapeutics in Cornell University Medical College; Assistant Visiting Physician to Bellevue Hospital. Third Edition. Revised to conform to the Eighth Decennial Revision of the U. S. P. New York: William Wood & Co., 1906.

This little book presents quite completely the present status of Materia Medica. It is a convenient and accurate little compend of a size suitable for the pocket, and is in accordance with the latest revision of the Pharmacopœia. It can be cordially commended to the student as embodying the essentials of the branch in a readily remembered form, and will prove a most satisfactory guide to the study of Materia Medica.

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M. D., LL. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association and the British Medical Association; Fellow of the Medical Society of London, etc. Sixth Edition. Thoroughly Revised. (In Conformity with Latest Revised U. S. Pharmacopœia, 1905.) Royal Octavo, 1244 Pages. Extra Cloth. Price, $5.00 net. Full Sheep. Price, $6.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

This, the sixth edition of this work, maintains the position of its predecessors as a representative text-book on these subjects and in its revision corresponds with the present U. S. and British Pharmacopœias. It is divided into Part I, Pharmacology including general considerations on remedies and therapeutic agents; Part II, Materia Medica or Pharmaceutical Therapeutic Agents or Drugs, and Part III, comprising about 250 pages devoted to nonpharmacal remedies, and expedients. Part first is entirely added, being taken from the limited students' edition of the same author, and to it has been added a comparative table which embodies the

changes in strength and doses of the present as compared with the preceding Pharmacopœia. The newer therapeutic agents are quite fully considered, and the book contains about 100 pages more than the former edition. Prescription writing is presented in a practical way, with exercises in both the metric system and our own. The present status of therapeutics is amply and clearly presented and the book can be recommended as a most satisfactory text-book.

Books Received

Syllabus of Lectures on Human Embryology: an introduction to the study of Obstetrics and Gynæcology for Medical Students and Practitioners; with a Glossary of Embryological Terms. By Walter Porter Manton, M. D., Professor of Clinical Gynæcology and Professor Adjunct of Obstetrics in the Detroit College of Medicine; Fellow of the Zoölogical Society of London, of the Michigan Academy of Sciences, etc., etc. Third Edition. Revised and Enlarged. Illustrated with a colored frontispiece and numerous outline drawings. 12mo, 136 pages; Interleaved throughout for adding notes. Bound in Extra Cloth. Price, $1.25, net. F. A. Davis Company, 1914-16 Cherry Street, Philadelphia, Pa.

The Practical Medicine Series, under the general editorial charge of Gustavus P. Head, M. D., Volume VIII, Materia Medica and Therapeutics, Preventive Medicine, Climatology and Forensic Medicine, edited by George F. Butler, Ph. G., M. D.; Henry B. Favill, A. B., M. D.; Norman Bridge, A. M., M. D.; Daniel R. Brower, A. M., M. D., LL. D.; Harold N. Moxer, M. D. Series 1906. Year Book Publishers.

Monthly Bulletin of the Illinois State Board of Health.

Whitman's Orthopedic Surgery. A Treatise on Orthopedic Surgery. By Royal Whitman, M. D., Instructor in Orthopedic Surgery in the College of Physicians and Surgeons, New York; Chief of Orthopedic Department in Vanderbilt Clinic, New York. Third edition, revised and enlarged. Octavo, 900 pages, with 554 illustrations, mostly original. Cloth, $5.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Tuttle on Diseases of Children. A Pocket Text-Book of Diseases of Children. By George M. Tuttle, M. D., Attending Physician to St. Luke's Hospital, the Martha Parsons Hospital for Children and Bethesda Foundling Asylum, St. Louis, Mo. New second edition, thoroughly revised. In one 12mo volume of 392 pages, with 5 plates. Cloth, $1.50, net; flexible leather, $2.00, net. Lea's Series of Pocket Text-Books, edited by Bern. B. Gallaudet, M. D. Lea Brothers & Co., Philadelphia and New York, 1907.

Conservative Gynecology and Electro-Therapeutics. A Practical Treatise on the Diseases of Women and Their Treatment by Electricity. By G. Betton Massey, M. D., Attending Surgeon to the American Oncologic Hospital, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, etc., etc. Fifth, carefully revised edition Illustrated with twelve (12) original full-page chromo-lithographic plates of Drawings and Paintings, fifteen (15) full-page half-tone Plates of Photographs made from Nature, and 157 half-tone and photo-engravings in the text. Complete in one Royal Octavo Volume of 467 pages. Extra cloth, beveled edges. Price, $4.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

Peterson's Obstetrics. The Practice of Obstetrics. By Eminent Authorities. Edited by Reuben Peterson, A. B., M. D., Professor of Obstetrics and Diseases of Women in the University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich. Large octavo, about 1087 pages, with 523 engravings and 30 full-page plates in colors and monochrome. Cloth, $6.00, net; leather, $7.00, net; half morocco, $8.00 net. Lea Brothers & Co., Philadelphia and New York, 1907.

CORRECTION

In the January number of the JOURNAL the name of Dr Samuel E. Earp, editor of the *Central States Medical Monitor,* was printed as Carp. We regret the error, and beg the doctor's pardon. Dr Earp's articles are always interesting, and well worthy of quotation, and we shall spell his name correctly in the future.

Correspondence

Editor CLEVELAND MEDICAL JOURNAL, Cleveland, Ohio:

Physicians who are interested in the study and legitimate practice of the physical (drugless) therapeutic methods, notably electro-therapy, photo-therapy, mechano-therapy, hydro-therapy, suggestion and dietetics, are invited to join the American Physio-therapeutic Association. Adress the Secretary, Dr Otto Juettner, No. 8 W. Ninth St., Cincinnati, Ohio.

The officers for the ensuing year are:

President: Dr H. H. Roberts, Lexington, Ky.

Secretary: Dr Otto Juettner, Cincinnati, Ohio.

Treasurer: Dr Geo. H. Grant, Richmond, Ind.

Executive Council: Drs W. F. Klein, Lebanon, Pa.; Jas. Hanks, Brashear, Mo.; J. W. Unger, West Point, Miss.; Chas. S. Northen, Talladega, Ala.; R. W. Gibbes, Columbia, S. C.; S. J. Crumbine, Topeka, Kans.; A. L. Blesh, Guthrie, Okla.

Yours very cordially, OTTO JUETTNER.

Lebanon, O., Jan. 17, 1907.

To the Editor of the CLEVELAND MEDICAL JOURNAL:

I am only one of those who are interested in the lesson taught us by the experience in Cleveland with vaccination and smallpox. I wonder if it was a co-incidence merely that sample copies of the *Philistine* for December, 1906, from your neighbor in East Aurora, N. Y. were distributed to physicians and others so closely following your October and November remarks. It contains a sermonette on the evils of vaccination. The editor of this periodical is a peculiar duck who, with the cunning of his kind, flatters his intended victims by intimating that they are of "the elect," "persons of probity (and discerning)." His style is rather antiquated just as are his thoughts as might be expected of one whose book-plate is made up of the heads of two monks of the Middle Ages —if I remember aright. But what is more to the point, this man has a most peculiarly morbid self-consciousness. Should any one of literary or political note spurn his approach or differ from him in opinion, he shows his lack of self-control by his manner of attacking such person, and it is to such notables that he gives his attention. The question might well be raised as to whether a series of nauseous "Little Journeys" published last year were intended to justify his own private life by intimating that he belonged in the same class with some of his "Great Lovers." It is nothing that he is fond of luxurious surroundings. Many others of the same kind delight in surrounding themselves with a certain luxury. It is nothing that he claims as original his back-number philosophy set to slang accompaniment. He is, to a certain extent, a menace while at

large, for his oddities of expression and his general air of independence have attracted to him a large following among the unthinking who chafe at moral restrictions, or who seem to be refreshed by getting out of the ordinary rut in their reading—much as one is entertained by a minstrel performance.

Alienists teach us that the morbidly self-conscious and self-important person, not having perfect self-control, running off into immoralities of thought and action, while cultivating a luxurious style of life, is degenerating mentally. Is it possible that the editor of the *Philistine* and the Goliath of Philistia is a paranoiac? Yours truly,

EDWARD S. STEVENS.

The Examinations of the Ohio State Medical Board, December 11, 12 and 13, 1906

EXAMINATION IN PHYSIOLOGY

1. How are foods classified? Describe each class.
2. Where and by what secretions are nitrogenous foods digested?
3. Describe the process of blood coagulation.
4. Describe a heart beat.
5. What part of digestion takes place in the duodenum?
6. What changes does the blood undergo in respiration, and how is it accomplished?
7. What conditions hasten and what retard absorption?
8. Describe a serous membrane, and name its office.
9. What is meant by the term blood pressure?
10. How is the heat of the body maintained?

EXAMINATION IN PRACTICE AND PATHOLOGY

1. Name some of the causes of constipation, and give dietetic and hygienic treatment.
2. Describe the changes that follow generalized arteriosclerosis.
3. Differentiate between catarrhal jaundice, gall stones in the common duct and malignant growth affecting the common duct.
4. Locate the lesion in paralysis of the right arm and leg and left side of the face.
5. Describe the process of healing by the blood clot dressing, *i. e.* where the cavity is allowed to fill with blood and is then closed.
6. How do carcinoma and sarcoma differ from each other?
7. Diagnose and give treatment of erysipelas.
8. Diagnose and give treatment for dysentery.
9. What is acne? How do you treat it?
10. Give symptoms, diagnosis and treatment of epilepsy.

EXAMINATION IN OBSTETRICS

1. Name the varieties of ectopic pregnancy. Give briefly the symptoms and signs by which it may be recognized.
2. How determine, before labor, the presentation and position of fetus without making a vaginal examination?
3. How, during pregnancy, may death of the fetus be recognized?
4. Name some conditions which would warrant the induction of premature labor.
5. How distinguish one shoulder from another when the elbow and hand cannot be reached?

6. What conditions would cause you to make a craniotomy or embryotomy rather than a cesarian section?
7. How should labor be induced at about the seventh or eighth month?
8. Give briefly the pathology of so-called milk leg.
9. In about what period of time should the second stage of labor be concluded? Why?
10. Give briefly the symptoms of rupture of the uterus and outline its management.

EXAMINATION IN DISEASES OF WOMEN

1. Classify uterine hemorrhage and give some of the causes.
2. Give treatment for nausea and hyperemesis of pregnancy.
3. Give some of the causes and treatment for pruritus vulvæ.
4. Give some of the aids and hindrances to involution.
5. Name three diseases of mammary glands; give their treatment.

DISEASES OF CHILDREN

1. Symptomatology and treatment of rickets. From what must it be differentiated?
2. How would you treat a child, age two years, who is suffering with vomiting and diarrhea?
3. Diagnosis and management of chorea in children.
4. Diagnosis, prognosis and treatment of inherited syphilis.
5. Give the period of incubation of whooping cough, measles, scarlet fever, diphtheria, chicken pox and mumps.

EXAMINATION IN SURGERY

1. Define surgical diseases; give an example with treatment for same.
2. Classify fractures and dislocations of the shoulder.
3. How do you dress a fractured clavicle?
4. Describe technique of surgical treatment for empyema.
5. Describe technique of cholecystotomy.
6. How frequently should you catheterize an unconscious patient?
7. Describe operation for varicocele.
8. What is the danger of surgical treatment of corns and bunions in old people and why?
9. Give a simple formula for hypodermoclysis and what conditions call for its use.
10. Give symptoms and treatment of intussusception of bowels.

EXAMINATION IN CHEMISTRY

1. Define acid, base and salt.
2. What inorganic salts enter into the formation of bone?
3. What is chemical affinity, cohesion and adhesion?
4. What are the properties of an acid; of an alkali?
5. What is an oxide?
6. What is chloroform? How made?
7. What is the difference between fermentation and putrefaction?
8. What is the antidote to carbolic acid?
9. Describe a method of preparing oxygen.
10. Name three mineral poisons and give their antidotes.

EXAMINATION IN MATERIA MEDICA AND THERAPEUTICS (REGULAR)

1. Upon what does the activity of hydrogen peroxid depend? How is it employed in medicine?
2. For what purpose is cold employed as a therapeutic agent; how does it produce its effects?
3. In what way may exercise act as a therapeutic agent?
4. What is heroin? Describe its physical properties and physiological action? Give some indications for its use.
5. Write a prescription for a patient suffering from cystitis with ammoniacal urine.
6. Describe the lethal effects of hydrocyanic acid.
7. Write a prescription for a patient with broken cardiac compensation.
8. How does quinin produce its effects in malaria?
9. From what is eserin obtained? Describe its action.
10. How graduate the dose of a remedy to the age of a patient?

EXAMINATION IN ANATOMY

1. What vessels unite to form the inferior vena cava? Describe its course and termination.
2. Give the origin, course and branches of the axillary artery.
3. Describe the medulla oblongata.
4. Give the distribution of the pneumogastric nerve.
5. Describe the larynx.
6. What are Peyer's glands? Where are they found?
7. Describe the gall-bladder, giving its location and relations.
8. Give the names of five muscles of the shoulder and arm.
9. What is the diaphragm? Where is it situated? Mention the principal opening in the diaphragm.
10. Give the origin, insertion and action of the deltoid muscle.

EXAMINATION IN PHYSICAL DIAGNOSIS

1. How discriminate organic from functional murmurs of the heart?
2. Give pathological significance of aortic murmurs.
3. State pathological significance of herpes labialis.
4. State indications suggested by the reflex vomiting.
5. What are the indications suggested by hiccough?
6. State pathological significance of blood in the stools.
7. State physical signs of an effusion in acute pleurisy.
8. Describe the methods of palpation to ascertain the condition of the kidneys.
9. State pathological significance of the general distention of the abdomen.
10. State pathological significance of rigid recti muscles of the abdomen.

Medical News

H. R. Trollinger, of Homeworth, is very ill.

W. H. Burns, of Alliance, is quite ill at his home with typhoid fever.

Dr Bunce, of Oberlin, was slightly injured a few days ago by a snow plow.

Dr Henning, of Bellefontaine, has been confined to his home several days by illness, but is much better.

C. F. Cushing and wife, of Elyria, have gone to Florida, where they will spend the remainder of the winter.

Dr and Mrs. Pyle, of New Philadelphia, who have been in Youngstown for a few weeks, are at home again.

G. R. Gardner and wife, of Circleville, are at home again after a three weeks visit in the northern part of the state.

E. Y. King, of Rockwood, a well known physician, who has been very ill for some time, is still in a critical condition.

B. R. Leroy and family, of Athens, have moved to Chagrin Falls, two of their sons having entered college at this place.

R. H. Reynolds, of Greenwich, who has been ill, is now able to sit up considerable of the time, but not able to attend to calls in his profession.

H. M. Page, of Warren, left recently for a brief stay in Oklahoma City where he will join his wife, who has been there for several months.

G. E. Davis, of Lewiston, while trying to start his furnace, was quite badly burned about the face, injuring both eyes, but not impairing the sight.

J. A. Spence, of New Philadelphia, who went to Roswell, New Mexico, several months ago, has gone to Silver Creek, and it is learned that his health is much improved.

The Butler County Medical Society held its monthly meeting Wednesday afternoon, January 16. Papers were read by Dr Burdsall, of Seven Mile, Merle Flenner and Leon Iutzi, of Hamilton. Supper was served at the Emporium dining rooms.

Third annual banquet of the Lake County Medical Society was held at the Parmly Hotel, Painesville, Ohio, Monday evening, January 7, 1907, at 8:15. Toastmaster, J. V. Winans, Madison, Ohio. Toasts: 1, "Some Remarks on Surgical Diagnosis," by Carl A. Hamann, Cleveland, Ohio; 2, "First Aids," W. E. Lower, Cleveland, O.; 3, "Professional Co-operation," (a) Why, (b) How, (c) When? H. G. Sherman, Painesville, Ohio.

The annual meeting of the Pickaway County Medical Society was held in the court house, in the early part of January. D. V. Courtright made the annual address. The board of health and health officer were given uncomplimentary notice of their loose methods of conducting their work. A. W. Holman read a paper entitled "Laboratory Methods and the General Practitioner." Both Courtright's and Holman's papers were well received and were very interesting. The following officers were elected for the ensuing year: President, D. V. Courtright; vice president, O. H. Dunton; secretary, A. W. Holman; treasurer, G. T. Rowe.

The first meeting of the new year of the Wayne County Medical Society was held on January 8, in the library room in the court house. The meeting was well attended and very interesting. G. W. Ryall, of Wooster, read a paper on "Post Graduate Work in Europe"; F. F. H. Pope, of Dalton, "Heredity in Carcinoma." The election of officers resulted in the selection of the following: President, A. B. Campbell, of Orrville; vice president, Norman Dawson, of Sterling; secretary, D. P. Shie, of Orrville; treasurer, Henry Blankenhorn, of Orrville. T. A. Elder, of Wooster, was elected a member of the auxiliary committee on public policy and regulation.

The Summit County Medical Society held its regular monthly meeting in the rooms of the Summit County Medical Club in the Abbey Block, at Akron, January 8. There was a large attendance and much interest shown. As a result of the ever-increasing interest in the organization during the past few years a number of new names were presented for membership. Several very interesting papers were read and much discussion followed. The present membership of the society is about 50, an increase of about half in a short time. The society represents, in its membership, Summit county very largely, as well as Akron, and there are prospects for a continuance of its growth right along.

A meeting of the Geauga County Medical Association was held in the Appleby Hotel, at Burton, January 10, eight doctors being present. Dr Henry O. Ferff, of Cleveland, was the guest of the association, and read a paper on "Pathology and Treatment of Club Foot." The next meeting will be held in Burton on the first Thursday in April. A. D. Warner, of Burton, was appointed to go to Columbus, and attend the meeting of the State Medical Association, which meets in that city next spring. This association is made up of the associations of each county in Ohio. The State Association will meet to discuss the legal phase of medicine with the idea of getting certain legislation through that will benefit communities, in their protection against medical frauds.

About 40 members of the Clark County Medical Society enjoyed the annual banquet, which was given January 7, in Springfield, at the Arcade Hotel. At the conclusion of the repast, Noah Myers assumed the duties of toastmaster and introduced G. F. Brubaker, who responded to the toast, "Retrospect." Clarence S. Ramsey, the new president, responded to the toast, "Prospects." The latter told what could be accomplished during the coming year. "What Can Be Accomplished by a United States Profession" was the subject presented by J. J. Moore, of South Charleston. R. B. McClellan, of Xenia, president of the State Medical Society, was the guest of honor. He spoke of the duties of organization. The new officers of the local society are: President, C. S. Ramsey; first vice president, E. F. Davis; second vice president, C. L. Minor; secretary, J. C. Easton; treasurer, Arthur Pancake. Executive committee, Noah Myers, R. L. Bell and C. W. Evans.

The Stark County Medical Society met January 15, in an all-day session. Forty members were present. Papers were read by L. B. Santee, of Marlboro, on "Women and Children"; by J. F. Marchand, of Canton, "A Plea for a National Department of Health"; and by H. P. Pomerene, of Canton, on "Surgery." A. B. Walker, of Canton, the retiring president, delivered the valedictory address; G. F. Zinninger, of Canton, secretary-treasurer of the society, reported, as did also T. C. Miller, of Massillon, councilor for the Sixth Ohio district. George Y. Davis, of Minerva, and George M. Campbell, of Navarre, were elected members of the association. An application for membership was received from S. J. Shetler, of Navarre, but no action was taken concerning it. Officers for the ensuing year were also elected as follows: President, N. W. Culbertson, of Massillon; secretary-treasurer, George F. Zinninger, of Canton. G. W. Gans and S. S. P. Barnes, of Massillon, were elected to the executive committee, which is now composed of H. P. Pomerene and J. F. Marchand, of Canton; L. B. Santee, of Marlboro; W. C. Steele, of New Berlin, and the new members mentioned above. F. W. Gavin, of Canton, was elected a member of the auxiliary committee on public policy and legislation, of the Ohio State Medical Association, to represent the Stark County Medical Society. The next meeting of the society will be held the second Tuesday in March.

Deaths

Archibald Crary died very suddenly, at his home in Huntington, January 10.

C. C. Collins, of Lima, who had been in ill health for some time, died last December.

Michael Hawes, died at his home in Claysville, Guernsey County, January 7th, aged 79 years.

T. E. Heath, the oldest practising physician in Summit County, died at his home in Cuyahoga Falls, very recently.

The Cleveland Medical Journal

VOL VI MARCH, 1907 NO 3

The Early Diagnosis of Gastric Carcinoma

A CLINICAL STUDY.

W. GILMAN THOMPSON, New York

By early diagnosis it is intended to include those cases in which the patient's condition still permits of his going about, and of operation if desirable, and in which, for the most part, no definite tumor is demonstrable by the ordinary means of physical examination.

It is of the utmost importance to establish the existence of a gastric cancer before a tumor is manifest, and to this end several laboratory tests have been added to our means of diagnosis. Such are the improved methods of gastric analysis, the determination of occult blood in the stools or gastric contents and blood examinations.

The importance of diagnosis of gastric carcinoma before decided physical evidence of tumor is obtainable, is enhanced by the fact that by the time the tumor is large enough to be clearly demonstrable the patient is too weak for operation, or secondary growths are so far advanced as to render operation futile. Entirely apart from the question of operation, moreover, is the desirability of an early diagnosis and prognosis. The conditions which obscure the early palpation of a small gastric tumor are several. Thickness of the abdominal wall may prevent its determination until emaciation has rendered it possible. More often the difficulty consists in abdominal rigidity. To a great extent this is to be overcome by repeated examination by which means the abdominal muscles are trained to relax. Sometimes the examiner is too superficial in his methods and fails to palpate the abdomen with the patient in different positions, especially after

*Synopsis of remarks in a paper read before the Cleveland Academy of Medicine, February 15th, 1907. The paper in full to appear in the Ohio State Medical Journal.

a thorough evacuation of the bowels, and also with the stomach empty, precautions which are often neglected. One of the most satisfactory methods of feeling a deeply seated small gastric growth is that used by Ewald in his stomach clinic in Berlin. The patient sits in bed with knees partially drawn up, his head leaning backwards and resting on the shoulder of the examiner, who, sitting close behind the patient on the bed, supports him while he reaches around the patient and palpates his abdomen in front. By this means all the patient's muscles are relaxed, and the natural descent of the abdominal organs often allows a gastric growth to drop downward and forward within reach.

Epigastric rigidity, if persistent under such favorable conditions as those described above, is of itself of considerable diagnostic importance, being usually due to reflexes caused by adhesions, or to the dread of elicitation of pain and tenderness. It is seldom necessary to submit a patient to the inconvenience of primary anesthesia if the foregoing methods are employed. In some cases a growth is bound by adhesions deeply out of reach, or lies behind the liver. Failure to demonstrate a mass may be due to the fact that the carcinoma has taken the small nodular or diffuse, infiltrating form rather than that of a palpable scirrhous tumor.

There is a condition which in elderly men often adds to the difficulty of palpation, namely chronic emphysema with considerable increase in the diameters of the lower thorax with eversion of the lower ribs. As emaciation proceeds the skin becomes stretched so tightly across between these ribs that deep palpation in the epigastrium becomes impossible.

In a series of 88 cases, heredity played no conspicuous part as a factor. In only three cases was there a history of any form of cancer in the family. One exception was the case of a woman 40 years of age and exact evidence was wanting. The second exception was that of a man 46 years of age, who stated that his father had died of cancer of the face. The third was that of a man 45 years of age whose father died of cancer of the larynx. Contrary to prevalent belief among the laity and to the statements of many text books, which are of themselves more or less hereditary, it does not appear that carcinoma is in any true sense a markedly hereditary disease. The great majority of patients give no such history and for the small remainder it should be recognized that with so common a disease the ordinary laws of chance may place a certain number of duplicate cases in the same family.

Social status and occupation were entirely without uniformity in influence, nor did the patient's previous habits as to alcoholism, etc., or the acquirement of chronic disease, such as syphilis or arteriosclerosis, appear to have any predisposing effect in any one case more than another. The factors of age and sex are much more definite, and it is interesting to know that of the 88 cases, only 16% to 18% occurred in women.

Loss of muscular strength and of weight even without definite gastric phenomena are among the most constant early symptoms and bear no definite proportion to the size and the position of the growth. In general these symptoms are liable to occur earlier and become more pronounced earlier in cases of gastric or hepatic carcinoma, than when the disease is situated elsewhere, but there are many exceptions.

Dilatation of the stomach, especially with visible peristalsis, is a very important and reliable condition from the diagnostic standpoint of cancer when present under certain circumstances, *i. e.*, when dilatation appears rather suddenly in a patient past 45 or 50 years of age, who has always been temperate in both eating and drinking, who has been in previous good health and who has presented none of the marked symptoms of chronic gastric catarrh. If the dilatation is not due to muscular weakness of the stomach wall, or distention by over-eating or drinking, it is inevitably due to obstruction in or about the pylorus, which in the great majority of cases of this type is found to be due to a carcinoma.

In testing for lack of gastric motility and stagnation of food contents spinach is an excellent substance to employ, for it is easily distinguishable in stomach washings and is scarcely altered by the gastric juice. In some cases of this series it was detected in the stomach washings more than 24 hours after ingestion. Failure to improve radically under treatment is an important diagnostic indication, especially in regard to gain in weight and in the blood composition. Patients with gastric cancer not infrequently improve both under treatment and spontaneously, but to a limited extent and for brief intervals only.

The blood examination is of interest and the changes are those of a secondary anemia appearing early in the disease and often before a tumor is evident. Analyses in 27 recent cases showed that in all cases leucocytosis was present, the average count being from 12,000 to 16,000, in several cases as high as 32,000, and in only two below 8,000. The polymorphonuclear cells

were increased to 80% or 90% in more than one-third of the cases. The number of lymphocytes varied, being sometimes as high as 35% or as low as 5%. The hemoglobin, on the average, was reduced to 60% although it was frequently much lower. In a case of another series it fell as low as 13% just before death. The color index, in marked contrast with that of pernicious anemia, is low, averaging .75 to .80. The erythrocytes are diminished, but are not often below 3,000,000. In some cases there is poikilocytosis and moderate polychromatophilia.

Vomiting is an early symptom in a large number of cases. It is persistent and bears no relation to the ingestion of food. Hematemesis occurs as an early symptom. The examination of the stools shows but little of diagnostic importance as a rule, but should not be neglected. Epigastric pain is a singularly variable symptom. One meets with fatal cases with large gastric growths, in which the patient has made no complaint of pain at any time, and in other cases it may be an early and constant symptom. It was an early symptom in 18 of the series of 88 cases. Tenderness of the epigastrium is commonly more or less obvious in the presence of a large mass, but it is by no means constant.

Gastric analysis is of the greatest interest in connection with carcinoma, consequently it should be made. A fairly large number of patients with gastric cancer maintain a reasonably good stomach digestion until the disease is well advanced, even to the extent of the appearance of a palpable tumor, and in not a few free hydrochloric acid may be obtained until the end. Hence the presence of free hydrochloric acid is no argument against the existence of gastric cancer. Sahli's test for free hydrochloric acid in the stomach is most ingenious, and if it proves to be reliable, has the advantage of not requiring the passage of a stomach tube. It is performed as follows: One grain each of powdered iodoform and methylene blue are placed upon a small piece of thin dental rubber dam, not over an inch square, the corners are gathered together so as to make a small bag, and firmly tied with a piece of catgut. This is then swallowed by the patient immediately after a meal. If no free hydrochloric acid be present, the bag passes on and is voided unopened with the stools, for the catgut with which it is tied is not dissolved in a neutral or alkaline medium. If, however, free hydrochloric acid and a little pepsin be present, the catgut dissolves, liberating the contents of the bag. The patient's urine is examined in about six hours and again in 12 hours and it will be found to be stained

bright blue by the aniline dye, and also to give an alkaline reaction. The demonstration of lactic acid in the stomach contents is even less reliable. In one case of this series, in which much improvement followed operation, neither acid was found in three tests. In another a trace was found in three tests.

The presence of the Boas-Oppler bacillus is too inconstant to be of any use. Tumor fragments are not only rare, but are not found early enough to be of practical value. By the term gastric dyspepsia may be included a common group of symptoms such as pyrosis, flatulency, sensations of weight, fullness or distention after eating, slight nausea, temporary ache, coated tongue, foul breath, etc. Dyspepsia occurs so frequently without cancer and often plays so little part with it that it must be concluded that it is not a necessary predisposing cause. Moreover, from what is known of the average duration of gastric cancer, it seems fair to assume that dyspepsias which have preceded the development of definite cancer symptoms by more than a year have nothing to do with the disease.

A slight grade of fever accompanies gastric cancer, at least towards the termination of the disease. Of the 88 cases of this series, it was absent in only 13 instances. It was very irregular in type, lasting several days or weeks, then subsiding. There may be periods of sub-normal temperature. The expression of carcinomatous cachexia is difficult to define in terms which are distinctive, yet in a certain proportion of cases the patient's appearance alone gives rise to a suspicion of malignant disease. The difficulty with the cachexia is its extreme variability and its lateness in becoming definite and distinguishable from that of other diseases. There are cases of gastric ulcer, especially those with pyloric tumor, which are difficult to diagnose from carcinoma, even at the time of operation, for a dense cicatricial mass about the pylorus may closely resemble a scirrhous growth. Special features which may aid in distinguishing gastric ulcer from carcinoma in the border-line cases are the greater frequency and severity of paroxysmal pain in the ulcer. The lesser degree of emaciation, and the absence of either the leucocytosis or polynucleosis which characterize cancer. As a rule in ulcer, hemorrhages are more frequent, and there may be persistent hyperacidity.

Melancholia is often accompanied by extreme emaciation and more or less gastro-intestinal disorder.

Pernicious anemia might be mistaken for malignant disease

of the stomach, especially if gastric or intestinal hemorrhage have occurred. The patient with pernicious anemia, although pale and weak, is not emaciated to any degree, and the patient's color is of a lemon yellow shade, in distinction from the dead white pallor of cancerous secondary anemia. Furthermore the blood examinations in pernicious anemia show peculiarities of relatively high color index, leucopenia instead of leucocytosis, with megaloblasts and poikilocytosis.

Having determined an early diagnosis of gastric carcinoma, or at least having determined a reasonable probability of its existence, it remains to consider the feasibility of operation. One would naturally decide against operation in cases complicated by serious cardiac, pulmonary or renal lesions, advanced arteriosclerosis, extreme anemia, the evident secondary involvement of the liver, etc. Apart from such cases are a large number in which the gastric question is the only one. Recent medical literature contains many strong arguments in favor of operation.

In an editorial in the *Journal of the American Medical Association,* May 28, 1904, the following statement is made: "Exploratory laparotomy has never been given a fair trial as a means of early diagnosis, having been practically restricted to the determination of the eradicability of the lesion. A suitable incision can be made under local anesthesia with little discomfort, practically without danger, and causing only temporary disability, and it would seem that it should be resorted to when there is a reasonable suspicion of the existence of a carcinoma."

William J. Mayo (*Journal of the American Medical Association,* June 11, 1904), wrote: "The only necessary thing for success is an early diagnosis, and this must be on clinical grounds, supplemented by early exploratory incision."

John C. Munro in the *Boston Medical and Surgical Journal,* January 19, 1905, presents a strong plea for early operation in all cases that are not absolutely prohibitive through complications or the patient's weakness.

Joseph A. Blake, writing in the *New York Medical Journal* of October 27th, 1906, states that: "The cancers of the stomach most amenable to operation are those at the pylorus, chiefly because they obstruct early. Stagnation, ever so slight, particularly if increasing and attended by visible peristaltic waves in the epigastrium, demands surgical intervention. Do not wait for tumor, diminished hydrochloric acid or dilatation." Further he states that: "In pyloric obstruction, no matter of what variety,

operation is conceded by all to be the proper treatment, for the simple reason that internal treatment at the best is only palliative and surgery affords such brilliant results."

Leriche collected recently from the literature 1300 cases of complete and partial resection of the stomach for cancer with a mortality of 20% but as most of the failures seemed traceable to errors in technic, he is disposed to take a very favorable view of the operation.

Mayo's last statistics for partial gastrectomy for carcinoma show that in 81 operations the mortality was 14.5% but in the last 25 cases it was only 4% and one-fourth of the patients were still living three years subsequent to operation, a record quite as favorable as that for most other operable cancers.

The plea of this discussion is for the earlier recognition of gastric carcinoma, based upon careful clinical study, and for early operation, *i. e.*, operation before waiting for a tumor to appear, in a much larger proportion of cases than are at present passed from the physician to the hands of the surgeon.

In conclusion I would summarize as follows the conditions which combine to make operation not only justifiable but desirable.

1. The patient's age should be within the average cancer developing period, for gastric cases, *i. e.*, between 40 and 65 years.

2. There should be a rapid and decided loss of weight and strength, without other assignable cause, such as chronic gastric catarrh, neurasthenia, mental strain or worry, or chronic general disease, such as diabetes, etc.

3. There should be evidence of some degree of stagnation of food contents in the stomach.

4. There should be failure to improve in marked degree under treatment, after a few weeks trial. With these four conditions fulfilled, exploration should be seriously considered, despite the absence of gastric pain or other marked gastric symptoms. In addition there may be:

5. A leucocytosis of 12,000 to 16,000 with polynucleosis and a moderate secondary anemia, with low color index.

6. Decided dilatation of the stomach. With these two additional factors, operation is distinctly indicated. Still further there may be:

7. Occasional attacks of vomiting, often without definite relation to food ingestion.

8. Occult or visible blood in the vomitus or stools.

9. Epigastric or right hypogastric rigidity and tenderness

on deep pressure. With these symptoms added the diagnosis can admit of practically no question. In this order of relative importance of symptoms I have purposely left until the last, as being often unreliable, (10) the demonstration of hypoacidity or anacidity, and (11) the so-called carcinomatous cachexia, which, while plain enough towards the fatal ending, is often wanting as an early definite appearance.

By thus grouping the train of symptoms and conditions in the relative order of their appearance and importance it becomes possible to recommend operation at a period when there is hope of accomplishing something more definite than mere exploration. As to what is to be gained by early operation, first, there is always the relief of uncertainty as to the extent and nature of the disease, and as to the possibility in error in diagnosis. Second, there is the possibility of complete extirpation of the growth and the prolongation of life for three or four years before a fatal and inoperable return. Third, there is the certainty not only of some prolongation of life, but of relief from much increasing suffering, and particularly from that most wretched of deaths by slow starvation, with constant nausea, regurgitation and pain from a dilated and useless stomach. Even in the later cases, in which a growth of considerable size is obvious, operation may be of advantage as a palliative measure whenever the growth obstructs the pylorus, causing dilatation. None of the post-operative cases that I have seen have suggested any cause for regret for the performance of the operation, for the late cases cannot be made any more miserable than they are under medical treatment alone, and the early cases always present at least a fair chance of very radical relief.

A Clinical Study of One Hundred Cases of Paresis

BY DR. H. H. DRYSDALE, CLEVELAND, O.

My paper, as the title indicates, is simply a dissection of the etiologic factors and a comparative study of the physical and mental manifestations of one hundred cases of paresis, more properly termed dementia paralytica or general paralysis of the insane.

The subject is divided into two classes. The first includes nineteen cases in the developmental period and the second eighty-one cases in an advanced stage of the disease.

Read before the Academy of Medicine of Cleveland, February 1, 1907

In this effort, I was jointly assisted by Drs Kathrine Moses and K. S. West, staff physicians of the Cleveland State Hospital, where the majority of the examinations were made. The series of early cases were seen in private practice.

Each patient was subjected to the ordinary neurologic and psychiatric investigation, the principal purpose in view being to determine the relative frequency and importance of the ordinary symptoms characteristic of this affliction.

Etiologic Factors		In 19 cases in the developmental stage	In 81 cases in the advanced stage
Average age at onset		36	34
Sex	Male	17	63
	Female	2	18
Nationality	American	12	47
	German	3	9
	Irish	1	0
	Hebrew	2	3
	English	1	5
	Bohemian	0	4
	Austrian	0	5
	Hungarian	0	8
Conjugal condition	Married	13	55
	Single	6	18
	Widowed		8
Color	White	19	76
	Black	0	5
Average duration (months) of present illness		11	?
History of syphilis	Acquired	9	40
	Inherited		3
Average number of years under antisyphilitic medication		1 8-12	?
Average number of years following invasion of syphilis		11	?
History of chronic alcoholism		5	15
History of chronic alcoholism and syphilis		4	13
History of neuropathic or psychopathic inheritance		3	9
History of prolonged worry and intellectual strain		4	14
Remissions		5	34

These facts unfortunately do not bring us any nearer the solution of the problem as to the exact cause of dementia paralytica. It still remains enigmatical.

One school of authorities unqualifiedly considers the late influence of syphilis as the sole disturbing element, while another school minimizes the importance of this factor and lays particular stress upon the significance of hereditary taint, prolonged worry,

mental strain, depressing emotions, chronic alcohol poisoning and trauma.

Perhaps the pronounced activity now in progress throughout the entire medical world, relative to the discovery of the definite cause of syphilis itself, may be the means of lifting the veil of darkness that so long has o'ershadowed us in this respect.

During the past four years much active research work has been done in attempting to determine the definite etiology of this incurable affliction and the painstaking efforts of Dr Ford Robertson, pathologist to the Scottish Asylums, have not only excited international interest but have stimulated individual laboratory workers to follow along these lines.

The conclusions of this distinguished pathologist, to state them briefly, are as follows:

Paresis is an infectious disease due to a specific bacillus—the bacillus paralyticans. It invades the system, by way of the alimentary canal and respiratory tract, producing a toxemia, to which the paretic symptom-complex is attributable.

He has found this bacillus in the brain, cerebro-spinal fluid, the mucous membrane of the bronchial tubes, alimentary canal, genito-urinary tract, urine and blood vessels.

In his judgment, prolonged worry, intellectual strain, alcoholism and syphilis merely precipitate conditions, for the development of which the necessary element (B. paralyticans) is already present. The bacillus is not found in individuals of healthy control, nor in patients suffering from other psychoses.

While it is greatly to be hoped that the outcome of these investigations, now almost universally conducted, will give to the world a cure for this so fatal and lamentable affliction, it would at this time be premature to accept these conclusions until something more definite has been accomplished.

If paresis is a communicable disease, it will be difficult to explain how so many physicians, nurses, and others closely associated with the insane, have escaped infection. In state institutions ten per cent of the inmates at least are paretics, and during the terminal period of the disease are more or less bedridden or in need of constant care and handling. As no unusual precautions have hitherto been advocated, it is natural to presume that the danger of repeated contact with excreta from this class of patients is almost continual, yet it is common knowledge that those employed in the care of the mentally disturbed rarely develop the disease.

Physical and Psychic Symptoms	In 19 cases in the developmental stage	In 81 cases in the advanced stage
Lost patellar reflex	5	21
Diminished patellar reflex	2	12
Exaggerated patellar reflex	8	40
Normal patellar reflex	4	8
Romberg swaying	2	22
Disturbed speech	8	69 (paretic)
Disturbed writing	9	54 (paretic)
Tremors	10	74
Analgesia	2	9
Hypalgia	4	7
Hyperalgesia	5	13
Normal pupils	3	0
Myosis	6	33 (extreme)
Mydriasis	10	44
Inequality of pupils	7	38
Irregular pupils	5	32
Sluggish pupils	12	50
Pupillary rigidity	4	21
Argyll-Robertson pupil	3	8
Optic atrophy	3	17
Insomnia	5	16
Emaciation	15	63
Deviation of tongue	1	4
Paralytic attacks	5	61
Emotional irritability	7	28
Ideomotor excitement	8	34
Mental exaltation	10	30
Obtusion of moral and esthetic faculties.	9	43
Distractibility	17	72
Paraphrasia	7	73
Mental depression	9	46
Hypochondriacal depression	7	17
Delusions of grandeur	9	38
Delusions of persecution	8	21
Hallucinations	14	32
Illusions	1	7
Defective judgment	19	81
Defective volition	19	81
Disturbance of orientation	8	64
Exaggerated sense of well being	13	62
Lapses of memory	19	81
Suicidal tendencies	4	14
Homicidal tendencies	3	9
Progressive mental enfeeblement	19	
Aphasia		5
Dementia		81

It is evident, from a study of these figures, that no two cases present the same clinical phenomena, nor does there exist, during the development period, any symptom that might be considered pathognomonic. As the disease progresses and disturbances of the higher psychic faculties are discernable, the diagnosis is practically easy.

Too much importance, however, should not be placed upon individual symptoms presented by a patient at any stage of the

disease but rather should we study the condition as a whole, including the prodromata, course and general symptomatology.

The facial expression of dementia paralytica has made a most pronounced impression upon me and it may be observed almost from the very onset. It is a difficult matter to describe it adequately but it is distinctly unlike the expression occurring in other mental disorders.

Contrary to an opinion that more or less prevails, delusions of grandeur or grandiose ideas are not by any means constant, and indeed many cases may run their entire course without a single suspicion of this expansive state. It should also be remembered that delusions of this nature frequently appear during the progress of other psychoses.

The significance of the paralytic attacks that occur in most cases at some stage of the disease is often overlooked. In some instances these attacks are so mild as almost to pass unnoticed.

A hemiplegia or monoplegia may follow these episodes but they are usually of short duration—if permanent, they are unquestionably due to a complication.

Remissions may appear at almost any period and for this reason the prognosis should be carefully guarded. During these recessions the physical and mental signs may almost entirely subside and the patient take on weight or even re-engage in business unless otherwise advised.

To recapitulate, I might say that with paresis we are confronted with a progressive, degenerative process, distinctly a psychosis and displaying a painfully insidious onset. It attacks men more frequently than women. It is particularly prevalent in the larger centres of population and seeks its victims from among the more prosperous and enlightened classes, at an age when the resisting powers should be at their highest. A few cases develop in childhood, but only rarely in the aged.

Of all mental diseases paresis is of as much importance to the general practitioner, as to those more closely associated with this line of work. It is the family adviser who is in touch with the early history of these patients and it is he who has to grapple with the problem first. His responsibility, to say the least, is at all times a grave one and much may depend upon what course is pursued.

During the developmental stage, much confusion will occur as the syndrome of this period is so misleading and we have no constant sign to guide us. In perhaps the majority of the cases the earliest noticeable change is suggestive of a functional

neurosis, and the friends of the patient conclude that he is suffering from what is frequently termed a "nervous break down." The objective signs may be transitory. He has his good and his bad days. Little by little, however, his depression increases and he becomes profoundly irritable. Happenings that formerly pleased and interested him now greatly anger him, and all the diplomacy faithful friends may exercise will not control it. He may suddenly and without provocation question the fidelity of his wife or the affection of devoted children. He may become possessed of vague suspicions that his family and business associates are conspiring to injure him. His appetite is poor; he becomes apathetic, restless and sleepless. A complete change of personality is going on; the former considerate father is now unreasonable, irritable and hateful. The immaculate man becomes careless and indifferent and the man of religious ideals loses his moral tone and becomes addicted to the use of alcohol or other excesses. He may turn bitterly against his most tried friends, seek associates he formerly shunned, and emphatically contends that his health is at its best but that his family is at fault.

Phenomena such as these may continue for some time and suddenly abate and the family may regard the patient cured. The disease, however, is a deceitful as well as a progressive one and sooner or later fond hopes are blasted by a return of the former symptoms greatly intensified. He may have a paralytic attack or his increased irritability may amount almost to frenzy. He may commit a misdemeanor or threaten the lives of loved ones, until at last it is suspected that the patient is suffering from real disease and that he is not responsible for the unaccountable change that has come over him.

On the other hand, and not infrequently, paresis may be ushered in by an attack of delusional melancholia, generally of a hypochondriacal nature, associated with hallucinatory disturbances and delusions of persecution, or it may first appear as an acute maniacal outburst, to run its usual course and clear up, only to recur and reveal the true condition. The apparent recovery being in reality a remission of the disease.

We may also encounter instances in which the physical picture is that of dementia paralytica, while the psychic manifestations are those of neurasthenia. From a medico-legal standpoint, a positive diagnosis under such circumstances is unjustifiable, for many times such patients are the successful subjects of Habeas Corpus proceedings much to the chagrin of the examining physician.

A few cases will occur in which the mental change appears suddenly. The patient may have been a prosperous business man of large responsibility and, almost without warning, he is discovered in an extremely exalted frame of mind and possessed of delusions of a most expansive nature. His generosity knows no bounds—he owns the world or he may be a king. Fortunately for the family of such a patient, his mental status is promptly recognized and he is thus prevented from squandering his possessions, which he invariably would do if not restrained.

It is difficult for many to get away from the so-called classical description of the disease. It is also hard for them to appreciate that paresis may develop without delusions, and for this reason many cases of the demented type are classified as some other form of dementia.

The physical aspects of this condition are usually suggestive while the psychic changes are manifested by distractibility, progressive mental apathy and morbid irritability. If delusions do exist they are hypochondriacal.

Of all the cases about 10% pursue an atypical course and in some instances it is almost impossible to reach a positive conclusion.

The separation of paresis developing late in life from senile dementia seems to me improbable. Cytodiagnosis will not make the differentiation. The initial period of the disease is frequently confounded with neurasthenia. The latter, however, is a functional disturbance and devoid of mental failure. Frequently, in this respect, we hear it said that the neurasthenic is continually apprehensive of becoming insane, while the paretic is controlled by an exaggerated sense of well being and does not appreciate his psychic disruption. This, I believe, is not true in every case.

The various abnormal mental states resulting from alcoholism may present a clinical picture not unlike the paretic symptom-complex. The character of the delusions and hallucinations, however, together with the physical signs, will clear the air.

In excluding cerebral lues the therapeutic test will suffice.

The average duration of the disease is about three years, death resulting from inanition (paretic marasmus) or some intercurrent malady.

1059 Rose Bldg

Mediastinal Tumor—Report of a Case with Demonstration of Specimen

BY M. J. LICHTY,
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The report of the following case may be interesting from both a clinical and pathologic standpoint. Mrs. H., aet. 27, was admitted to the Cleveland General Hospital September 28, 1906. The following brief history is of rather negative importance. Both parents are living and in fair health. Seven brothers and sisters are living and well. She herself had never been seriously ill, though she had the infections of childhood—whooping cough, scarlet fever, and measles with no sequelæ. She was married at 22 years of age and has two children living and well. She was a woman of good habits and no history of alcoholism or venereal diseases could be obtained. Fourteen months before admission to the hospital she noticed a peculiar itching of the skin of the lower extremities. This was most marked in the evening before retiring. When the skin was irritated or scratched it became sore, and was soon covered with scabs. This condition spread over the entire body. It was also noticed that the skin became yellowish in appearance. Seven months before admission to the hospital she noticed a mass in the right side of the neck, similar to small tumors or enlarged glands. Several months later it was noticed that there were similarly enlarged glands on the left side of the neck as well as in the arm pits and in the groin. These glands were not painful; and about the only annoyance the patient experienced was the gradually developing dyspnea together with some malaise and loss of weight. During the past summer she spent several months in the mountains of West Virginia, where she experienced considerable relief at first but later her condition became more aggravated. The dyspnea increased to orthopnea, there was greater failing of strength and weight, and a cyanosis of the arms, head and neck began to develop, so she returned to the city in August and was admitted to the hospital in September. Before entering the hospital there was a rather rapid enlargement of the glands in the inguinal, axillary and cervical regions. The cyanosis of the upper portions of the body became more apparent and it was associated with an edema of these parts, though there was no edema of the feet and legs. Indeed the lower portions of the body seemed to be emaciated. About this time she also noticed a peculiar bulging

Read before the Academy of Medicine of Cleveland, January 4, 1907

to the left of the sternum at the junction of the second and third ribs and in the second intercostal space. She entered the hospital hoping she might be relieved of her weakness, dyspnea and cyanosis. At this time the glands on either side of the neck were almost the size of a man's fist. They were not painful.

The diagnostic features of the case were very interesting during her entire stay of one month in the hospital, a period which terminated fatally. The orthopnea, the cyanosis, and the edema of the arms, face and neck, in marked contrast to the pallor and emaciation of the other parts of the body, were very striking. The glands were more or less separable. The skin over the entire body was rather mottled or purpuric if not copper colored. It was also easily irritated so that the patient was tempted to scratch it constantly.

The eyes, teeth and tongue appeared normal. The reflexes were negative. The heart and heart sounds seemed to be normal. The urine was usually scant, with a trace of albumen and sometimes granular and hyaline casts as well as blood and epithelial cells were present. With the exception of harsher breathing at both apices of the lungs and a few moist rales the lungs were normal. Examination of the blood showed hemaglobin 75%; red blood corpuscles 5,300,000; and white blood corpuscles 6,000. The differential count of the leucocytes, made several times, was negative. The bulging mass to the left of the sternum beneath the second and third ribs seemed to annoy the patient most, not so much on account of pain or distress as the simple cognizance of its presence.

A discussion of the differential diagnosis need not be lengthy. My first impression was that we had a case either of Hodgkin's disease or a tuberculous or syphilitic adenitis. A number of my colleagues of the hospital staff saw the case with me frequently and most of them were inclined toward the diagnosis of general sarcomatosis. Aneurism was excluded with but little difficulty inasmuch as the case presented a marked contrast to several typical cases of aneurism seen at the hospital at that time; though it has been said by good authorities that tumors of the mediastinum may present every feature of aneurism. Tuberculosis was excluded with some doubt inasmuch as a good diagnostician had seen the case almost a year before the glands were enlarged, and made a tentative diagnosis of pulmonary tuberculosis at that early date on account of harsh breathing and rales at both apices. Lues was positively excluded, in spite of a rather copper colored eruption, on account of the fact that there was much itching

where the eruption appeared, as well as a clear negative history and failure of the case to respond to mercurial treatment. The diagnosis of Hodgkin's disease did not seem at all unreasonable in spite of the fact that it is rare in the female, and in spite of the very persistent copper colored or purpuric eruption. It must be remembered, however, that purpuric eruptions are after all quite frequently found in debilitated patients afflicted with Hodgkin's disease as well as in the terminal stage of many other wasting diseases. The conviction, however, began to grow from day to day as the patient was failing rapidly that sarcoma was the most probable cause for the speedy decline. Treatment seemed to be of no avail whatever. It is greatly to be regretted that we did not secure any photograph of what seemed to me a very interesting case. The temperature and pulse were always more or less irregular and above the normal A few days before death the patient became delirious and comatose. The orthopnea as well as the edema and cyanosis of the upper portion of the body became more marked and the patient was an object pitiful to behold.

The autopsy performed a few hours after death showed a large tumor weighing perhaps one or two pounds occupying all of the superior mediastinum surrounding and compressing the afferent and efferent vessels of the heart and both bronchi. It also invaded the extreme apex of each lung and the upper portion of the pericardium. The heart was negative. The lungs were more or less emphysematous with small nodules one to three cm. in diameter at both apices. But no typical tuberculous areas were seen in any portion of the lungs. The kidney and spleen were merely congested, and the stomach and bowels were negative. The surface and parenchyma of the liver, however, were studded with numerous white shining nodules one to five cm. in diameter. It was requested that the glands of the neck be undisturbed. Glands of the axilla were unfortunately overlooked, but some of the glandular structure in the groin was removed.

The report of the microscopic examination by Dr Placak showed the following conditions:

Sections taken from the mediastinum and inguinal regions were composed of cells both large and small with very little intercellular substance and with here and there little areas of necrosis. The cells were not arranged in any definite way. These specimens had the appearance of round cell sarcoma.

Sections from the spleen were negative except for some slight thickening of the capsule.

Specimens from the lung showed large areas of necrosis with a few nuclei present at the extreme border. The areas of necrosis were distinctly limited and surrounded by a dense fibrous capsule which contained a considerable amount of anthracotic pigment. No typical giant cells were seen. The lung surrounding these areas was compressed, heavily pigmented, and emphysematous. Some of the blood vessel walls were slightly thickened with an infiltration of round cells. This was apparently an old focus of sarcoma which had undergone degeneration. Another small area of recent sarcoma was apparently composed of small and large round cells.

Specimens from the liver showed nodules of a new growth. Underneath the capsule was normal liver tissue with a good deal of pigmentation. The cells were compressed, some showing cloudy swelling and deeper in fatty infiltration and degeneration. The tumor mass was distinctly outlined, composed of large and small round cells with large nuclei, some of which were vacuolated. The intercellular substance was very scant.

It will be seen from this report that the case was one of sarcoma, possibly primary in the mediastinum. In even a slight review of the literature on the subject of Hodgkin's disease, one is impressed with the fact that Hodgkin's disease, malignancies, and tuberculous conditions affecting the mediastinum, are very likely often wrongly and loosely diagnosed. Some authors even regard Hodgkin's disease as a pure and simple tuberculous affair, while other equally good authorities have applied the same name, Hodgkin's disease, to conditions which they in reality recognize as general sarcomatosis. Probably the most exhaustive study of affections of the mediastinum was that by Hare in which he collected more than 500 cases. Almost one-fifth of this number were sarcomas. Another interesting feature in the study of these cases is to note the varying descriptions of the pathology. One can easily see that there are cases clinically diagnosed as Hodgkin's, though pathologically the descriptions are very, if not entirely, similar to tuberculosis or sarcoma. About the best description of the microscopic pathology of Hodgkin's disease in differentiation from other conditions comes from Reed through Welch's laboratory. Reed's description is clear cut and in marked contrast to the pathologic descriptions by some other observers.

In spite of this description I am quite convinced that it is often very difficult to make a positive antemortem diagnosis, and as for myself I should hesitate to be very positive before seeing the pathologic condition.

1803 East 82nd St.

The Immediate Results of Conservative Operative Measures on the Tubes and Ovaries

By HUNTER ROBB, M. D.
Professor of Gynecology, Western Reserve University

In 1904 I read a paper before the Ohio State Medical Society, in which I presented an analysis of 237 patients upon whom conservative measures had been carried out when dealing with inflammatory lesions of the tubes and ovaries. Since then we have had 182 additional cases, making in all 419 instances in which we have carried out such procedures during the past seven years. We have not included the cases of so-called cystic or cirrhotic ovaries, unless they have been bound down by marked adhesions. We believe that such ovaries are still capable of performing their functions, and the symptoms are apt to be due not to pathologic conditions in the ovaries themselves but mainly to adhesions which are binding them down.

But even when the ovaries have undergone actual inflammatory changes, or when they are occupied by tumor formations, or are bound down by adhesions so that their functions are interfered with and the necessity of operative procedures becomes imperative, we still have to decide how far we ought to go and how we can get the best results for the patient not only immediately but later on. From our experience in this line of work for more than seven years we have been able to thoroughly convince ourselves of the great advantages that may be obtained by preserving as far as possible the integrity of the pelvic organs. It is true that in a small percentage of cases (2 to 5%) after such a line of treatment has been followed, the patient will still have to undergo a second operation before she can be completely relieved of her discomfort, and it is also possible that in a few instances, by the introduction of infection, her condition may be rendered even worse. Such cases, however, in our experience are exceptional. Moreover, a secondary operation is not infrequently necessary in cases in which radical measures have been carried out, hence it is not altogether fair to blame the conservative measures for the second operation. We all have had the experience (in a small percentage of cases) of separating post-operative adhesions after carrying out radical measures. Before, however, employing the more conservative procedures we always make it the rule to carefully explain to the patient, or to her friends, that

Read before the Clinical and Pathological Section of the Cleveland Academy of Medicine, February 1, 1907

such measures will be undertaken if in our judgment at the time of the operation they seem to be advisable. But we further state, that even though we remove what seems to be the inflammatory area it may later become necessary to institute a secondary operation before relief is obtained. After this very clear statement has been made to the patient, as a rule she is perfectly willing to take a good many chances if there is a reasonable prospect that the conservation of the pelvic organs will be compatible with future health and comfort, and as we have already said, from actual observation we have found that it does not become necessary to perform a secondary operation in more than from 2 to 5% of all such cases. If an ovary or a portion of an ovary can be saved before the menopause has begun, or even during the time in which the patient is experiencing this change, we have found that not only the immediate convalescence, but also the subsequent condition of the patient is in every way more satisfactory. I am sure that all of us have seen many patients suffer more after than before the removal of diseased ovaries. In many instances their discomfort is due to the artificial change of life that is thus brought about. In some instances they may complain for five years or longer. And unfortunately during this time the addiction to morphin or some other drug habit may be formed in endeavors to relieve their distress. In our opinion the prevention of the artificial menopause is the most important reason for leaving the patient her ovaries whenever this is possible, the question of possible pregnancy following conservative measures being apparently only of secondary importance, as in the majority of these cases the patients are in an unhealthy condition not only for bringing a child into the world, but also for the proper rearing of the same. This criticism of course does not usually apply to those cases in which a tumor is present, implicating only one ovary. When the question of pregnancy is to be considered one has to deal with the condition of the fallopian tubes as well as that of the ovaries.

I will not take up your time with an account of the various methods that are employed in carrying out the conservative measures, as they are perfectly well known to every one. I would say, however, that in the light of our experience it is a wiser procedure to remove the fallopian tube whenever a pyosalpinx exists, *i. e.*, when there are macroscopic evidences of pus. When, however, the ovary is involved in an abscess formation, the same radical treatment is not always indicated, as the abscess in most

instances does not involve all of the ovarian stroma. Furthermore, macroscopic examination of many of these ovaries will show that the abscess is walled off, and the ovarian stroma beneath frequently has been invaded only to a slight extent. In such instances the abscess may be excised and the line of incision be brought together with a fine silk or catgut suture. In our series of cases the lateral structures showed macroscopically marked evidences of inflammatory disease, and there were adhesions which bound down the structures. We have only included in this analysis those cases in which we were able to carry out conservative measures, and not those in which we were obliged, on account of the technical difficulties of the operation, to leave the lateral structures on one or both sides, although removal was indicated.

The statistics in detail of the cases in our series will appear elsewhere. Here it will be necessary to refer only to certain points of interest. The majority of the patients were between 15 and 28.

The menstrual history was normal in 129, abnormal in 290 cases. The symptoms in the latter class in most instances were dysmenorrhea, menorrhagia, prolonged or irregular flow.

Of course it is well known that a previous acute infection plays a very important part in inflammatory diseases of the tubes and ovaries. In our series there were 124 cases in which infection had followed labor or an abortion.

There was a history of gonorrhea in 102 cases.

Both ovaries were preserved in 80 patients and partially so in 10 cases. The right ovary was preserved in 134 and partially in 39 cases. The left ovary was preserved in 127 cases and partially in 28 cases.

Out of the 419, 97 were pus cases. The structures saved in the pus cases were: one ovary in 62 cases, both in 16 cases, a part of one ovary in 10 cases. One tube was saved in 10 cases. Part of a tube in six cases. In the pus cases the gonococcus was the organism most commonly found.

Altogether among the 419 cases there were seven deaths, three being among the pus cases. Two patients died of peritonitis and one of intestinal obstruction. In the non-suppurative cases, one died of acute obstruction of the bowels, one from a peritonitis caused by a complicating infection from the gall-bladder. In the third and fourth cases no very satisfactory explanation of the fatal issue was determined.

Preliminary Note on the Direct Transfusion of Blood

IN

Pernicious Anemia, Leukemia, Carcinoma, Chronic Suppuration, Surgical Hemorrhage, Pathologic Hemorrhage, Tuberculosis, Surgical Shock and the Transference of Immune or Protective Bodies in Self-Limited Diseases, Illuminating Gas Poisoning, Bleeding and Transfusion in Toxemia and Drug Poisoning

GEORGE CRILE, M. D., Cleveland, O.

In the research of these various phases of the general problem of transfusion, there have been associated with me Drs Lower, Dolley, Hitchings, Lenhart and Eisenbrey.

Since the experiments of Dr Dolley and myself seem to have established the fact that normal blood of individuals of the same species is physiologically interchangeable, the time seemed opportune to extend the investigation further along practical lines. The present note is intended to cover the clinical observations up to a certain date.

1.—*Pernicious Anemia.* Through the courtesy of Drs J. H. Lowman and Wood, I transfused a patient having advanced pernicious anemia. The red count was 875,000, the hemoglobin 15%. There was considerable edema, marked hebetude, and the beginning of delirium. The transfusion temporarily improved her physical well-being and the blood picture. Acute dilatation of the heart followed. Within five days the new blood had entirely disappeared, and the disease progressed steadily until her death. Beyond the temporary improvement during and immediately subsequent to the transfusion, there was no evidence that the course of the disease was favorably modified.

2.—*Leukemia.* Through the courtesy and at the suggestion of Prof. Arneill, of Denver, I transfused a case of splenomyelogenous leukemia that had resisted a carefully planned and well executed medical course, including the X-ray. This case was first bled, then transfused. There was temporarily a marked gain in vitality, manifested by an improved well-being, increased appetite and strength. The blood picture of leukemia, however, showed no change. Though the spleen gradually became smaller, this, in the absence of improvement in the blood picture, was regarded as a coincidence. The patient died of bronchopneumonia several weeks later. In this case there was no evidence that the natural history of the disease was modified.

3.—*Carcinoma.* Through the kindness of Drs A. and S. Peskind, I had the opportunity of transfusing, for the purpose of controlling a cholemic hemorrhage, a case of cancer of the gall-bladder. The diagnosis of carcinoma was established by an exploratory incision. The natural history of the disease was apparently not modified by the transfusion.

4.—*Chronic Suppuration.* In three of my own cases and one of Dr W. E. Lower's, transfused for the double purpose of lessening the anemia and, perchance, supplying better fighting leucocytes in extremely reduced and anemic cases of prolonged intractable suppurations, there was a distinct improvement in the vitality and general well-being.. But the improved blood picture did not continue as in transfusion in certain other diseases. Neither was there a noticeable improvement in the local suppurative field. However, as a method of raising the vitality for better enduring surgical measures, transfusion was of undoubted benefit.

5.—*Tuberculosis.* In a 15 year old tuberculous patient, under the care of Dr W. W. Holliday for intractable tuberculous pleuritis and tuberculous peritonitis, a laparotomy with drainage and an aspiration of the chest were done. The course of the disease was not modified—both the abdomen and the chest refilled. After carefully considering the question of adding blood of presumably normal opsonic index by transfusion, Dr Holliday and I reached the conclusion that under the circumstances such a measure should be tried. Following the transfusion there was a marked improvement in the general state, in appetite and in strength, and the improved blood picture was maintained. The abdomen was emptied by trocar and the chest by aspiration. The abdomen partially refilled but the chest did not. The latest observations show that the disease is not progressing and the general strength and nutrition are improving. It is still too early to reach a clinical conclusion.

6.—*Pathologic Hemorrhage Accompanying Jaundice.* The patient alluded to under carcinoma was, through the kindness of the Drs Peskind, transfused on account of hemorrhage from the bowels, the uterus and the nose, as well as subcutaneous hemorrhages in many parts of the body. The hemorrhage was entirely controlled. An exploratory operation was made the day following the transfusion and no unusual hemorrhage followed. The patient lived about three months but there was no recurrence of hemorrhage.

7.—*Chronic Hemorrhage from the Bowels.* The first case of this group was sent to the hospital by Dr D. S. Hanson for the

purpose of transfusion. Hemoglobin was reduced to 15%, red count to 1,200,000 and the bleeding had been continuous for six months. There was nothing in the rectum or anus to account for it. It was intended to transfuse so as to gain sufficient vitality to perform an exploratory operation to secure the source of bleeding. The hemorrhage entirely disappeared immediately following the transfusion and there has been but a single instance of bloody stool since the operation, six months ago. She soon regained her normal health, which has since continued. Three other cases of chronic hemorrhage in many aspects similar have since then been relieved by transfusion alone.

8.—*The Transference of Immune or Protective Bodies.* The recent advances in the investigation of immunity seem to warrant the hope that in certain self-limited diseases, immune or protective substances might be transferred. With this in view as well as the protection of the donor, in a case of transfusion in a grave typhoid hemorrhage, I selected as a donor a subject who had had typhoid. In a consultation with Dr J. V. Gallagher and Dr J. V. Kofron it was concluded that it would be wise to transfuse since the hemorrhage was progressive and, despite medical measures, the patient was pulseless. The donor was young, florid, muscular and weighed 225 pounds—a splendid subject. The donee was literally flooded with blood and was brought out of clammy unconsciousness into a state of glowing jocoseness. This seemed an ideal test of the value of the immune bodies transferred.

Unfortunately, the hemorrhage recurred in two days and the patient died without affording us the opportunity of observing the role of the transferred immune bodies.

In another such instance I would advise immediate laparotomy to try to secure by a cobbler stitch the bleeding ulcers.

9.—*Shock.* (a) Prevention. An elderly patient, who for five years had been losing blood on account of so-called essential hemorrhage of the kidney and had become so anemic and reduced as to render him unsafe even for anethesia, was transfused prior to operation. His vitality was thereby raised to the point of a good surgical risk, after which he easily endured nephrectomy.

(b) Treatment. The subject of a prolonged infection and suppuration of the retroperitoneal pelvic space with multiple abscesses, laying bare the sacrum and dissecting up the rectum and sigmoid, was so anemic and reduced that it was not considered safe to give ether. Under nitrous oxide and oxygen a vaginal incision was made and the separate foci converted into a single cavity for drainage. This manipulation, though a minimum, was

immediately followed by grave shock. The pulse became imperceptible and the heart was beating at the rate of 186 per minute. During the five hours following she was under vigorous treatment. 1000 c. c. of saline solution was given subcutaneously and the usual measures pushed to the extreme, but with the result that she gradually lost and at the end of five hours was nearing death. She was then transfused. At the beginning of the transfusion the pulse could only occasionally be palpated at the wrist, the respirations were 12 and very shallow, the second heart sound was lost and the eyes were set. Under the influence of transfusion she gradually came out of this precarious state and regained consciousness, with corresponding return of all vital manifestations, until she was distinctly stronger than at the time of her entrance into the hospital. Following this there was no circulatory relapse; but her physical state being but little above that of a living skeleton, and the infection diffuse and extensive, she finally died of exhaustion 18 days later.

Summary. The therapeutic results may be grouped into three classes: positive, negative and undetermined. Among the positive results is transfusion in acute hemorrhage, which is apparently final. In pathologic hemorrhage it has proven positive in improving the patient's immediate condition, and in most instances wholly controlled the hemorrhage itself. In shock its value seems far greater than any other remedy hitherto employed by me. From the experimental standpoint it seems to be the most effective treatment of illuminating gas poisoning.

Among the negative results are transfusion in pernicious anemia, leukemia, carcinoma, strychnin poisoning and diphtheria toxemia.

Among the undetermined results may be mentioned chronic suppuration with its attendant debility and anemia, tuberculosis and the acute self-limited infectious diseases.

Of the 17 clinical cases, all were technically successful. In every instance the donee experienced a heightened vitality, and in the absence of serious organic disease the patient became buoyant, even jocose. Some had chills during transfusion or soon after, and a majority showed some febrile reaction later. In the case of serious disease, such as suppuration, pernicious anemia, leukemia, the improvement in the blood picture was not maintained, as in patients having no serious disease or infection. It is our intention to go over the field and endeavor to establish limitations as well as values and this note is but a further report of progress.

Foreign Body of Right Bronchus Removed by Aid of Bronchoscope

BY SECORD H. LARGE

Mr J. W. W., of Mansfield, age 28, was kindly referred to me by Dr C. A. Hamann, with the following history:

On September 17, 1906, while driving along the country road, he was eating peanuts. The horse gave a sudden jump, causing him to take a deep inspiration, while he had part of a peanut in his mouth. He felt something go into the trachea and was seized with a violent attack of coughing. He immediately consulted his family physician, who sent him to Cleveland. Dr Hamann diagnosed a foreign body in right bronchus.

I saw him on the 19th, two days later, and he was then having considerable pain in the right lung, aggravated on inspiration. His temperature was 99 4/5°, pulse 84.

The larynx and upper part of the trachea were thoroughly cocainized with a 20% solution. He was then placed on a low stool, the head thrown well backwards, and the tube inserted. The first tube used was too short to bring the foreign body into view. By using the longest tube I had, which is 13½ inches long, I was just able to see the foreign body. It was firmly lodged in the bronchus and was enveloped in thick mucus. On grasping it with long forceps it broke off and I had to remove it in four pieces. After its removal the pain immediately disappeared. After swabbing out the mucus I made careful search for any abrasion, but was unable to find any. Iodoform in glycerine was instilled and the patient sent to Charity Hospital.

Next morning he came to my office and insisted upon going home. He said he had no pain but was feeling a little weak.

His family physician, Dr Yoder, informs me that when he saw him the day after his return home, which would be September 21st, pneumonia had developed in the right lung. The patient is now entirely well.

As to what caused the pneumonia, I am not in a position to say, but I think that the foreign body was the exciting cause. During the entire operation no blood was seen and the patient had absolutely no pain. This is the first case of pneumonia I have had or seen, following the removal of a foreign body.

If these cases could be seen immediately after the accident, I feel confident that the danger of pneumonia following is very slight.

Foreign Body of Esophagus Removed by Aid of Esophagoscope

BY SECORD H. LARGE

Baby K., of Akron, age 27 months, was referred to me by Dr E. L. Mather with the following history:

On Friday, November 30, 1906, she swallowed a campaign button. Dr Edwin Cauffield, the family physician, was called and on examination of the throat was unable to see the foreign body. Dr Mather was called in consultation and an X-ray was taken which located the foreign body in the esophagus opposite the sternum, between the sterno-clavicular articulations. A mark was made on the chest showing its location. Dr Mather passed a probang but was unable to remove the button.

I saw the child the following day and the parents said that she had been vomiting and retching the whole night and morning.

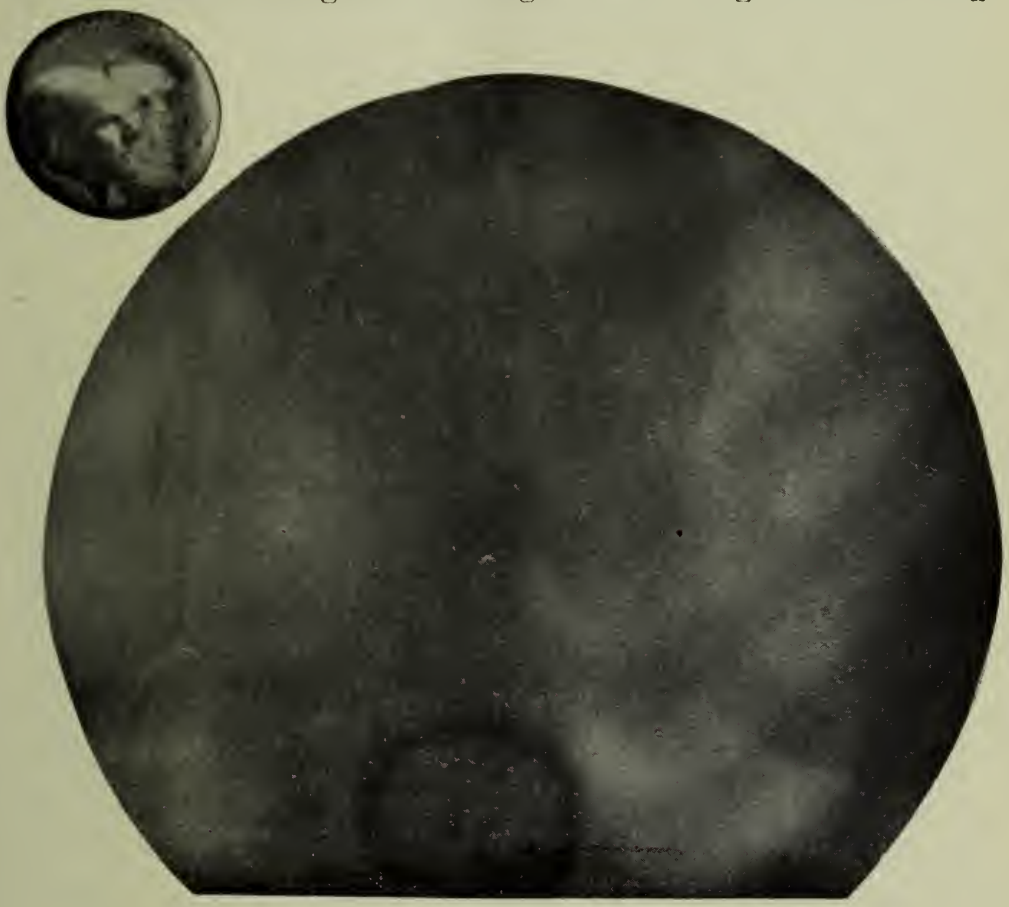

FIGURE II.

X-ray photograph showing button in esophagus with pin pointing downwards. Photograph of button, front view. Original size shown in Figure I.

Dr LeFevre made a skiagram which shows very well the position of the button.

The child was chloroformed by Dr Tarr and with the assistance of Dr Burke the esophagoscope tube was passed and with long forceps the button was grasped and removed along with the tube.

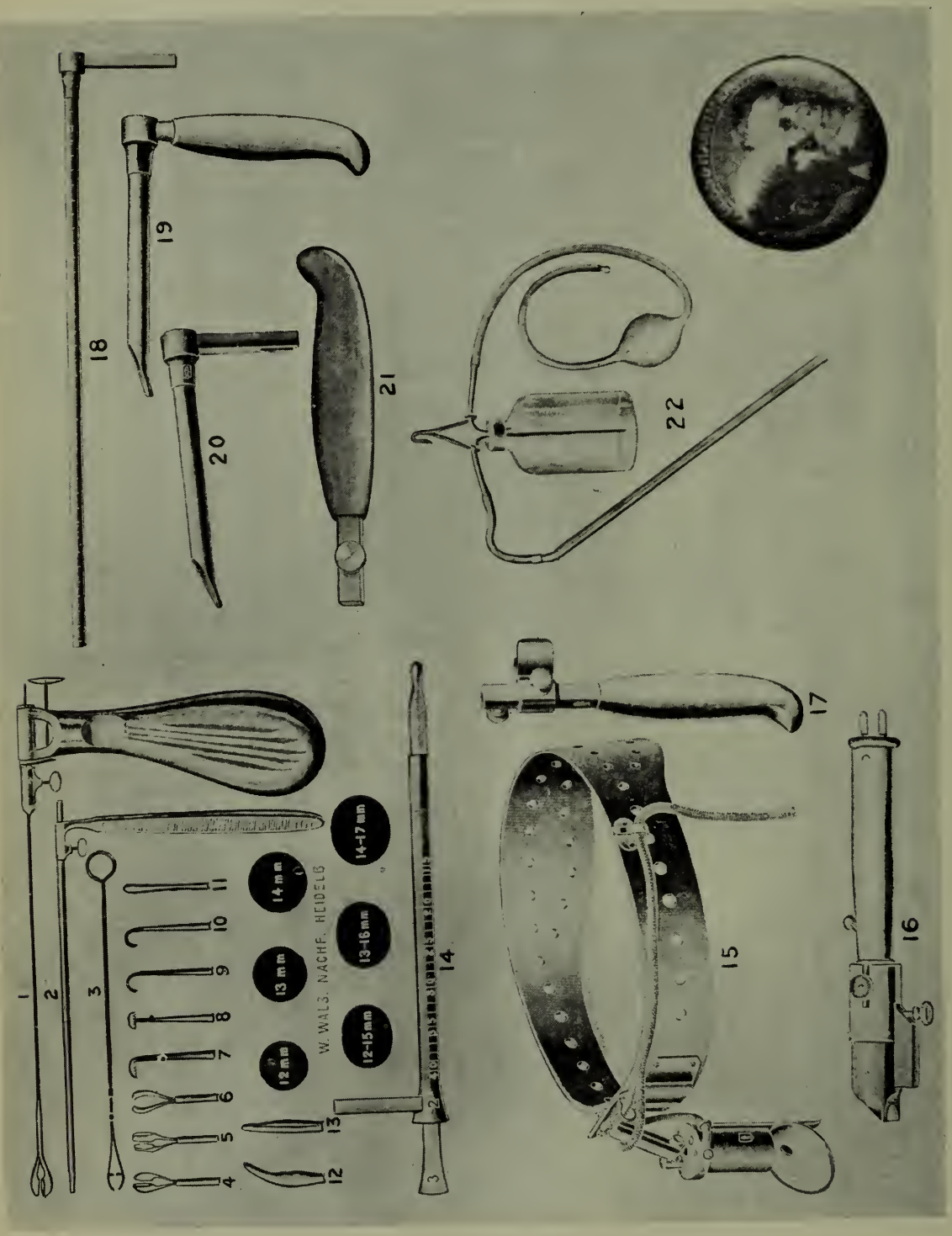

FIGURE 1.

1 to 13—Instruments for intratubal use. 14—Esophageal tube. 15—Kirstein's Electric Lamp. 16—Electroscope used for Bronchoscope and Esophagoscope. 17—Handle for tubes. 18—Tubes for Bronchi. 19-20—Kilian's tube spatula. 21—Handle for tubes. 22—Saliva injector.

One hour after the operation the child was able to be up, and, feeling quite well, went home four hours after the operation. In a letter from the parents which I received yesterday, they report the child entirely well.

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Recognition for Dr James Carroll

Of that small band of scientists associated together in the epoch-making discovery of the relationship of the mosquito to yellow fever, Dr James Carroll alone remains of the three men representing our Government. Dr Jesse W. Lazear sacrificed his life to experimental infection. Major Walter Reed was cut down just as he was reaping the reward so well deserved, the result of his unselfish devotion to science and to truth. To Dr Carroll is due, equally with his colleagues, all the honor and appreciation that our country can bestow upon him. He himself was the first to submit to an experimental infection with the yellow fever infected mosquito, and established through his own illness the truth of the fact now so well known.

Dr Carroll's service in the United States Army dates from his entrance in January, 1874, and he completed 33 years of continued service on January 21, 1907. His services in the cause of scientific medicine are too well known to need extended comment by us. In his early work, he was associated with Major Reed, whom he succeeded as Curator of the Army Medical Museum, and much of whose teaching he has also taken up.

The movement on foot to secure the passage of a special act by Congress in order that Dr Carroll may retire with a rank above that of assistant surgeon with the rank of first lieutenant in the United States Army, which he at present holds, is one which commends itself to every public spirited physician throughout the country. Born in 1854, unless aided by this special act of Congress, Dr Carroll would be forced to lose his promotion in rank by a very narrow margin. If ever there existed a suitable occasion for such action by Congress, this would seem to us to be the proper time to take such action. No reward can be too great for a man who has dared in the calm and quiet of his every day routine to risk his life to prove that which has proved to us one of the great discoveries of our time, not only scientifically but practically. In September, 1906, in an editorial appearing in the *British Medical Journal*, Dr Carroll was suggested for a share of the Noble prize. In our judgment there can be no doubt but that Congress will reward with honor, where honor is so meritoriously due.

Pseudo-Medical Articles

The time worn quotation to the effect that "a little knowledge is a dangerous thing" is well illustrated by many of the present day publications on medical and other scientific subjects by persons without scientific training. That personal bias should have no weight in comparison with the burden of evidence is clearly unknown to such authors, and the facts that they do have at their disposal are garbled to convey as far as possible the opposite to their true meaning. The literature of the "Antis" is crowded with publications of this kind, but fortunately these are for the most part written in so obviously partisan a manner as to fail to carry conviction even to their supporters. Here and there however we find someone who gains the attention of a larger body on account of his superior literary ability or his reputation in some other line, and accordingly requires a more or less active refutation. Such a man is Elbert Hubbard, editor of the *Philistine,* in the December number of which he has published a compendious article on the origin and value of vaccination, with the various dangers attendant on it. From his premises he argues that vaccination is a superstition to be placed in a list lower than witchcraft, and in the same class with black cat salve for itch, and similar remedies. The wide reputation of

Mr. Hubbard, and his capacity for plausible writing on a variety of subjects, leads Dr Kenneth Millican of St. Louis to consider it worth while to answer him in a series of articles in the *St. Louis Medical Review,* which are now published in pamphlet form and available on request. The article is notably temperate in tone, and shows a degree of information strikingly different from that of Mr. Hubbard. The latter's assertions are taken up and disposed of in detail, and the Sage of East Aurora is shown up in rather an unenviable light. His various statements and assertions are shown logically, and in the light of information to which accurate references are given, to be incorrect and very misleading, a comparatively easy matter for a writer of so much practice as Mr. Hubbard. His easy dogmatism and his positive conclusions from inadequate information lead Dr Millican to make quotations from the *Lancet,* and from Bernard Shaw, which are not out of place here.

The *Lancet* states in one place that "there has somehow arisen a curious superstition to the effect that people of ordinary intelligence, who have received an ordinary education, are capable of arriving at sound conclusions concerning questions which they have not studied, and of which the solution may turn upon data with the very existence of which they are wholly unacquainted," and in another place "the prevailing delusions concerning the value of unskilled opinion, and especially of unskilled opinion in relation to medical and scientific subjects, are largely fostered and maintained by a certain section of the press, which of recent years has begun to assume a tone of authority and knowledge concerning every question submitted to the public, and, as a rule, to display an equal and impartial ignorance concerning them all." Mr. Shaw, of whom Mr. Hubbard professes to be a great admirer, states that writers of this type are preferred by the general public, "because their high spirits are amusing, their slovenly colloquialisms familiar and intelligible, and their inveterate inaccuracy and illiteracy are matters of indifference."

Such articles and the discussions arising from them lend additional weight to the growing opinion that the tendency of reputable physicians is to keep too much in the background, and that inasmuch as the people of this present day and generation are determined to have information of some kind or other on various scientific subjects, it would be better for them to have it in a more accurate form than that in which it is obtained from the pens of writers like Mr. Hubbard. Popular articles on other

branches of science are in evidence in the magazines, with some frequency, but medical papers of this type, except where the matter is distinctly startling or sensational, are conspicious by their absence.

The Midwife Question

An extremely interesting article in the January number of *Charities and the Commons* deals with the midwife question in New York. The writer, F. Elizabeth Crowell, a trained nurse and an ex-superintendent of a hospital, investigated the matter very fully and the details furnish much food for reflection, not only to the people of New York, but to those of other cities, such as Cleveland, which possesses a large foreign population.

The custom of employing women for attendance at confinements dates, of course, from the earliest times and it is only reasonable to expect that their services will long continue to be in demand. With the advance in the science of midwifery and the improvement in results gained by a proper aseptic technic, the status and work of the midwife has not always progressed in proportion. Some of the European countries have realized this and have insisted upon the proper training and supervision of these women. Here in this country we find many of the states providing for an examination or registration of midwives, but too often are the statutes practically a dead letter and women of low intelligence, and with no training or qualifications, seem free to do this work very often with dire results.

During 1906 in greater New York, 43,843 births or 42% of the total number registered, were attended by midwives. The law requires that a midwife must possess certain qualifications and be registered with the Board of Health, but this register was found to be entirely unreliable. Personal visits were made upon 500 midwives and of these 249 were incorrectly registered and 37 were not registered at all. The great majority of them were foreigners, 138 having been born in Austria-Hungary, 126 in Italy, 111 in Germany, 70 in Russia and only 23 had been born in the United States. As regards qualifications, 201 possessed foreign diplomas of recognized value, 211 had only worthless certificates, and 85 could show no credentials whatever. The methods of practice were particularly interesting from a medical standpoint. Four-fifths of them stated that they would undertake the care and treatment of abnormal cases, in which version, for instance, might

be required. Although very nearly all claimed to use antiseptics their outfits too often belied the fact that even simple cleanliness was observed, out of 303 obstetric bags inspected but 34 were marked as first class, that is they were clean and their equipment was complete and sterile. Many of the foreign trained midwives possessed satisfactory sterilizers as required by the laws of their home country, but in nearly every case, after coming to this country, they had abandoned the use of these sterilizers as being unnecessary and troublesome.

The greatest danger and most ominous aspect of the midwives' work is their willingness to induce criminal abortion and this is not surprising when one considers their average low intelligence and poor education. Out of the 500 investigated, 176 were classified as criminal, 28 had a record of conviction, 29 others had agreed to produce an abortion upon a female detective who solicited their services, and the remainder furnished the necessary evidence in the equipment of their bags. It has been estimated that 100,000 criminal abortions are annually induced in New York City and this is probably a very conservative estimate, the concensus of opinion seems to be that the majority are produced by midwives, so that the terms "midwife" and "abortionist" are often considered synonymous. The whole article is most convincing and lays bare a most deplorable condition of affairs. It is of course impracticable to abolish them and allow only physicians to attend such cases, nor is such a step desirable, but a closer supervision of their work should be observed and an adequate preliminary training should be demanded. Many midwives of course are of a superior class and do careful and conscientious work but the great majority are below par and serve to discredit the whole number.

In Cleveland the midwife is much in evidence as is shown by the Health Office records and when our large foreign population is considered the fact is not astounding. There are good, bad and indifferent ones here as in New York and the subject might well be investigated locally as it has been there.

City Hospital

In view of the discussion in the public press concerning the condition of things in the infectious ward at the City Hospital, we are glad to be able to publish on page 138 in this issue of the JOURNAL, a copy of the letter written by Dr Hamann, a member

of the committee, and Dr Ford, Secretary of the Academy, addressed to Mr Harris R. Cooley, Director of Charities. This letter makes plain the condition of things as found by the investigating committee and shows further what steps have been taken to remedy the wretchedly unhygienic conditions found. In view of the absurd statements and allegations made by the daily press, we are very glad to call the attention of the profession to the plain statements as contained in the letter alluded to.

A Correction

In an editorial in the February issue of the JOURNAL upon the typhoid mortality of Cleveland in 1906, it was stated that the Health Office had used an estimate of 500,000 population in compiling their returns for 1906. Dr Friedrich has informed us that an estimate of 470,000 was used, while we figured upon a population of 476,152. The difference in the percentage mortality from using these figures is so slight that it does not affect the essential facts of the editorial as to the increased typhoid mortality of 1906 as compared with 1905. We regret the occurrence of this error which was due to a misunderstanding of a verbal communication from an official of the Health Office.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Acute Cardiac Dilatation: In the *American Journal of the Medical Sciences* for February, Beverley Robison considers the treatment of acute cardiac dilatation as occurring during the course of some acute infectious disease as rheumatism, pneumonia, diphtheria or influenza; next, that due to a nervous origin, and finally, that sudden cardiac dilatation following temporary physical strain in those accustomed to excess in eating, drinking or the use of tobacco. In rheumatism, the acute dilatation of the heart seems as though to a considerable degree the direct result of the action of the rheumatic poison is on the cardiac muscle itself. Its remedial treatment consists largely in the proper use of antirheumatic remedies, as salicin or the salicylates and sodium bicarbonate internally and locally blood-letting with leeches or venesection followed by application of the icebag. In this way the heart can often be notably reduced in size, or indeed completely restored to its normal size, and also to its normal strength. If, however, the treatment is lessened too much or stopped too soon, a relapse to rheumatic symptoms, and particularly to cardiac dilatation, is almost sure to occur. This treatment according to Lees should be large doses of salicylates with double the quantity of sodium bicarbonate to prevent salicylic acid poisoning. Locally, whenever there is engorgement or dilatation of the right ventricle, leeches should be

applied; subsequently the icebag should be used more or less continuously. The icebag is of service in subduing the inflammation present and in stimulating and quieting the heart. He asserts that if these methods were adopted generally, they would very greatly diminish the subsequent evil effects of acute cardiac dilatation in rheumatism and probably prevent a great amount of cardiac misery. In pneumonia when the right heart dilates and fails from its inability to overcome the pulmonary obstruction he believes that blood-letting at least in moderate quantity is essential as a rule, but prefers leeches, or wet cups locally, to the use of the lancet. In this condition of pulmonary obstruction and dilated right-heart we should beware of the preference of digitalis to the vasodilators. Rarely, if ever, should we expect benefit from digitalis, on the contrary we find rather increase of cyanosis and distension of the veins. Keep the color florid with the use of nitroglycerin, oxygen, alcohol and suitable diet. Smith has never yet seen a small thready pulse become fuller and slower from the use of digitalis, but it is true that after the distention of the right heart has been relieved by leeches or venesection, digitalis may become very serviceable in giving to a weak rapid intermittent pulse. Digitalis is also useful, in his judgment, when the heart as a whole is affected and weakened by the toxemia of pneumonia, not merely its right auricle and ventricle because of the pneumonic or pulmonary obstruction. Influenza is another frequent cause of rapid cardiac dilatation and may occur even early in the disease. In these cases, when all ordinary means fail to establish the health and the heart action remains feeble, an ocean voyage is often most beneficial. In some of these cases with rapid irregular heart and low tension a prolonged course of moderate, or even small, doses of digitalis is useful and he believes even curative.

Cocain: The *Medical Record,* for January 26, states that not long after cocain was recognized as one of the most valuable drugs in ophthalmic practice, efforts were made to overcome its toxic properties and other objectionable features, as the production of mydriasis, paralysis of accommodation, etc. A series of derivatives was the result, for each of which perfection was claimed as the ideal local anesthetic. Wintersteines, however, has shown (*Wien. Klin. Wochenschrift*) that such claims do not bear the test of clinical application as regards its use in ophthalmic practice particularly and proves that the supposed disadvantages are largely overestimated. It is admitted that cocain may exert an injurious effect on the epithelium of the cornea, and when there is a tendency to glaucoma it may also cause unfavorable symptoms. But aside from this there is very little in the character of the substitutes to satisfactorily balance these shortcomings. He concludes that while each of the numerous derivatives of cocain may have its advantages, these are not of sufficient moment to cause an abandonment of the original drug.

Scopolamin Morphin Anesthesia: M. C. Wood, Jr., in *American Medicine* for December, 1906, summarizes the comparative danger of the scopolamin morphin anesthesia. The alkaloid scopolamin is now universally recognized as identical with hyoscin and the last edition

of the U. S. Pharmacopœia, although recognizing the two names, so defines them that the same substance may be properly dispensed under either name. The statement of Schneiderlin that hyoscin and morphin are antagonistic in their action can arise only from an ignorance of the physiologic effects of the two drugs. The chief danger in morphin poisoning is of respiratory failure: hyoscin is not in any sense a respiratory stimulant and in large doses is actively depressant to this function. It is true that hyoscin dilates the pupils while morphin contracts them, but it is impossible for us to conceive what bearing this has upon the dangerous action of the drug. A study of the physiologic actions of these two drugs must lead to the conviction that the combination is an essentially irrational one. Wood summarizes 1988 cases in which this method has been tried and finds nine deaths, the mortality reaching the astounding figures of one death in 221 anesthesias. The contention that the method while not generally applicable is of great service in certain types of cases may possibly be true, although there is no evidence as to the special indications for the preference of this method over ether. Certainly it is not in cases of advanced renal disease, for every clinician will hesitate seriously before giving 0.03 gram (½ grain) of opium to a nephritic. While some authors claim it is of service in the aged, others are equally positive in their assertions that it must be especially avoided in old people. In view of the facts that the combination of hyoscin and morphin for the production of surgical anesthesia is scientifically irrational, and has yielded a mortality of over four per thousand, and that in 69% of the cases the anesthesia has been unsatisfactory, he thinks it must be either a very bold or a very ignorant surgeon who will persist in its use.

Angina Pectoris: The *New York Medical Journal* for January 22, quotes Le Moine (*Le Nord Medical*) as warning against the use in angina at the time of access, of the ordinary heart tonics such as digitalis, ergot, caffein and strophanthus. These are contraindicated when the case is one of true angina with arteriosclerosis, and resulting cardiac ischemia. These remedies all increase the hypertension which is already too high. The time to use these is when the myocardium becoming affected by sclerosis is feeble and insufficient. In the opinion of Huchard the therapeutics of coronary or aortic angina is summed up in amyl nitrite, trinitrin or nitroglycerin and sodium iodid. As the salts of potassium have an unfavorable action on the cardiac muscular fibre, potassium iodid should not be given continuously for too long a time, but should be replaced by sodium iodid. In pseudoangina where the pain is the main thing to be considered, general sedatives and hypnotics may be used. The general health and especially the diabetic or gouty element causing the angina should be considered.

Phenacetin: In the *Medical Council* for January, F. W. St. John believes that acetphenitidin or phenacetin, as it was formerly called, is the most generally useful antipyretic sedative, antispasmodic and hypnotic in the various ailments of children. In convulsions he has found it a most potent remedy. After clearing the in-

testinal tract of all irritating matter one grain of acetphenitidin for each year up to three years of age, given every two hours till effect, will in most cases prevent a return of the convulsions or greatly modify them in intensity. He also uses it in bronchopneumonia, scarlet fever and measles, but is very careful as to its use in diphtheria. In children restless at night a dose of acetphenitidin at bedtime is usually sufficient and he has found it useful in the headache and fever of cerebrospinal fever. He has never seen any depressing effect upon the heart when this drug was properly administered and never exceeds three and one-half grain doses at eight years of age; six months to a year, one-half to one grain.

Nephritic Calculi: In the *International Clinica* (Vol. IV, Sixteenth Series, 1906), Howard Lilienthal states that in renal colic if very acute and the stone is thoroughly impacted, the ordinary hypodermic of morphin will give very little relief. Even a second and third injection will often disappoint the medical attendant by their utter inefficiency to relieve the pain. The spasm of the ureter in these cases causes such intense pain that only enormous doses of morphin will make the patient comfortable. The best method of relieving the spasm of the ureter, for this is the true source of the pain, and not the traumatism of the sharp edges of a rough stone, is to give chloroform by the mouth. About a teaspoonful of pure chloroform should be quickly swallowed and followed by a small draught of water. The chloroform will cause a disagreeable strangling sensation but immediate relief from this is afforded by the draught of water. Properly speaking this is not a large dose of chloroform and only a small portion of it is really absorbed. Most of it is vaporized by the heat of the body shortly after it reaches the stomach and is belched up in the form of gas. Enough of it is absorbed, however, to afford a good measure of relief for the pain of the renal colic, and no other remedy acts so rapidly or with such certainty and efficiency. After the administration of the chloroform the patient should be put in a hot bath, and while this is being prepared, if there is any reason to believe that the stone is only engaged at the beginning of the ureter, or at the exit of the pelvis of the kidney, it is well to invert the patient, and to perform brisk bimanual massage over the affected kidney. To prevent a recurrence, a very simple method of nonoperative treatment has given remarkable success in a number of cases. In all of these the renal colic was due to the presence of a calculus and the beneficial effects were obtained by simple water drinking, having the patient take large quantities, about two quarts in a short space of time once or twice a day. He would not advise operation in a suspected case till this method has had a fair trial.

Codein: In the January number of the *American Journal of Clinical Medicine,* attention is called to codein phosphate as one of the most useful drugs in abdominal work. The phosphate is preferable to the more common sulphate on account of its free solubility,—of particular importance for hypodermic medication. It is the best of all preparations of opium because, (1) it does not check secretions like morphin, (2) a codein habit is not easily formed and (3)

it does not produce the distress in secondary nausea of other opiates. After an abdominal section when the patient complains bitterly of pain and general discomfort five centigrams (or from one-half to one grain) may be injected and repeated in an hour if necessary. It being mildly anodyne and hypnotic, the patient generally feels sufficiently comfortable after two doses, not to require a third for some hours, when the two doses one hour apart may be repeated.

Phosphorus: Alfred Gordon in *Medicine* for December, 1906, asserts that the relation of phosphorus to asthenia is a problem of great importance and we now know that the largest portion of phosphorus in the tissue is in organic combination, while its elimination in the urine and feces is almost exclusively inorganic. We can say that certain exhaustive conditions of the nervous system should be treated not only with the usual drugs appropriate for each individual case, but also by phosphorus in organic combination, as only the latter can build up tissues, and restore the daily loss of phosphorus. Most observers agree that it is not phosphoric acid but the organic combinations of phosphorus which are absorbed and utilized by the organism, and that the mineral phosphates will not replace organic phosphorus in which the animal and vegetable food is rich. He found in syphilitic cases that, while, for example, mercurials and iodids improved for a certain time the symptoms of the disease, they failed to remove or improve the asthenic condition. Phosphorus added to the other treatment showed a most beneficial effect upon the accompanying asthenia; the special symptoms of the disease itself were apparently also ameliorated. He wishes it understood that he does not attribute to phosphorus the property of ameliorating syphilitic infiltrations in the meninges or nervous tissue. He merely records the clinical fact that the phosphorus, so to speak, reenforced the well-known effect of mercurials and iodids. As to the relative value of the various organic combinations of phosphorus, the glycerophosphates appear to give the best results. Lecithin and protonuclein are the other products advised. He has, however, uniformly used the glycerophosphates and his results showed an increase in weight, an improvement in strength and mental activity, a sensation of general "well-being." It can be therefore safely said that the administration of organic phosphorus compounds aid rapid and complete assimilation and they act as a regenerator and stimulant of the normal nutrition and metabolism of cells.

Spartein Sulphate: In the *Journal A. M. A.* for January 2, Stuart McGuire believes that he has accidentally discovered in sulphate of spartein a valuable remedy for the prevention and treatment of postoperative suppression of urine. In the last five years he has lost many patients from this cause, despite the almost routine use of chloroform as an anesthetic. The cases have usually been those with preexisting nephritis, from sepsis or cholemia. Shock has not apparently been a factor as the condition would not develop for 24 or 36 hours. A patient operated on for retention of urine or for jaundice due to obstruction of the common duct, would do well for one or two days and then

become restless, listless, would develop a stupor which would rapidly deepen into coma, and die with all the symptoms characteristic of uremia. In the treatment of this condition he has tried giving water by mouth and vapor baths, cups and counterirritants, strychnin, digitalis and nitroglycerin, calomel and saline purgatives, and in one case stripping the kidney capsules with uniformly bad results. Two years ago he began empirically the use of sulphate of spartein and now has a record of six cases in which he is sure the drug was the means of saving the patient's life. Its therapeutic effect is to increase the blood-pressure, make the pulse slower and stronger and act as a powerful diuretic. Its action is manifest in 30 minutes and lasts for from four to six hours. To get results it must be given hypodermically in from one to two grain doses. Its use should not be delayed until suppression of urine exists. It should be prescribed as a prophylactic as well as a curative agent. He does not claim it is a specific or should be employed to the exclusion of other measures as purgatives, transfusions and the hot packs. He does believe, however, that it is preferable to the drugs of the digitalis type in rapidity of action, ease of administration and in efficiency of results.

Scarlet Fever: A. Franklin Royer, in the *Therapeutic Gazette* for January, summarizes his conclusions as to the value of chloral hydrate in scarlet fever after treating 800 cases with routine doses of this drug. First, chloral hydrate is of distinct value in the treatment of scarlet fever, and when used in doses of sufficient size to secure light somnolence does not seem to be a circulatory depressant. Second, chloral hydrate ameliorates nervous symptoms better than any remedy yet suggested in the treatment of scarlatina. Third, chloral hydrate allays the itching of the skin often found annoying in scarlet fever. Fourth, when chloral hydrate is given continuously during the febrile period and for some days thereafter, postfebrile nephritis appears to be less frequent. Fifth, this study would seem to justify the more extended use of chloral in the treatment of scarlet fever, and a more detailed study as to how it acts on the kidney itself.

Academy of Medicine of Cleveland

The forty-fifth regular meeting of the Academy was held at 8 p. m., Friday, February 15th, 1907, in the Assembly Room of the Cleveland Medical Library. Program: (1) An Analysis of 1,000 Cases of Appendicitis with Especial Reference to Etiology and Diagnosis, G. W. Crile, M. D.; (2) The Early Diagnosis of Gastric Carcinoma, W. Gilman Thompson, M. D., New York.

Clinical and Pathological Section

The thirty-ninth regular meeting was held at 8 p. m., Friday, February 1st, 1907, at the Cleveland Medical Library. Program: (1) Conservative Operations on the Tubes and Ovaries, Hunter Robb, M. D.; (2) Bone Grafts of the Skull, with specimens, Dudley P. Allen, M. D., (3) Congenital Stenosis of the Oesophagus, with Report of a Case, John

Phillips, M. D.; (4) A Clinical Study of One Hundred Cases of Paresis, H. H. Drysdale, M. D. W. G. Stern exhibited a case of congenital dislocation of the head of the femur successfully treated by the manipulation method. F. E. Bunts showed a specimen of large sized, rapidly growing scirrhous carcinoma of the breast removed at operation.

EXPERIMENTAL MEDICINE SECTION

The thirtieth regular meeting of the Experimental Medicine Section was devoted to Demontrations of the Experimental and Microscopic Methods of Medical Research, and was held at 7 p. m., Friday, February 8th, 1907, in the Laboratories of the Western Reserve Medical College, corner East 9th Street and St. Clair Avenue, N. E.

The Physiologic and Pharmacologic Demonstrations were given on the second floor of the Laboratory for Physiology and Bio-Chemistry.

Experiments on Osmosis, Dr Torald Sollman; Tracheal Cannula, Dr J. G. Spenzer; An Artificial Circulation Schema, Dr K. E. Ochs; The Action of the Valves of the Heart, Dr P. W. Cobb; Perfusion of the Heart by Langendorff's Method, Dr J. J. R. MacLeod; Experiments on Osmosis, Dr H. D. Haskins; Specimens of Organic Substances made by Students of the Organic Chemical Class, Dr H. D. Haskins.

The Microscopic Demonstrations were held in the Laboratory for Histology, on the first floor of the College building.

Demonstration of Apparatus:

Types of Microtomes. Camera Lucida. Apparatus for Microphotography. Mechanical Stage.

Branched Tubercle Bacilli from Sputum, Dr R. G. Perkins; A Diphtheria-like Bacillus from Throat Cultures, Dr R. G. Perkins; Branched Diphtheria Bacilli, Dr L. W. Ladd; Fusiform Bacilli and Spirochaetae of Vincent-Plaut's Angina, Dr L. W. Ladd; Pathogenic Protozoa, Dr O. T. Shultz; Embryological and Histological Preparations, Dr F. C. Waite and Dr M. W. Blackman.

Series of Entire Chicks. Complete Series of 10 mm Pig. Golgi Stains of Central Nervous System. Weigert Brain-stem Series. Paccinian, Herbst and Grandry Corpuscles. Segmentation in Cerebratulus. Chromosomes and Division Figures. Crayfish Muscle. Development of Skeleton.

St. Alexis Hospital Alumni Association

The forty-ninth regular monthly meeting of the St. Alexis Hospital Alumni Association was held at The Hollenden, on Thursday, February 7th, 1907, 8 p. m. Program: Traumatic and Post Operative Delirium Tremens, J. V. Gallagher; Surgical Treatment of Nasal Obstructions, Myron Metzenbaum; Discussion, J. E. Cogan. Annual Election of Officers.

Annual Meeting of the Middle Section of the American Laryngological, Rhinological and Otological Society

Cleveland Medical Library, 2318 Prospect Ave., Cleveland, Ohio, Friday, February 22, 1907.

Chairman, J. M. Ingersoll, M. D. Headquarters, Hollenden Hotel.

Morning Session.

1. Suppurative ethmoiditis due to traumatism; cerebral abscess; death during operation; autopsy.—J. A. Stucky, Lexington, Ky.

2. Some points in the radical treatment of chronic empyema of the antrum.—R. Bishop Canfield, Ann Arbor.

3. The indications for radical operations on the accessory sinuses of the nose.—Norval H. Pierce, Chicago.

4. Diseases of the accessory sinuses of the nose, illustrated by skiagraphs.—Wm. L. Ballenger, Chicago.

5. Report of a case of melanoma (melanotic sarcoma) of the nasal mucous membrane.—C. G. Coakley, New York.

6. Report of a case of melanotic sarcoma.—Wendell C. Phillips, New York.

7. Report of a case of mucous polypi of the nose and accessory cavities.—A. H. Marvin, Cleveland.

8. The acoustic properties of the mouth and the relation of the voice to hearing.—D. Braden Kyle, Philadelphia.

9. Two cases of extensive cholesterin infiltration of the mastoid cells. —Edward B. Dench, New York.

10. The physical examination of Cleveland public school children.— G. W. Ehler, Supervisor of Physical Training in the Cleveland Public Schools.

11. Laryngologic technic with especial reference to office practice. —Thomas Hubbard, Toledo.

12. Treatment of atrophic rhinitis with strong solutions of nitrate of silver with massage.—Geo. F. Keiper, Lafayette, Ind.

13. Atrophic rhinitis, etiology and treatment, illustrated by radiographs.—Jos. C. Beck, Chicago.

14. Further studies in Nasal Therapy.—J. A. Thompson, Cincinnati.

15. The pathological importance of the fossae of Rosenmueller in relation to the tympanum observed in otitis media catarrhalis chronica.— W. Sohier Bryant, New York.

16. Tracheoscopy and Bronchoscopy.—Chevalier Jackson, Pittsburg.

17. Hypertrophy of the pharyngeal lymphatic ring as an exciting factor in the production of epileptic equivalents.—Walter S. Daly, Ogdensburg, New York.

18. The importance of correcting pathologic conditions of the nose and throat in patients who have incipient tuberculosis.—Willis S. Anderson, Detroit.

19. Sigmoid sinus thrombosis during an attack of streptococcic tonsilitis; operation; recovery.—W. R. Dabney, Marietta, O.

20. Exhibition of serial sections of the head.—H. W. Loeb, St. Louis.

21. A speedy, safe and efficient method for the removal of adenoids. —John F. Barnhill, Indianapolis.

22. A case of papilloma of the larynx.—Wm. R. Lincoln, Cleveland.

23. An unusual case of retro-pharyngeal abscess.—M. A. Goldstein, St. Louis.

24. Exhibition of two chisels designed for the prevention of injury

to the facial nerve in the radical mastoid operation.—John J. Kyle, Indianapolis.

Officers—Wendell C. Phillips, M. D., President; 40 West 47th Street, New York City. Vice Presidents—Frank B. Sprague, M. D., Chairman of Eastern Section; Providence, R. I. John M. Ingersoll, M. D., Chairman of Middle Section; 318 Euclid Avenue, Cleveland, O. William C. Bane, M. D., Chairman of Western Section; Denver, Colorado. J. M. Ray, M. D., Chairman of Southern Section; 432 West Chestnut Street, Louisville, Ky. Thomas J. Harris, M. D., Secretary; 117 East 40th Street, New York City. Ewing W. Day, M. D., Treasurer; Westinghouse Bldg., Pittsburg, Pa.

Book Reviews

A Treatise on Surgery. In two volumes. By George R. Fowler, M. D., Examiner in Surgery, Board of Medical Examiners of the Regents of the University of the State of New York; Emeritus Professor of Surgery in the New York Polyclinic, etc. Two imperial octavos of 725 pages each, with 888 text illustrations and 4 colored plates, all original. Philadelphia and London: W. B. Saunders Company, 1906. Per set: Cloth, $15.00 net; half morocco, $17.00 net.

The publication of many text-books devoted to medicine and surgery, occurs apparently in epidemics, somewhat analogous to the epidemics seen in the periodicity of the maladies of which these various text-books treat. Within the past few months ones taste for things surgical has been surfeited by a number of works similar to that under review, as well as by two large American systems. It is, however, true that the work of Dr Fowler in no way attempts to cover the domain of surgery as exhaustively as the systems alluded to, and there can be no doubt that the average student and the average general practitioner who needs a concise and yet sufficiently exhaustive work, which may be easily and frequently consulted, will turn to the smaller practical treatise included in these two very handsome volumes of Dr Fowler's. Of this work it may be truthfully said that it is eminently practical. All theoretic and historic discussions have been avoided. It very evidently has been the author's aim to produce a treatise which could be used as a guide for every surgical procedure and yet present the accepted teaching of the day with a sufficiently complete bibliographic record. In the preparation of the text all the well known authorities in pathology and bacteriology have been consulted and the more recent advances have been made use of in the descriptions of the various pathologic conditions met with.

Volume 1 is devoted to general and regional surgery. The author adheres to the time honored custom of discussing inflammation first. He then takes up the consideration of injuries and diseases of the special tissues. We wish that the paragraphs devoted to the injuries and diseases of the nerves in this section might have been a little more full. Gunshot injuries are then considered very satisfactorily with much new information as a result of the Russian-Japanese conflict. Under the acute wound diseases are described erysipelas, hospital gangrene, infectious emphysema for which we prefer the descriptive and etiologic term "gas bacillus infection," septicemia, pyemia, tetanus and hydrophobia. After considering

chronic surgical infections as syphilis, etc., and tumors, the author takes up the question of laboratory aids in surgical diagnosis and prognosis, a subject which, in our judgment, would preferably be placed at the end of the volume. The last 300 pages of volume 1 are devoted to regional surgery, including surgery of the head, neck and thorax, and covers in an eminently practical way the steps necessary for each individual surgical operative procedure.

Volume 2 continues the discussion of regional surgery, including the surgical conditions and operations upon the spinal cord. The surgery of the abdomen and pelvic region of the upper and lower extremities and of the female pelvic organs.

Each volume contains an index of names and an index of the subject matter covered in the volume, while volume number 2 contains as well a very exhaustive general index covering the subject matter of both volumes.

It would be unjust to conclude any note of this work without calling attention particularly to the arrangement of the text by the use of heavier type and carefully spaced paragraphs, which aid so much in the perusal of the text, helping to emphasize points which it is desirable to bring out. It would be quite beyond the range of any review to do justice to the illustrations which abound throughout these two volumes both diagramatic, those illustrating instruments and the half tone plates. They are all exceptionally well done and enhance immensely the value of the work as a practical guide. The press work, typography and paper are all that the publisher's imprint implies and leave nothing to be desired.

Rhythmotherapy, or a Discussion of the Physiologic Basis and Therapeutic Potency of Mechano-vital Vibration, to which is added a Dictionary of Diseases, with Detailed Suggestions as to the Technic of Vibratory Therapeutics, with illustrative plates, by Samuel S. Wallian, A. M., M. D., Chicago. Oullette Press, 1906, price $1.50 net, postage 10 cents.

This small volume of 207 pages includes a discussion of the physiologic basis and therapeutic efficiency of mechano-vibration, including also the treatment of disease in which vibratory therapeutics are suggested as of special service. No one can deny the value of certain forms of bodily friction and manual massage as an aid in the treatment of certain diseases, and it would seem to be impossible to question the real worth of the so-called mechano-vibratory treatment which has been made so much of during the past five years, though, in our judgment, the enthusiasts for this method of treatment have been, as is so often the case, carried away by their own enthusiasm.

There can be no doubt that vibratory massage is beneficial and in many instances helpful, stimulating, as it undoubtedly does, the muscular tissues and the terminal nerve endings in a way that would be quite impossible except by some such mechanical contrivances as are seen in the latest instruments put on the market for these purposes. There is undoubtedly a very legitimate field for mechanical therapeutics and an accurate and technical classification may be made of the various types of mechanical strokes introduced in this method of treatment. That vibratory massage may under certain conditions accomplish much it would be

foolish to deny but that it can accomplish all the wonders which have been heralded as possible under its influence we as firmly deny.

As a guide for those who are using mechanical apparatus, this work is as satisfactory as any we have encountered. We do not agree, however, with many statements contained in its pages. We do not believe that gentle vibration of the diseased appendix is possible. We do not believe that rheumatic joints can be apparently made over by vibratory massage. We further question whether vibratory massage is of real value in acromegaly, adenosarcoma, amblyopia, angina pectoris, Friedrich's intestinal obstruction and a host of other conditions for which its virtues are enthusiastically extolled.

Diet in Health and Disease. By Julius Friedenwald, M. D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M. D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Second Revised Edition. Octavo of 728 pages. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $4.00 net; Half Morocco, $5.00 net.

Diet in Health and Disease by Friedenwald and Ruhrah, of Baltimore, is a well printed and arranged volume of 700 pages. It will prove of especial value to the medical hospital interne and the busy general practitioner. The former would do well to read it through entirely and would undoubtedly find it of great practical value. The latter would be more likely to refer to the rapid reference diet lists in the back part of the book, perhaps reading over in detail certain chapters, as, for example, the diet in diabetes, obesity, nephritis, constipation, pregnancy, etc., the food value of alcohol, etc., etc. A point that will appeal to every physician is that such a work as this represents the result of an enormous amount of laboratory work, often requiring very elaborate and complicated experiments, and that at the same time much of the information obtained is eminently practical and can often be made use of daily in a general practice.

The Diseases of Children, Medical and Surgical. By Henry Ashby, M. D., Lond., F. R. C. P., Physician to the Manchester Children's Hospital, Lecturer and Examiner in Diseases of Children in the Victoria University, Hon. Member of the American Pediatric Society, formerly Lecturer on Physiology in the Owens College, and G. A. Wright, B. A., M. B. Oxon, F. R. C. S., Eng., Surgeon to the Manchester Royal Infirmary, Consulting Surgeon to the Children's Hospital, Professor of Surgery in the Victoria University, formerly Examiner in Surgery in the University of Oxford, Corresponding Member of the American Orthopedic Association. Fifth edition. Thoroughly revised. Longmans, Green & Co., 39 Paternoster Row, London. New York and Bombay. 1905.

That this well known work is now in its fifth edition speaks well for the reputation it has made for itself. The first edition appeared in 1889, and in the succeeding publications the authors have brought the subject matter up to date. This volume shows additions to the text and also some new illustrations, while several of the chapters have been entirely rewritten. The fact that the authors are, the one a surgeon, the other a physician, gives a balance to the book which might be wanting if but one had written the book, orthopedic work is therefore considered much

more fully than is usually the case in text-books upon children's diseases. A very convenient appendix is included which gives a number of useful and tried prescriptions and practical points on the preparation of foods, etc. The work is much more extensive than a casual glance would indicate as the type is of small size, although perfectly distinct and clear.

Diseases of the Stomach. A Text-Book for Practitioners and Students. By Max Einhorn, M. D., Professor of Clinical Medicine at the New York Post Graduate Medical School and Hospital; Visiting Physician to the German Hospital. Fourth revised edition. New York. William Wood & Co. 1906.

On the appearance of succeeding editions of Einhorn's Diseases of the Stomach, the JOURNAL has commented on its reliability and increasing value. Since the publication of the first volume in 1896 the work has grown to one of 559 pages. A few additional subjects are considered in this edition. Among these may be mentioned his hints in regard to the proper way of eating and the use of radium in the treatment of esophageal and gastric cancer. On the latter subject he defines his methods and describes his results. Final conclusions cannot be reached, but the radium applications appear to relieve pain in most instances and sometimes to relieve the stricture in part. Some of those treated were able to take solid or semisolid food, although they had not been able to do so previously. The text as a whole has been revised with a total increase of about 25 pages over the previous (third) edition.

Books Received

Plaster of Paris and How to Use It, by Martin W. Ware, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor in Surgery, N. Y. Post Graduate Medical School. 12mo; 72 illustrations, about 100 pages. Surgery Publishing Co., 92 William St., New York City. Cloth, $1.00.

The Practitioner's Medical Dictionary. An Illustrated Dictionary of Medicine and Allied Subjects, including all the Words and Phrases generally used in Medicine, with their proper pronunciation, derivation, and definition. By George M. Gould, A. M., M. D., author of "An Illustrated Dictionary of Medicine, Biology, and Allied Sciences," "The Student's Medical Dictionary," "30,000 Medical Words Pronounced and Defined," "Biographic Clinics," "The Meaning and Method of Life," "Borderland Studies," etc.; editor of "American Medicine." With 388 illustrations. Octavo; xvi + 1043 pages. Flexible leather, gilt edges, rounded corners, $5.00; with thumb index, $6.00 net. P. Blakiston's Son & Co., Publishers, 1012 Walnut St., Philadelphia.

American Practice of Surgery, a complete system of the science and art of surgery, by representative surgeons of the United States and Canada. Editors, Joseph D. Bryant, M. D., Albert H. Buck, M. D., of New York City. Complete in eight volumes. Profusely illustrated. Volume Two. New York, William Wood & Co., 1907.

The Cleveland Medical Library

The Cleveland Medical Library will be very glad to receive reprints of any medical articles from the profession. These will be classified and catalogued so as to be readily available for reference. The loan of such a reprint from the Library would frequently obviate the issue of a large bound volume.

NEW BOOKS RECENTLY ADDED TO THE MEDICAL LIBRARY

Ralph King, Esq., through Dr Hunter H. Powell:

Edgar—Practice of Obstetrics, 1907.
Rotch—Pediatrics, 5th edition, 1906.
Carr—Practice of Pediatrics, 1906.
Wright—Text-book of Obstetrics, 1905.
Sachs—Nervous Diseases of Children, 1905.
Ballantyne—Antenatal Pathology and Hygiene, 2 Vols., 1905.
Filatov—Diseases of Children, 2 Vols., 1904.
Bainbridge & Meeker—Operative Gynecology, 1906.
Taylor—Nervous Diseases of Childhood, 1905.
Grancher & Comby—Traite des Maladies de L'Enfance, 5 Vols., 1905.
Budin & Demelin—Manuel pratique D'Accouchements, etc., 1904.
D'Espine & Picot—Traite pratique des maladies de L'Enfance, 1899.
Marfan—Sur la Diphterie, etc., 1905.
Biedert—Die Kinderernährung im Säuglingsalter, etc., 1905.
Salge—Therapeutisches Taschenbuch für die Kinderpraxis, 1905.
Vogel—Leitfaden der Geburtshülfe, 1902.
Stoeltzner—Pathologie und Therapie der Rachitis, 1904.
Ahlfeld—Lehrbuch der Geburtshilfe, 1903.
Runge—Lehrbuch der Geburtshülfe, 1903.
Biedert—Verdauungsstörungen der Kinder, 1901.
Hecker & Trumpp—Atlas und Grundriss der Kinderheilkunde, 1905.
Duhrssen—Geburtshülfliches Vademecum, etc., 1902.
Baginsky—Lehrbuch der Kinderkrankheiten, 1905.
Biedert—Lehrbuch der Kinderkrankheiten, 1902.
Henoch—Vorlesungen über Kinderkrankheiten, 1903.
Bruns—Die Hysterie im Kindesalter, 1906.
Finkelstein—Lehrbuch der Säuglingskrankheiten, 1905.
Schreiber—Die Krankheiten der Verdauungsorgane im Kindesalter, 1902.
Von Winckel—Handbuch der Geburtshülfe, 1903-1906, 7 vols.
Bumm—Grundriss zum Studium der Geburtshülfe, 1905.
Czerny und Keller—Des Kindes Ernährung, etc., Band 1, 1906.
Pfaundler und Schlossmann—Handbuch der Kinderheilkunde, 4 Vols., 1906.
Fritsch—Geburtshülfe eine Einführung in die Praxis, 1904.
Leyden und Klemperer—Die Deutsche Klinik, Bd. 7, Kinderkrankheiten, 1905.
Monti—Kinderheilkunde in Einzeldarstellungen, 3 Vols., 1903.
Heubner—Lehrbuch der Kinderheilkunde, 2 Vols., 1906.
Hochsinger—Studien über die Hereditäre Syphilis, 2 Vols., 1898.

Donated through Dr F. C. Herrick, from the Royal College of Surgeons of England:

Seven volumes catalog Museum Royal College of Surgeons.

From Cleveland Medical Journal:

About 200 numbers of journals, various.
Bishop, S. S.—The Ear and its Diseases, 1906.
Burr, C. B.—Psychology and Mental Disease, 1906.
Historic notes and Canadian medical lore, 1906.
Pickings from Pro-Vaccinist Polemics.

From Cleveland Medical Journal—Continued:
Professional opinion adverse to Vaccination.
Professional opinion adverse to Vaccination: British.
Attfield, J.—Chemistry, 1906.
Practical Medicine Series, 1906. 6 Volumes.
Overall, G. W.—Diseases of the Prostate Gland, etc., 1906.
Hirsch, C. S.—Genito-Urinary Diseases and Syphilis, 1906.

From Dr C. J. Aldrich:
Ballance & Stewart—Healing of Nerves, 1901.

From Dr W. E. Bruner:
Posey & Spiller—The Eye and Nervous System, 1906.

From S. S. Cohen:
Transactions Association American Physicians, 1906.

From Dr H. S. Upson:
Sainsbury, H.—Principia Therapeutica, 1906.

From Dr H. Robb:
Aseptic Surgical Technique, 1906.

From Dr D. P. Allen:
Annals of Gynaecology and Pediatry, Vol. 19, 1906.
Surgery, Gynecology and Obstetrics, parts of 3 vols.
Ohio State Medical Journal, 12 numbers.

From Dr H. B. Allyn:
Philadelphia Hospital Reports, Vol. 6, 1905.

From Dr S. Weir Mitchell:
Transactions College of Physicians, Philadelphia, 1905.

From Dr C. K. Mills:
Tumors of the Cerebrum, 1906.

From Dr C. J. White:
Transactions American Dermatological Association, 1906.

From Dr C. A. Hamann:
Keen's Surgery, Vol. 1, 1906.
American Journal of Anatomy, Vol. 6.
Zentralblatt f. Normale Anatomie, etc., 6 numbers.

From Dr B. L. Millikin:
Transactions American Ophthalmological Society, 1904, 1905, 1906.

From Dr J. W. Williams:
Two reprints—Pernicious Vomiting of Pregnancy; Toxaemic Vomiting of Pregnancy.

From Dr Crile:
One hundred numbers of journals, various.

From Jas. E. Newcomb, M. D.:
Transactions American Laryngological Association, 1906.

From Dr R. M. Harte:
Transactions American Surgical Association, 1906.

From Surgeon General, U. S. Public Health and Marine Hospital Service:
Public Health Reports, Vol. 21, Nos. 1-26.

From Librarian Library of Congress:
Report of the Librarian of Congress, for the year 1906.

From Dr Benj. Lee:
Report State Board of Health, Pennsylvania, 20th annual report.

From Dr F. C. Heath:
Transactions Indiana State Medical Association, 1906.

From Dr A. Jacobi:
Treatise on Diphtheria, 1880.
In memory of Ernst Krackowizer, 1875.
Aufsätze, Vorträge und Reden, 2 Vols.
About 100 Pamphlets, various.

The following new journals have been added:

Review of Neurology and Psychiatry.
Revue Mensuelle des Maladies de L'Enfance.
Jahrbuch für Kinderheilkunde.
American Journal of Orthopedic Surgery.
Long Island Medical Journal.
West Virginia Medical Journal.

New books purchased:

Fournier, A.—The Treatment of Syphilis, 1906.
Forel, August.—Hypnotism or Suggestion and Psychotherapy, 1906.
Forchheimer, F.—Prophylaxis and Treatment of Internal Diseases, 1906.
Emerson, C. P.—Clinical Diagnosis, 1906.
Welch & Schamberg—Acute Contagious Diseases, 1906.
Grayson, C. P.—Diseases of the Nose, Throat and Ear, 1906.
Hare, Caspary & Busby.—National Standard Dispensatory, 1905.

Correspondence

MR. HARRIS R. COOLEY, February 26, 1907.
Director of Charities,

My Dear Sir:—Replying to your letter of recent date to Dr Hamann, which was referred to me as Secretary of the Academy of Medicine, I have to say that I am authorized by the Council of the Academy of Medicine to inform you that at the meeting of the Council, November 13, 1906, communications were received from Drs F. W. Hitchings, Miss Upjohn and Dr C. E. Ford, of Rainbow Cottage, concerning the existence of gonorrheal vaginitis in the ward for infectious diseases in the City Hospital. After discussion a committee of two, consisting of the President and Secretary of the Academy, Drs Hamann and Ford respectively, were authorized to investigate. This committee, some days later, called upon Mr Emde, Superintendent of the City Hospital, and informed him of the communication and the request of the Academy. Mr Emde expressed great surprise and shock at the information given and gave the committee unrestricted power to investigate.

Late in December the committee visited the City Hospital and were unable, from the records there, to establish the possibility of the infection of more than one case in the institution.

At the meeting of the Council of the Academy in January, an oral report of the committee to investigate conditions in the contagious wards of the City Hospital was received from the Secretary, and after discussion it was recommended that the members of the Council who are on the City Hospital Staff, endeavor to improve hygienic and other technical conditions in that institution. This report in substance was,—that the so-called annex is an old building entirely unsuitable for the housing of contagious disease cases. Adults and children of both sexes suffering with contagious diseases of various kinds are housed in the place. There are only two bath-tubs in the building and they are unfit for hospital use. They have wooden rims soaked with water and are peculiarly fitted to transmit infection, particularly of the character known to exist. It was suggested that shower-baths be substituted for the tubbing of patients upon admission to the ward. The number of attendants was reported to be insufficient. The children were permitted to leave their rooms, wander about the hall and visit other patients, thus incurring and carrying infection. It was found that methods in use for prevention of septic infection were defective, *i. e.*, thermometers, which were sterilized by dipping in a

glass partly filled with a carbolic solution, were used for taking rectal temperatures in three cases of gonorrheal vaginitis. The methods of sterilization being wholly inadequate.

At this meeting the following letter to me from Dr C. C. Stuart, Secretary of the City Hospital Staff, was presented:

"At a meeting of the staff of the City Hospital last night, motion was made, seconded and carried, that the Academy of Medicine be apprised of the efforts being made by our staff to secure the erection of a hospital by the City for the care of contagious diseases. We have a committee of the staff who are active in pushing forward this measure and would like the support of the Academy in all manner possible in urging upon the Board of Public Service of our City, the need of such an institution. Will you kindly bring the matter before the Council today and ask for their co-operation with us."

It was moved and seconded that the Council of the Academy recommend to the Board of Public Service the advisability of erecting a new hospital for contagious diseases. Carried.

Following your request of recent date, at the meeting of the Council of the Academy held Thursady, February 21st, the following motion was passed: That a committee, of which Dr Hamann be Chairman, be appointed to investigate and compile recommendations for the improvement of the City Hospital and its service. Carried. This committee consists of seven members, whose names will be reported to you if you so desire.

Very respectfully yours,

THE ACADEMY OF MEDICINE OF CLEVELAND.

C. A. HAMANN,
Member of Committee.

CLYDE E. FORD,
Secretary.

Medical News

P. F. Eagle, of Troy, recently took a hunting trip into Texas.

H. M. Page, of Warren, who has been at Enid, Oklahoma, is at home again.

T. B. Marquis, of Lisbon, is on his way to Porto Rico, where he will spend two months.

G. F. Starr, of Van Wert, has moved his family to Nevada, where he will locate permanently.

H. S. Brown, of Niles, has been appointed civil service examiner for the Sixth Ohio District.

H. S. Newland, of Adelaide, South Australia, visited Cleveland for a week during February.

R. W. Purdy, of Bradyville, who has been sick for the past three weeks, is somewhat better.

G. S. Staub, of Dayton, who has been suffering from blood poisoning in his hand, is doing well.

H. W. Patrick and wife, of Elyria, have moved to Norwalk where they will permanently reside.

C. H. Neal, of Cardington, who has been very ill with pneumonia, was much improved at last reports.

Dr Bloom, of Youngstown, who has been ill for some time, has suffered a relapse and is confined to his room again.

H. L. Vanatta, of Sycamore, who recently went to Eagle Lake, Texas, will remain there until May 1, because of poor health.

Dr Hammond, of Wellsville, slipped on the ice while making a professional call and broke his right leg just below the knee.

William Graefe, of Sandusky, has been appointed examining surgeon by the civil service commission for the Sandusky district.

R. Harvey Reed, a former well known physician of Mansfield, committed suicide at Los Angeles, California, on January 30, by shooting himself.

Clara Cook, of Portsmouth, is back from New York City where she has just completed a six weeks' course in the New York Post-Graduate School of Medicine.

W. S. Spence and family, who moved from Germano last fall to Van Wert, are now located in East Springfield, where they will make their home for the future.

The Athens County Medical Society held is regular monthly meeting February 5. A. H. Freiburg delivered an address upon "Some Newer Aspects of Rheumatism."

A most interesting address entitled "The American Family" was delivered by Chas. A. S. Reed, of Cincinnati, at the Medical Library, on Saturday evening, February 23.

The monthly meeting of the Richland County Medical Society was held February 6. An interesting paper on "The Use of Antistreptococcic Serum" was read by M. T. Love, of Shelby.

The regular monthly meeting of the Marion County Medical Society was held February 5, with small attendance. Following the business session, A. M. Crane read an interesting paper on "Locomotor Ataxia." General discussion followed.

The regular monthly meeting of the Canton Medical Society was held in the early part of February, E. P. Morrow and C. E. Fraunfelter presiding. J. P. DeWitt read an interesting paper on "The Treatment of Typhoid Fever." H. P. Pomerene, C. C. Jones, G. F. Zinninger and E. J. March participated in the discussion.

The Montgomery County Medical Society held their meeting February 1. H. H. Hatcher read a paper on "A Plea for General Anesthesia in All Obstetric Cases." D. G. Reilly led the discussion. F. R. Thompson read a paper on "Indications for the Application of Forceps," and Hugo Maetke led the discussion. Annual report of the society showed a membership of 150.

The thirty-fifth regular session of the Lake County Medical Society was held at 8 p. m., on Monday, February 4, at Painesville. Program: "Question Papers on Medico-Legal Subjects"; "Medical Jurisprudence," R. B. Newcomb; "General Discussion on Registration, Reciprocity, Legal Fees, Duties to Boards of Health in Reporting Births, Deaths, etc., Contract Prices and Insurance Fees." J. W. Lowe, M. D., Secretary pro tem. Mentor, Ohio.

Deaths

John Ward, formerly of Springfield, died in Dubuque, Iowa, of pneumonia.

Isaac A. Myers, Shelby's oldest physician, died at his home in that city after an illness of two years.

Richard D. Morrison, 80 years old, a pioneer of Hardin County, died at his home in Patterson in January.

The Cleveland Medical Journal

VOL VI APRIL, 1907 NO 4

The Therapeutic Application of the Theories of Immunity

J. B. McGEE, M. D., Cleveland

In the practical application of serum therapy the antidiphtheric serum easily stand first. Its position is now so firmly fixed both as a curative and prophylactic agent, and its specific action rests upon so scientific a basis, that it is practically an ideal remedy within its therapeutic field. It is also an essentially safe agent as no serious results can be ascribed to its action, and it is at present the only serum recognized as official. Insofar as its use is concerned, three points seem worthy of emphasis; first, its early administration, second, the value of a large initial dose, and third, its harmless character. While an occasional death may follow its use, such an occurrence is extremely exceptional, the serum bearing no direct causal relation to such a result, except as any other agent used hypodermically might be a factor in its production. As an almost uniform condition in this connection the status lymphaticus seems to exist and Ohlmacher states that it is entirely justifiable to conclude that most, if not all, of the fatal accidents in serum therapy are examples of lymphatic sudden death.

The dosage and methods of use of the serum are familiar knowledge and require but a brief consideration. Insofar as the dosage is concerned, the child's condition rather than its age should be the index to follow, and the earlier the serum is employed, the more rapid the response, and the more complete

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Read before the Experimental Section of the Cleveland Academy of Medicine March 8, 1907

the control. It is during this period that the toxins are free in the plasma, before they have become united to the cells and hence are readily reached by the antitoxin, that we get the ideal result. Later in the disease, when they have invaded the structures and become combined with the cells, large or even enormous doses are required to abstract them and neutralize them, and in these cases, in spite of such doses, we frequently find impaired function following the cell involvement. The customary initial dose is from 3,000 to 5,000 units, or even more, according to the severity and stage of the disease, and the dose should be repeated in six to 12 hours if required. Laryngeal cases and those with decided toxemia call for large doses and frequent repetition. The amount of membrane too would appear to bear some relation to the dose required, a great extent of membrane indicating a large amount of toxin generated and absorbed. This is not always so, however, as I have seen paraplegia follow in one case, considered at the time as extremely mild, with but little deposit and that limited to one tonsil, and in which the serum was used early.

Holt's rule, certainly an excellent one, is that on the second day the dose should be twice that used on the first, and on the third, twice that used on the second if the patient's condition upon these occasions is equally severe. The serum should be used until the characterstic changes in the membrane appear and the patient's general condition improves; the state of the heart affords a better prognostic indication than the temperature. Personally, I have never given more than 12,000 units, and this was used in a child 20 months of age; but McCollum's results with enormous doses show not only the value of such, but their safety as well. The complications due to its use are few in number and minor in character. I have never seen an abscess follow its use and urticaria and joint pains but rarely; as these results are probably due rather to the serum, than to the antitoxic bodies, it would seem as though the more concentrated the serum the less the liability to such sequelæ. These disagreeable effects of the injection of the serum have recently been termed the "serum disease," with a usual incubation period of from eight to 12 days; fever is the most constant symptom, and the rash may be variable in character, while severe itching is almost universally present, the severity of the symptoms seeming to bear some relation to the amount of serum employed. Chlorid or lactate of calcium in 15 grain doses is recommended for its prevention, to be given at the time of the injection, and for several days following. I am in

the habit of prescribing an alkaline diuretic, such as the acetate of potassium, in these cases and am inclined to believe that its action as an eliminant exerts an appreciable effect in lessening the tendency to these eruptive complications. I am quite confident too that the hypodermic use of the saline solution in several very septic cases has been a strong factor in promoting recovery and averting sequelæ.

As regards postdiphtheric paralysis, it is to be ascribed to the fact that the antitoxin was not used early enough, or else was used in too small a dose to neutralize the entire amount of toxin present. While it has recently been stated that the use of antitoxin even at this late date has apparently been of aid in these paralytic cases, the usual plan followed is that of general tonic treatment.

In cases of mixed infection the injection of the antistreptococcic serum would seem advisable.

Antidiphtheric serum has been markedly successful in other diseases, notably in scarlet fever, tonsillitis and cerebrospinal meningitis; its action here, however, is doubtless due not to any specific power, but to increasing leucocytosis and possibly too by aiding toxic elimination. Attention has recently been called to the oral administration of the serum and McClintock and King have proved that the antitoxin, when given by the mouth, may be absorbed in sufficient quantity to show quite an evident antitoxic property in the blood; drugs that inhibit digestion and promote absorption were used in connection with the serum and while not so efficient as when used subcutaneously it aids decidedly against the infection and to this extent at least promises to be of value.

The antitetanic serum although a true antitoxin, and so presumably of equal efficacy with the antidiphtheric serum, has been a decided disappointment insofar as its curative influence is concerned. It is universally conceded, however, that as a prophylactic and immunizing agent, it is ideal in its action, and worthy of entire confidence. Its lack of curative power is largely due, as is well known, to the fact that when the clinical symptoms of tetanus appear, the toxin has already formed a union with the nerve cells, and the serum is practically powerless at this stage. If used sufficiently early, its control over the disease would evidently be as certain as that of the antitoxin in diphtheria in neutralizing the circulating toxin, and the poor results in the acute well-developed cases are due to its late administration.

Occasionally, however, cases of recovery under its use are reported, and the injection of heroic doses may possibly be of aid. The subdural method offers the best prospects as the antitoxin here comes more closely in contact with the nerve cells involved. In mild and chronic cases its use is certainly advisable but its most satisfactory field is that of prophylaxis affording perfect protection when thus employed. It should be freely used in any form of wound in which tetanic infection is suspected or even seems remotely possible. This is especially true, as is well known, in the various forms of injuries due to firearms, in which the local use of the dried serum is highly advocated by those who have employed it. Puerperal tetanus occasionally occurs and if in epidemic form, as might happen, would call for the prophylactic use of the serum. Antitetanic serum has as yet no standard unit and hence the dosage lacks the uniformity and accuracy of the antidiphtheric serum.

The antistreptococcic serum, although not as satisfactory clinically as was predicted at its introduction, is still regarded by the profession as, to a certain extent, of value, and is used quite extensively wherever septic infection is found. General use, however, has proved that as a practical remedy it is far inferior to the serum for diphtheria in certainty of specific power. This may be due to the fact that other organisms than the streptococcus may produce the septic condition, and over these this serum has no control. Sepsis following traumatic and puerperal cases has yielded the best results, although in erysipelas, scarlet fever and rheumatism success has been quite generally reported. In such cases it is supposed to shorten the course of the disease, to lessen complications and to reduce the temperature and pain, and its value appears to bear a direct relation to its early employment. Moser believes that the streptococcus of scarlet fever is peculiar to that disease and so uses only a serum prepared from these streptococci in its treatment. Very favorable reports have been made of Moser's serum as relieving the symptoms without collapse and if given early as seeming to prevent the serious sequelæ. In fact wherever a septic state exists it is worthy of trial, and H. A. Hare believes it probable that in certain cases of ulcerative endocarditis it is the best agent we possess. B. C. Hirst, who had formerly discarded it, has resumed its use and finds it occasionally followed by "decided and sometimes brilliant results." In all cases of mixed infection as may occur in diphtheria, pneumonia and tuberculosis, its use is indicated with

some prospect of success. It does not act as do the antitoxins but presumably by stimulating phagocytosis, although its exact method of producing its effects has not yet been determined. There is, I believe, no standard unit for this serum, and the usual dose is from 10 to 20 c. c. every eight to 12 hours, and in severe cases 20 to 40 c. c. if indicated by the intensity of the infection, and the patient's condition. It is free from toxic and disagreeable effects, and Marmorek, while placing special stress on its early use, believes that an infection may be so severe that it cannot be controlled. My personal experience, although limited, has not been satisfactory; reports as to its value are on the whole conflicting and it is a question whether in ordinary cases results under its use are much better than with the treatment usually employed. It is evidently not applicable to all forms of septic invasion and its greatest value is in cases of pure streptococcic infection. As a prophylactic some degree of success attends its use, as in certain surgical cases. The therapeutic means at our command, however, in the presence of a severe septic infection are so limited and uncertain, and the results with the serum are sometimes so satisfactory, that any such condition would amply justify its use.

The position of the antipneumococcic serum is, from a practical standpoint, on the whole rather unsatisfactory and the general opinion probably is that as a rule it exerts but little effect upon the course of the disease. Its specific claims have not been sustained, and the symptomatic treatment of the disease is at present quite generally preferred by the profession. It is probably worthy of further trial and Ohlmacher states recently, concerning a serum prepared under his own direction, that one result of its use was "the remarkable manner in which it aborted or cut short what apparently were beginning typical attacks of lobar pneumonia." It is to be hoped that further trials will prove equally satisfactory.

Of the various antituberculous sera which have from time to time been presented to the profession, all have practically been discarded except those of Marmorek and Maragliano, which are at present to some extent employed. Maragliano's serum is stated to be more suitable for chronic cases with little pyrexia, while that of Marmorek is indicated in those of unmixed tuberculosis to reduce the fever, and to aid resolution. Both of these sera are admitted to be harmless and probably aid by increasing the production of the substances conferring protective power,

and may therefore be of aid in supplementing the usual lines of treatment. Behring's tulase, while at first highly recommended, is still uncertain as to its curative properties, and is probably of more value as an immunizing agent. In tuberculosis, unlike other infections, one attack does not confer immunity, and hence it does not offer so satisfactory a field to serum therapy as the other infectious diseases.

Many other sera have been prepared and brought to professional notice, and may here be referred to. The antiplague serum is certainly of value but of little practical interest as the disease so rarely occurs in this country. The antityphoid, antidysenteric, antigonorrheal, hay fever sera and others may be dismissed as being at present *sub judice*.

Very analogous to the sera, although acting in a distinct manner, are the opsonins, which so influence the bacteria that their destruction by the leucocytes is rendered more certain. By the use of the various vaccines the opsonic index is raised and the resisting power of the individual increased. When the diagnosis is made and the opsonic index ascertained, the patient is given an injection of the special bacterial preparation, and this is repeated as frequently as is considered necessary. Stress is laid upon the fact that the vaccines should never be used during the "negative phase" as it is termed, the basic principle of the method being to administer them during the increase in opsonic power. The dose should not be repeated until the effect of that preceding it has ceased, and the minimum dose producing the desired effect should not be increased as long as its activity continues. Bunch states that if too large a dose be given or injected when the index is falling the positive phase appears very late or not at all. In cases of local disease, such as a local tuberculous infection, Wright also advises increasing the flow of blood to the part, to bring the opsonin in more direct contact with the diseased structures. Wright and Douglas summarize the principles of treatment as follows: "Isolate in pure culture the causative microorganism, estimate the opsonic power of the patient's blood to this microorganism. If the opsonic index be at or below normal, prepare and standardize a vaccine from this microorganism. Inoculate the patient with this vaccine in appropriate doses and at proper intervals as shown by a systematic estimation of the opsonic content of the patient's blood."

Under the use of the opsonic treatment tuberculosis in various forms has shown marked improvement, and Ross believes that in

incipient pulmonary tuberculosis it promises much, although in advanced cases it will probably prove of little value. In staphylococcus infections, as in severe cases of acne of long standing and resisting all other remedies, most satisfactory results followed its administration. Similar results were obtained in furunculosis, and in sycosis uninfluenced by other treatment, also in gonorrheal arthritis as well as in ulcerative endocarditis. It seems at present to be of most value in chronic and local infections and especially in those of a tuberculous character. It has also been suggested to use it preceding operation in surgical cases, to favor phagocytosis and to aid healing. In brief the opsonic theory marks a decided advance in the treatment of disease and will doubtless form an important factor in the therapy of the future.

A Bacteriologic Comparison of Milk Served in Bottles and by the "Dip" Method

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In taking steps to enforce the new Sanitary Regulations of the City of Cleveland, the Board of Health ordered that, on and after January 1, 1907, all milk offered at retail should be bottled. In order to learn what bacteriologic difference, if any, may be expected between milk handled in bottles and that dipped from the can in the ordinary manner, arrangements were made with several dealers in various sections of the city to get series of samples, each covering periods of about a week.

A careful examination of the literature on dairy bacteriology fails to show any data by which these two methods of handling milk may be compared. It therefore seemed advisable to place on record the results here obtained. Unfortunately, however, the work was taken up at a period too late to get a larger number of samples, or to cover a greater range of season. During most of the time the weather was of such a degree of temperature and moisture as to reduce the chances of contamination of milk exposed as is that in the ordinary dipping can of the average dealer.

WAGONS AND DAIRIES

Two types of wagon were in use among the dealers. One form had the modern closed top with glass front and side doors; the other had merely a folding top, which left the opened can without protection from atmospheric dirt.

In all the dairies it was customary to wash both the bottles and the cans in warm soapy water and then rinse them with warm or hot water. In no case were either the bottles or the cans said to have been sterilized.

METHOD OF SAMPLING

The samples were obtained with the understanding that they were originally from the same can, so as to insure a condition as uniform as possible at the beginning. Plates made at the time of filling the bottles would have given a better check upon the results, but such were not to be obtained under the circumstances. The bottle was carried throughout the morning delivery on the same wagon as the can from which milk was dipped for customers along the route. The "dip" sample was taken from the few pints remaining in the can after the customers had been served.

TECHNIC

The samples were plated in Conn's lactose-litmus whey gelatin (Storrs Agr. Exp. Station Report, 1902-3, pp. 84 and 91), using dilutions of 1:100, and 1:1000 in duplicate. An attempt was made to break up bacterial clumps by thoroughly shaking the sample before making the dilution and by thoroughly agitating the 1:100 dilution. The 1:1000 dilution, which was made from the 1:100, was agitated merely enough to insure thorough mixing.

The plates were counted on the third day, and the average taken. The number of liquefying and acid producing colonies were noted, and in each case the averages expressed in percentages. This was to determine if the possible difference in numbers of bacteria was due to any particular class of organisms.

RESULTS

The results are arranged according to dealers so as to show the local influences bearing upon each series of samples.

The "High Sample" column represents the percentage of difference between the two samples expressed in terms of the lower sample.

DEALER A.

A closed top wagon was used on this route. The territory covered was in a residence section, and principally along paved streets. The weather was dry, and at times dusty, with occasional high winds.

Date	Sample	No. of Colonies per C. C.	Liquefiers	Acid Colonies	Higher Sample
Nov. 21.	Bottle	893,000	.....	.....	.....
	Dip	938,000	.....	.....	5.00%
Nov. 22.	Bottle	5,943,000	0.21%	.....	.....
	Dip	8,563,000	0.24	.....	44.00%
Nov. 23.	Bottle	51,800	6.80	36.00%	.....
	Dip	923,000	27.00	0.27	1,486.00%
Nov. 24.	Bottle	34,000	0.00	0.00	.....
	Dip	270,500	2.70	3.36	695.50%
Nov. 26.	Bottle	70,000	20.50	12.14	.....
	Dip	139,000	19.70	6.11	98.50%

In each case the "dip" sample contained the greater number of bacteria

DEALER B.

This dealer used a folding top wagon. His route was in a rather dirty, smoky, factory district, with many unpaved streets. The weather was wet during almost the entire period which these samples represent. There was some rather high wind at times, but the temperature was usually not much above the freezing point.

Date	Sample	No. of Colonies per C. C.	Liquefiers	Acid Colonies	Higher Sample
Dec. 3.	Bottle	2,329,000	1.20%	0.15%	.....
	Dip	2,508,000	1.70	0.00	7.60%
Dec. 4.	Bottle	7,262,000	0.45	0.99	7.34%
	Dip	6,765,000	0.54	1.48	.....
Dec. 5.	Bottle	1,381,000	0.06	23.36	.....
	Dip	1,386,000	0.26	12.33	0.36%
Dec. 6.	Bottle	558,000	5.37	25.98	.....
	Dip	619,000	2.26	31.01	10.93%
Dec. 7.	Bottle	806,333	1.77	36.68	21.30%
	Dip	673,000	0.84	67.23	.....
Dec. 8.	Bottle	558,000	0.00	8.96	.....
	Dip	766,000	0.13	6.26	37.27%

In two of the six sets the bottle sample was higher than the "dip."

DEALER C.

In this case a folding-top wagon was used. The route was located in a rather clean residence district, and mainly along paved streets. The weather, during the greater part of the time, was wet and cold; with high wind at times.

Date	Sample	No. of Colonies per C. C.	Liquefiers	Acid Colonies	Higher Sample
Dec. 4.	Bottle	4,045,000	2.44%	.....	.....
	Dip	9,159,000	0.45	.....	126.42%
Dec. 5.	Bottle	12,600	4.00	48.41%	.....
	Dip	18,100	0.55	48.20	43.65%
Dec. 6.	Bottle	33.600	0.00	22.62	.....
	Dip	54,000	0.18	83.33	60.71%
Dec. 7.	Bottle	20,000	5.00	25.00	.....
	Dip	140,000	0.71	27.14	600.00%
Dec. 11.	Bottle	108,600	1.47	67.03	.....
	Dip	137,800	11.39	63.14	26.85%
Dec. 12.	Bottle	64.466	11.22	48.70	.....
	Dip	72,100	5.36	17.47	11.84%

In each case the "dip" sample contained the greater number.

DEALER D.

The milk was delivered in a closed-top wagon. The route was in a business-residence district, with well paved streets but a somewhat grimy atmosphere. There was very little rain during the first three days, but considerable on the last two days. There was also a rather stiff breeze during the first two days.

Date	Sample	No. of Colonies per C. C.	Liquefiers	Acid Colonies	Higher Sample
Dec. 11.	Bottle.....	50,000	23.33%	16.66%	.....
	Dip	321,000	4.67	73.83	542.00%
Dec. 12.	Bottle.....	18,600	5.73	26.35	.....
	Dip	93,266	15.61	33.16	401.43%
Dec. 13.	Bottle.....	43,533	1.68	55.26	.....
	Dip	479,533	3.85	96.15	908.84%
Dec. 14.	Bottle.....2,724,000		6.75	90.00	.....
	Dip 2,754,000		5.35	65.57	1.10%
Dec. 15.	Bottle.....	107,666	34.05	22.07	.....
	Dip	137,600	13.37	12.52	27.81%

DEALER E.

A wagon with a closed top was in use here. The route was in a residence district and principally along paved streets. The weather during this period was wet and, with the exception of the first two days, the ground was covered with snow.

Date	Sample	No. of Colonies per C. C.	Liquefiers	Acid Colonies	Higher Sample
Dec. 14.	Bottle.....	152,933	20.05%	51.00%	4.51%
	Dip	146,333	30.12	33.39	.....
Dec. 17.	Bottle.....	114,133	0.73	74.60	.....
	Dip	168,733	0.06	89.00	47.80%
Dec. 18.	Bottle.....	12,466	35.50	41.70	126.65%
	Dip	5,500	40.00	29.00	.....
Dec. 20.	Bottle.....	42,500	45.88	50.58	24.50%
	Dip	34,133	40.33	40.43	.....
Dec. 21.	Bottle.....	34,366	41.80	26.47	.....
	Dip	108,000	70.37	34.25	214.29%
Dec. 24.	Bottle.....	144,400	6.48	36.01	51.68%
	Dip	95,200	1.19	78.64	.....

Four of the six sets from this dealer show a higher percentage of organisms in the bottle than in the "dip" sample.

DEALER F.

This dealer, located in the same district as dealer E., used an open wagon. The weather conditions were practically the same as in the previous case.

Date	Sample	No. of Colonies per C. C.	Liquefiers	Acid Colonies	Higher Sample
Dec. 20.	Bottle.....	78,333	8.51%	45.95%	47.79%
	Dip	53,000	70.75	10.34	.....
Dec. 21.	Bottle.....	192,033	6.45	21.69	.....
	Dip	206,000	21.52	10.51	7.27%
Dec. 22.	Bottle.....	180,500	58.72	13.57	.....
	Dip	470,000	51.06	8.29	160.38%
Dec. 26.	Bottle.....	11,533	0.17	66.66	.....
	Dip	62,000	33.06	29.83	437.58%
Dec. 27.	Bottle.....	37,133	3.14	70.91	14.72%
	Dip	32,366	12.77	45.83	.....
Dec. 28.	Bottle.....	27,200	48.97	21.50	.....
	Dip	111,000	50.90	33.33	336.40%
Dec. 29.	Bottle.....	53,166	37.61	10.03	.....
	Dip	166,666	40.08	2.18	213.48%

DEALER G.

A wagon with a closed top was used on this route. The territory covered was mostly in a clean, well paved residence district. The weather was wet; the ground being covered with snow during the entire period.

Date	Sample	No. of Colonies per C. C.	Liquefiers	Acid Colonies	Higher Sample
Dec. 25.	Bottle.....	42,433	4.17%	60.88%	.....
	Dip	88,933	9.60	41.22	109.58%
Dec. 26.	Bottle.....	49,000	24.28	42.58	.....
	Dip	93,266	13.43	51.50	90.34%
Dec. 27.	Bottle.....	109,533	15.70	30.98	.....
	Dip	149,966	8.83	49.10	36.46%
Dec. 29.	Bottle.....	577,800	19.03	65.45*	237.63%
	Dip	171,133	28.71	8.02	.....
Dec. 31.	Bottle.....	30,800	49.35	24.02	.....
	Dip	669,000	31.54	56.35	117.02%

*The high percentage of acid colonies present in this sample and the low percentage in the corresponding "dip" sample suggests very strongly the possibility of its being older; or that it received some unusual contamination.

METEOROLOGIC INFLUENCES

These results, when compared with the local observations of the United States Weather Bureau, are suggestive. In the case of dealer A., the total rainfall during the five days preceding and including Nov. 21 was 1.18 inches, an amount sufficient to clear the atmosphere of dust and dirt. The result was that the difference in the number of bacteria in the two samples was only 5%. On the 22nd there was no rain, but the day was characterized by winds sufficiently high to dry the ground and raise the dust. The difference on this day was 44% more bacteria in the "dip" sample. The effects of this drying wind, however, are more marked on the following day, Nov. 23, when the difference was 1,486% more in the "dip." On the 24th, a clear day with a rather stiff breeze, the difference was nearly 700% more in the "dip." On Nov. 26, with .12 inch of rain, the percentage of difference fell to 98.5% more in the "dip."

On December 11 and 12, both characterized by high winds but only a trace of rain on the 11th, dealer D., peddling in a somewhat grimy business district, had differences of 542% and 401% respectively; while dealer C., serving along the paved streets of a rather clean residence section about five miles distant, had differences of but 26.85% and 11.84% respectively. On December 13th, a day similar to the 11th and 12th, D. had over 900% more bacteria in the "dip" than in the bottled milk. On the 14th, with .22 inch of rain, D's difference fell to 1.1%; and on the 15th, with .27 inch rain and snow, it was less than 28%.

On the other hand we find that on December 7, after a week of daily rain, but with exceptionally high winds on the 6th and 7th, dealer B., in a factory district with many unpaved streets, had over 21% more bacteria in the bottle than in the "dip" milk; while dealer C., in the paved residence section, had 600% more in the "dip" than in the bottle.

While it is possible in several other instances to find "dip" samples which were two to three hundred percent higher than the corresponding bottle sample, for reasons to be given later, they were not considered as having the same significance as those with a greater number of organisms and a higher percentage of difference.

GENERAL DISCUSSION

It is interesting to note in the case of dealer E., that in four of the six sets of samples the greater number or organisms was found in the bottle sample. While the difference was small in every case, and could be accounted for by possible contamination from the bottle, it must be said of the dealer that the bottles, as well as all other utensils, were apparently handled with as much care as was observed with any of the others. It is also to be noted that the atmospheric conditions were such as to seem more favorable to milk exposed in an opened can than they were in some of the other cases. On the other hand, samples from dealer G. were taken during weather which was rather more favorable than in the case of dealer E.; but, with one exception, the lowest "dip" sample was over 36% higher than the bottle sample.

In the 40 samples of "dip" milk examined the average number of bacteria was found to be 36.94% (37%) higher than the average in the same number of samples of bottled milk. The greatest difference found in any one instance was that of a "dip" sample which was 1,486% higher than the corresponding bottled sample. The least difference was that in which the "dip" sample was 0.36% higher than the bottled sample.

In nine of the 40 cases the bottle sample was found higher than the "dip" sample. These samples, with one or two exceptions, contained either a very small number of bacteria, or gave a low percentage of difference.

In 39 sets of samples the number of liquefiers averaged 14.21% in the bottle and 17.21% in the "dip" sample; making a difference of 3% more in the latter. The percentage was found to be higher in the "dip" in 22 of the 39 samples, or 56%.

In 37 sets of samples the acid colonies averagd 35.7% in the

bottle and 35.8% in the "dip"; a difference of 0.1% more in the latter. The bottle was found to contain the higher percentage of acid colonies in 21 of the 37, or in 57% of the samples examined.

The same sample was found to contain the higher percentage of both liquefiers and acid colonies, eight times in the "dip" sample, and six times in the bottle sample.

From this we find, that in the two methods of handling milk, there is very little difference in the percentage of putrefactive and lactic organisms present in either case. The "dip" method seems to have been slightly more favorable to the putrefactive organisms, while the bottle seems to have been favorable to the lactic organisms. The data at hand do not warrant drawing any conclusions as to whether or not this is more than a mere coincidence. While the relative proportions of the two classes of organisms may differ widely in individual samples, on the average the quality of organisms remains practically the same in milk handled by either method.

It is perfectly reasonable to expect that milk handled by the "dip" method would contain the greater number of bacteria; and that the difference is due to germ-laden matter gaining access to it when the can is opened to serve customers. However true this may be, we should not overlook the possibility of bacterial clumps being broken up in the can by the agitation and frequent stirring which the milk receives when customers are being served. This does not occur in the bottle. Even though an attempt was made, at the time of plating, to break up these clumps as much as possible, it must be admitted that the sample from milk so frequently and thoroughly agitated would have the clumps more perfectly broken up than one which was not so stirred. It does not seem possible, however, that this would account for the difference in those samples which contain tens or hundreds of thousands of colonies, and which also show a difference of several hundred percent.

Again it must be remembered, that, as dairy bacteriologists are well aware, it is possible to obtain widely different results from separate samples taken from the same can of milk. While this may account, in part, for the difference; and may have significance in some of the high bottle samples; it does not account for the greater number occurring so frequently in the "dip" samples.

In conclusion, it must be said that the results of this work support the theory that milk served by dipping from the can contains a greater number of bacteria than that handled in bottles.

Also, that this excess can be acounted for, in part, by contamination from dust and organic matter which drops into the can when opened to serve customers. It is a well known fact that such matter coming from the streets of our large cities is much more liable to contain particles of dried expectoration laden with tubercle and other bacteria, than it is to consist of pure sand. The number of pathogenic organisms transported in this manner cannot easily be estimated.

On the other hand, consumers who strenuously object to receiving milk in bottles usually have good reasons for their objections. When we remember that the bottles are left in the homes of all customers, where cleanliness and health, or filth and disease are represented in their various forms; and when we recall the frequency with which these bottles are indefinitely retained in many homes, usually among the more filthy and carelessly regulated, where they are often applied to uses which have been known to range from that of a preserve jar to those unmentionable, or have been allowed to stand, without rinsing, until their putrefactive odors become a nauseating stench, and are then returned to the dealer, who may sometimes be a man with only vague ideas of cleanliness, it is not surprisisng that protests are offered.

With these facts before us, the choice between the "dip" or bottle method may seem to be a matter of selecting the lesser of two evils. It is practically impossible to regulate in any effective manner the atmospheric contamination of milk in a can which, under all conditions of weather and surroundings, must be opened from time to time on the streets. On the other hand, it seems possible, by close inspection, to enforce careful washing and sterilization and thus reduce to a minimum the conditions mentioned in regard to bottles.

SUMMARY

In the average of 40 samples the "dip" milk was found to contain 37% more bacteria than that in the bottles.

The "dip" milk contained the greater number of bacteria in 77.5% of the samples examined. Sixteen samples were over 50% higher, and of these, eight were over 300% higher than the corresponding bottled sample.

The bottled milk contained the greater number of bacteria in 22.5% of the samples examined. Of these but three were over 50% higher than the "dip"; the highest being 237.6%.

Dry weather, with a stiff breeze or wind during delivery, usually resulted in an increase of several hundred percent in the bacterial content of the "dip" milk over that of the same milk which was served in bottles.

Biographical Notes on Percival Pott

By CLYDE L. CUMMER

It seems strange that so little should have been written regarding the life of Percival Pott. Few biographies are to be found in the literature, notwithstanding that his name is a part of our surgical nomenclature and is daily on the tongue of the practitioner. This fact must serve as an apology for the appearance of this sketch, which is at best a mere compilation of data gleaned from the few references obtainable.

The purpose of this paper is, not only to give some idea of Pott's life, but also to show how his personality affected his own career and even the entire profession of his day and of after years. In doing this it may be pardoned if his personal attributes are described somewhat fully, for it is necessary to touch upon them to some extent to show that the same general characteristics must dominate a man's professional career and his individual life.

Pott was born in London in 1713. His father died shortly after his birth leaving his mother with quite inadequate means. Fortunately for the profession, a distant relative, Dr Wilcox, then Bishop of Rochester, took the subject of this sketch under his kindly patronage. He was sent to a classical school in which "his quick conception, guided by the care and solicitude of his mother, improved and afterwards cultivated into critical accuracy, served as the basis of his preparation for his life's work." It is pleasing to note that the affection and care which his mother bestowed upon him were well rewarded by him throughout her life.

From the interest which Dr Wilcox had taken in young Pott it was presumed that he would enter the church in which he would have had some hopes for preferment. However, he was strongly determined to devote himself to the study of surgery and his resolve could not be shaken. Accordingly he was apprenticed to Mr. Nourse, then Surgeon to St. Bartholomew's Hospital and one of the few men who lectured on anatomy in those days. At this time Pott was but 16 years old and was at first employed in preparing subjects for demonstration. When 22 he became an active practitioner, taking a rather "high rented" house as his biographers say. After some nine or ten years of private practice he was appointed one of the surgeons of St. Bartholomew's Hospital where he served, as he said, "man and boy," for fifty years.

When 43 years old he fell from his horse, fracturing his leg, so that the bone protruded from the wound. This accident occurred during the winter and as he lay on the cold pavement waiting until the chairmen arrived to convey him to the hospital he evolved a scheme whereby he could be carried horizontally. He had a door purchased to which the chairmen's poles were nailed and so he was carried across London Bridge to St. Bartholomew's. The consulting surgeons considered his case desperate enough to require amputation and indeed Pott himself had consented. The instruments were prepared and all was ready but the operation was prevented by the arrival of his old preceptor, Mr. Nourse, under whose direction the bone was replaced. The old accounts explain most solemnly that the fortunate termination of the case was due to the fact that the bone had made its exit some distance from the fracture, "so that when it was returned into the proper place a sort of valve was formed which excluded air." This injury was doubtless a most fortunate one for it furnished Pott the leisure in which to write his work on Ruptures, and in this way was demonstrated his marked ability as an author.

As further evidence of the scope of his influence, it may be said that he gave courses of lectures at his home which were said to have been excellent. Among his students was the famous John Hunter. At the age of 51, Mr Pott attained the honor of a Fellowship in the Royal Society. At the time of his election he presented to the Society a case of hernia of the bladder "including a stone of unusual nature." Among other distinctions, he received the diplomas of the Royal College of Surgeons of Edinburgh and the Royal College of Surgeons of Ireland. He died at the age of 70.

The biographers portray Pott's character as a very pleasing one. He is pictured to us first as a scholar, fond of the classics, a great reader, blessed with excellent memory and judgment. His mind was filled with the material for interesting conversation, and this, together with his geniality and pleasant address, distinguished him among men of culture and attainments. In this way he gained a large circle of friends. According to his contemporaries, "he was the principal author of that simplicity which distinguishes our present practice from that of our ancestors," and "he had acquired the faculty of speaking readily and with incredible perspicuity and correctness and with a most harmonious and expressive elocution." In the stilted phrases of the time he

was described as "elegant and graceful in person, manners and deportment. He was, in the relations of husband and father, inestimable in private life."

Certainly it would seem that surgery as then practiced needed a man of his character. This branch of the profession seems to have fallen into very bad repute during that period, and it is claimed that at one time, when the army was in need of surgeons, all London was scoured and only 11 could be found. This disreputable standing evidently was deserved for we are told that the operators frequently did more harm than good by their often brutal interference. They were ignorant of anatomy and physiology and possessed clumsy and inefficient instruments. In addition to this the character of the surgeon of the day was painted as rather savoring of the heartless and bombastic. It was considered "high treason" for a surgeon to affect any knowledge of the theory and practice of medicine. Even in surgical cases the physician only was supposed to "regard the febrile symptoms, the state of the bowels and the pulse."

However, during Pott's period, great discoveries in anatomy were made by Morgagni, Valsalva and Cowper. The progress of culture, moreover, gradually influenced the practice of surgery so as to direct it into the rational system favored by Pott. His professional endeavors really consisted in attempting to place surgery on a scientific basis by improving the surgeon's knowledge of anatomy, physiology and pathology, by perfecting instruments and by improving the surgical code, as surgical technic was then termed. As might be expected from an insight into his character he also attempted to make it a more gentle and merciful art than it had been in the past.

In evidence of his exactness as a clinical observer, it is interesting to note his own description of Pott's fracture,* a description so complete that little could be added by the modern writer. He first calls attention to the leg of the skeleton. "The fibula is a small and slender bone yet the support of the ancle depends upon it," he observes. "Its lower extremity is considerably below that of the tibia and is held firmly by strong and inelastic ligaments to the tibia and the astragalus, the bone of the tarsus which is principal in forming the ankle joint. Further, the lower extremity of the fibula has in its posterior part a superficial sulcus for the lodgement and passage of the tendons of the peroneal muscles which are bound down by a ligamentous capsule

*The Chirurgical Works of Percival Pott, F. R. S., 1783.

and have their action determined from this point of the ancle." Hence the smallest variation, he held, from the usual position of this point would considerably alter the effect of the muscles and consequently distort the foot. If tibia and fibula both be broken the inferior extremity is usually drawn under the superior making a "deformed, unequal tumefaction" in the fractured part and rendering the limb short. If the tibia only is broken and no further act of "violence, indiscretion or inadvertence be committed," the limb commonly preserves its figure and length. The same generally happens if the fibula only be broken above a point some three inches superior to the external malleolus. "The due and proper use and execution of the office of the ancle depend almost entirely on the perpendicular bearing of the tibia on the astragalus and on its firm connection with the fibula. If either of these be perverted the joint will suffer a partial dislocation internally, which partial dislocation cannot happen without, not only a considerable extension or perhaps a laceration of the joint which is lax and weak, but a laceration of those strong tendinous ligaments which connect the lower end of the tibia with the astragalus and os calcis and which constitute in great measure the ligamentous strength of the joint of the ancle. This is the case, when, by leaping or jumping, the fibula breaks in the weak part already mentioned, that is, within two or three inches of its lower extremity. When this happens the inferior fractured end of the fibula falls inward toward the tibia, that extremity of the bone which forms the outer ancle is turned somewhat outward and upward and the tibia having lost its proper support and not being of itself capable of steadily preserving its true perpendicular bearing is forced off from the astragalus inwards, by means of which the weak bursal or common ligament of the joint is violently stretched, if not torn, and the strong ones which fasten the tibia to the astragalus and os calcis are always lacerated, thus producing at the same time a perfect fracture and a partial dislocation. By this means and as indeed a necessary consequence, all the tendons which pass behind or under or are attached to the extremities of the tibia or fibula or os calcis, have their natural direction and disposition so altered that, instead of performing their appointed actions, they all contribute to the distortion of the foot and that by turning it outward and upward." This latter point is not so greatly emphasized in the present teachings.

In regard to treatment, it might be observed that he placed reliance principally upon the position. He recommended laying the leg upon its outer surface with the knee moderately bent.

Thus, he thought, the muscles forming the calf of the leg and those which pass behind the fibula and under the os calcis were put into a state of relaxation so that the foot might "be easily placed right, the joint reduced and, by maintaining the same position of the limb, everything will in general succeed very happily, as I have many times experienced."

Briefly, Pott's works can be summarized as follows:

1. *Treatise on Ruptures,* including a treatment of strangulated hernia by enema of tobacco.
2. *Treatise on Fistula Lacrymalis.*
3. *Observations on those Injuries to which the Head is Liable from External Violence.* This was considered to be his masterpiece.
4. *Fistula in Ano,* originating the present method of treatment by the simple incision of the sinus into the gut.
5. *Few General Remarks on Fractures and Dislocations,* wherein the form of fracture now known as Pott's was first described.
6. *Remarks on Palsy of the Lower Limbs,* describing the paralysis due to pressure by carious vertebræ in the condition now called Pott's disease.

The data from which this sketch was compiled were obtained from an article in the *Medical Circular,* London, 1859, and from a paper which appeared in the *Michigan Medical News,* 1882, together with other references.

In closing, I desire to acknowledge the helpful suggestions of Dr F. E. Bunts and Dr F. C. Herrick.

Relation of Endothelioma to Cancer Research Work

A discussion of this question was recently held before the Glasgow Medico-Chirurgical Society, the paper of the session being presented by Dr W. S. Lazarus Barlow (*Lancet,* March 9, 1907). After a description of the various forms of endothelial cells, the essayist indicated the distinguishing histological features between the endotheliomata on the one hand and angiosarcomata and certain varieties of spheroidal and squamous-cell carcinomata on the other. He believed that a considerable number of the growths found in the breast and in the cervix uteri, which were described as spheroidal-cell carcinoma and squamous-cell carcinoma respectively, were in reality examples of lymphatic perithelioma. The cases to which he was referring were those in which masses of cells were present with a central degenerated

material. It had been usually considered that this degenerated material had arisen from a necrosis of the central portion of a formerly completely solid mass of cells, but he pointed out that under such conditions there should be a gradation between the outermost and undegenerated cells and the central degenerated mass. On the contrary, in the cases under consideration there was a sharp differentiation between the cellular portion and the débris, and in addition a definite endothelial lining, such as one was accustomed to meet with in the ordinary blood-vessel or lymphatic, often bounded the proliferated cells on their internal aspect and completely shut them off from the central débris. He urged further that these cases were identical in histological appearance whether they were derived from the breast or the cervix and were best explained on the view that they were lymphatic peritheliomata.

The greatest difficulty in differentiation lay between the endotheliomata and those carcinomata containing the so-called Malpighian and the pure prickle cells. In examining the sections from cases in a certain hospital for a period of six years or more, he had found that about 10 per cent. of supposed breast cancers and the same number of uterine cancers should, on the ground of his own researches, be considered as endotheliomata. There was evidence that the endotheliomata were amongst the most malignant of new growths. On the other hand "parotid tumors" and certain tumors of the cerebral meninges showed that growths which were histologically identical with those that had been described might be non-malignant in respect of the fact that they did not tend to recur after removal. It was clear, therefore, that endotheliomata might be intensely malignant or non-malignant, and the important question at the present time, bearing in mind the amount of work that was being done on the subject of mouse cancer, was to determine in what class of growths this latter should be included. A recognition of the true character of mouse tumors was necessary for determining whether work on these growths was attacking the cancer question at its very heart, which would be the case if they were carcinomata, or whether it concerned a relatively uncommon form of new growth—namely, the endotheliomata. Moreover, supposing that the majority of mouse tumors were ultimately considered to be endotheliomata there remained the question as to whether they belonged to the intensely malignant or to the non-malignant variety.

—*Medical Record,* March 30, 1907.

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Expert Testimony

The recent spectacle of eminent alienists testifying in open court that an individual on a certain date, committing certain acts, was sane, and an equal number of eminent specialists testifying that the same individual was insane, is as amusing a demonstration of expert testimony as one could ask for. What an inconceivably large number of combinations are possible when we consider how differently each one of these eminent alienists might have testified had he been approached and secured originally by the "other side."

It is a curious travesty upon our laws that makes possible such an exhibition, and it is unfortunate, beyond words, that this sort of thing is possible only when the rich are involved. Can one conceive of an equal number of eminent alienists voluntarily coming forward in the interest of humanity and the life of a poor man and offering their expert testimony that they believed him mentally unbalanced, it is too absurd a situation to even think of.

In a recent address before the New York Academy of Medicine, Dr Allen McLain Hamilton suggested the abolition

of the "so-called expert" in the matter of insanity as a defense in criminal trials, and instead the creation of a permanent board of alienists selected by the County Medical Society and approved by the Appellate Division of the Supreme Court, whose authority in all such cases should be supreme. Dr Hamilton urged with all the weight of his influence the wisdom of some such change; and he suggested further that, in all criminal trials, this board of experts should examine the defendant as to his insanity without any legal aspect of the case being considered. This suggestion coming from so eminent an authority is one which it is to be hoped will meet with the approval of the New York State profession and judiciary, and it is to be hoped that ultimately some such similar provision may be adopted generally throughout the country. Anything, we believe, is better than the condition of things which at present exists in all criminal trials.

Status of the Expert Witness

Recent trials in New York and elsewhere have emphasized the importance of a proper understanding of the status of the physician when called into court as a witness, whether expert or ordinary. There are many misapprehensions among the profession as to these matters, and the information supplied in the last edition of Witthaus and Becker, reviewed elsewhere, covers the case very well.

It is more or less a matter of common opinion that the line between an ordinary and an expert witness lies in that the expert may be called on to express an opinion, while the ordinary witness may not. As a matter of fact there are a great many cases in which the ordinary witness is as much called on to express an opinion as is the expert. Among many instances, it may be noted that the witness is often asked whether the accused was angry, and his opinion on the subject accepted without comment, though the question evidently related to a psychic condition. The accepted definition of the two types of witness is as follows: "The non-expert witness testifies to conclusions which may be verified by the adjudicating tribunal, the expert to conclusions which cannot be so verified. The non-expert gives the result of a process of reasoning which is familiar to every day life, the expert gives the results of a process of reasoning which can be determined only by special scientists." And furthermore, "when conclusions point to facts whose evidential weight can only be determined by those

familiar with a particular specialty, then these conclusions may be given by experts in such specialty."

There is some difference in opinion as to whether an expert witness may be required to testify in matters clearly expert without additional fee, but in general, whether the case is civil or criminal, it may be said that if the court see fit to order it, evidence of an expert nature must be given on the ordinary fee basis. It may also be said, however, that this fee is usually paid, for the obvious reason that a witness forced to testify on a subject with which the court and counsel are unfamiliar, against his will, is at best an unsatisfactory aid in the case.

The general rule in force in this country and in England with regard to the availability of the witness is to the effect that "the extent of the previous study and investigation, and the amount of the skill and information, which must be shown, will depend on the facts of each particular case." But some especial and particular skill must be established, the amount of it to be determined by the trial judge at his discretion. The possession of such knowledge is presupposed in medicolegal cases if the witness is a practitioner.

In this country and in England the expert medical witness is nothing more or less than a butt for the counsel in the case who spend most of their time in the endeavor to discredit his testimony and to lead the jury into the belief that he is simply saying what he has been paid by one side or the other to say. This is made easy by the knowledge of the fact that the expert witness is retained exactly as a counsel would be, by a fee dependent on the length of purse of the accused and importance of the evidence needed. In this way men are often selected in particular cases, not because they are the leaders in their specialties, but because they may be counted on to be sufficiently partisan to help the cause of their employers. The fact that the true function of an expert witness is really a judicial one is quite lost sight of and the average medical expert testimony is a farce of the most approved type. On the European continent this is considered from the proper standpoint, and the experts are appointed with the approval of the court, are not harried by the counsel and are listened to with respect. Until some such modification shall have taken place in the laws in America, expert medical testimony will remain in its present uselessness. With these points in view, the advice as to the personal conduct of a medical witness, given in the same connection, is of great interest and value to the

inexperienced in these lines, whether they be young men with the ink scarcely dry on their diplomas, or older hands who have not learnt the need of a proper attitude. Revision of these conditions is one of the matters for which the remedy lies largely in the hands of the physicians, and it is to be hoped that in time this will be taken up, and modernized.

The Crocker-Doyen Suit

Le Semaine Medicale for February 27 publishes a very full account of the interesting Crocker-Doyen suit in which, in an action at law, Mr Crocker attempted to recover the sum of 100,000 francs paid by him to Dr Doyen for professional services rendered to his wife. It is hardly conceivable that similar circumstances could arise in this country, and the whole situation bears witness to the extraordinary susceptibility of the rich individual to the potency of something about which there is just an air of mystery.

In the original agreement entered into between Mr Crocker and Dr Doyen, the former agreed to pay to the latter the sum of 100,00 francs for the treatment of his wife, suffering at that time from an inoperable cancer, by a supposedly specific therapeutic serum, which had been discovered and worked out by Dr Doyen. In the light of subsequent events this agreement, so willingly entered into, appears more than ever extraordinary. Mr Crocker brought suit, in brief, on a number of fundamental points; that Dr Doyen had deceived him in holding out the hope of a recovery which he knew to be impossible; that he had sold a therapeutic serum in violation of the law which makes it necessary that all such serums offered for sale shall have received the sanction of the Government, acting upon the recommendation of the Academy of Medicine; that he sold a secret nostrum; and in a subsidiary charge, that the treatment had not been completed, when, as a matter of fact, Mr Crocker summarily stopped the treatments himself.

In the trial the following interesting point was brought out. Mr Crocker, through his attorney, attempted to show that Dr Doyen was violating the legal and ethical rights in holding out hope of a cure in the case of Mrs Crocker. Counsel argued that the word "cure" has a different meaning according as the disease concerned is chronic or acute, a very keen distinction and one indeed based upon sound facts. We have come to use the word "cure" altogether too loosely. In the case of a large number of

conditions, such as tuberculosis, carcinoma and some of the blood disorders, an individual may seem apparently to have thrown off the entire original infection, and we carelessly speak of such an instance as a "cure," when, as a matter of fact, in the event of death from some intercurrent affection, we may find at autopsy abundant evidence of the original malady, lesions perhaps latent but still present. Have we any right to call this condition cured?

However much, in the suit alluded to above, we may question the fineness of ethical feeling, as shown by Dr Doyen's readiness to undertake this treatment and to accept a large fee, we cannot fail to approve the decision of the court which nullified the claims of Mr Crocker and decided in favor of Dr Doyen. Certain phases of the court proceedings were marked by the usual dramatic scenes so common in French courts. From the witness chair, Dr Doyen dramatically exclaimed that "if fortune had brought it about that Mrs Crocker, continuing my treatment, had lived and that the poor woman who had received the same treatment had died, Mr Crocker would have blessed me; he now curses me because of the two women it was his wife that perished; what would you? man is mortal; *Le medecin n'est pas le bon Dieu!*"

Results of Ohio State Board Examinations for Graduates of Ohio Medical Colleges

To those interested in medical education who place great reliance on results before state boards of medical examination, in estimating the comparative value of the medical training given by different schools, the following tabulation may be of interest.

The value of comparative results in examinations depends largely on the nature of the tests and the manner of conducting the examinations. The idiosyncrasies of individual examiners or local conditions as to laxity in control of the candidates while taking the examinations are the more completely eliminated as the number of examinations that are included in an average increases. Therefore the following tabulation, which includes all graduates of Ohio medical colleges examined before the Ohio board in the six examinations of the past three years,—during which period the personnel of the Board has considerably changed,—serves to give the most comprehensive statistical exhibit available as to the relative position of the several medical schools of Ohio in the matter of examination results.

The data for the tabulation is derived from the reports of the secretary of the Ohio Board sent to the *Journal of the American Medical Association* and published there at various times.

It is noticeable that the percentage of failures for the entire period is but 4.37 percent, and exclusive of the examination of December, 1906, is but 3.28 percent, while the statistics assembled by the Council of Education of the American Medical Association show that the average percentage of failures for the entire country in these same three years was about 15 percent.

	JUNE, 1904.			DECEMBER, 1904.		
	Number of men examined.	Average percent.	Number of Failures.	Number of men examined.	Average percent.	Failures. Number of
Cleveland College of Physicians and Surgeons	11	86.45	0	0	.....	.
Cleveland Homeopathic	13	80.46	3	3	80 00	0
Eclectic Medical Institute	6	86.00	0	1	72.00	1
Medical College of Ohio	39	87.79	0	1	88.00	0
Miami	15	88.27	0	0	.....	.
Ohio Medical University	29	84.59	2	3	81.67	0
Pulte	4	87.75	0	0	.....	.
Starling	25	82.80	2	4	82.75	0
Toledo	4	76.50	1	1	73.00	1
Western Reserve University	25	89.40	0	1	83.00	0
	JUNE, 1905.			DECEMBER, 1905.		
Cleveland College of Physicians and Surgeons	14	89.16	0	2	85.00	0
Cleveland Homeopathic	11	86.18	0	2	82.00	0
Eclectic Medical Institute	12	84.36	1	2	81.00	0
Medical College of Ohio	29	89.10	1	1	68.00	1
Miami	20	87.15	0	0	.....	.
Ohio Medical University	28	87.00	0	4	88.75	0
Pulte	3	87.00	0	0	.....	.
Starling	28	82.85	1	1	80.00	0
Toledo	0	.....	.	0	.....	.
Western Reserve University	17	90.82	0	2	87.00	0
	JUNE, 1906.			DECEMBER, 1906.		
Cleveland College of Physicians and Surgeons	19	86.05	0	0	.....	.
Cleveland Homeopathic	11	81.09	0	0	.....	.
Eclectic Medical Institute	8	82.87	0	1	63.00	1
Medical College of Ohio	25	88.00	0	3	85.67	0
Miami	19	89.63	0	1	69.00	1
Ohio Medical University	44	85.14	1	1	63.00	1
Pulte	0	.....	.	0	.....	.
Starling	27	84.48	2	2	64.00	2
Toledo	6	78.00	1	1	56.00	1
Western Reserve University	19	86.58	0	1	86.00	0

TOTALS

	Number of men examined.	Highest Grade.	Lowest Grade.	Average Grade.	Number of Failures.	Percent of Failures.
Cleveland College of Physicians and Surgeons	46	96	75	87.26	0	0
Cleveland Homeopathic	40	95	62	81.75	3	7.5
Eclectic Medical Institute	30	95	63	82.89	3	10.0
Medical College of Ohio	98	95	68	86.92	2	2.1
Miami	55	94	69	87.98	1	1.8
Ohio Medical University	109	95	63	85.21	4	3.6
Pulte	7	95	84	87.42	0	0
Starling	87	93	62	82.87	7	8.1
Toledo	12	92	38	75.25	4	33.3
Western Reserve University	65	97	79	88.72	0	0
	549			85.47	24	4.37

Contagion from Returned Bottles

We publish elsewhere in this number of the JOURNAL a very interesting study of the bacteriology of the milk supply as at present and as formerly available in the city. This study is a most interesting and valuable contribution to public hygiene. In this article the author brings out the point, already emphasized by us in a previous number of the JOURNAL, that many individuals have objected to the distribution of milk in bottles on the very valid grounds of lack of proper cleanliness and care, as well as on account of the long period of time that must elapse between the milking and the actual delivery to the consumer. The findings are all, with one or two exceptions, happily in favor of the bottled milk as against that distributed by what is called the dip method. His experiments, however, were largely carried out during the colder period of the year and we should be much interested to compare results of a similar careful analysis made during the summer months.

In our judgment there can be no question but that contagion may be very easily carried through the medium of milk bottles, as also through the agency of any flask or bottle which may be used a second time without proper precautions as to sterilization having been taken. So important a matter is this that the physicians of Austria have been forced to insist that in the refilling of prescriptions new bottles shall be used, particularly in all cases of infectious diseases. There can, of course, be little danger from this source with a careful pharmacist, but unfortunately all our pharmacists are not as careful as we could wish.

Medical Legislation

The unremitting efforts of the osteopaths in many states to obtain from their respective legislatures special privileges in the matter of qualifying for the right to practice their particular brand of treatment is a menace to the general public. If the bars are let down for them, there is no reason why special examining boards should not be granted to all other cults who wish to treat suffering humanity for a financial consideration.

The bills which have been introduced by the osteopaths in the different states are all so similarly worded that their common origin is evident. They all ask for a special licensing board, composed of osteopaths, which shall determine the fitness of an applicant for license, either by means of an examination or from

the character of his credentials. The exceptions to the rule demanding a written examination are so numerous that undoubtedly the great majority of applicants would be granted their license without the formality of an examination.

The osteopaths claim that, inasmuch as they do not practice "medicine," they should be exempt from the laws governing the licensing of practitioners of medicine. It will be noticed, however, that the field of osteopathy is constantly widening. They claim the right to use antiseptics, and since there are a host of drugs which could be shown to have some inhibitive power over bacterial growth and therefore "antiseptic," all these might be used internally by them for an "antiseptic effect." The earlier osteopathic bills provided that they be allowed to practice minor surgery, but they now object to any such limitation as is implied by the term "minor," and even so, who is to define the limits of minor as compared with major surgery? *The Journal of Osteopathy* for February, 1907, contains details of a course of operative surgery upon animals as given in one of their schools; this course includes various operations "through amputations and abdominal operations to that of putting in of a Murphy's button." This clearly indicates the field of minor surgery which they aim to practice.

Their claim that they do not practice "medicine," simply because they do not administer medicine internally, is not in harmony with a very important decision recently handed down by the Appellate Division of the New York State Supreme Court, which defines the practice of medicine in a very clear and satisfactory manner. By the terms of this decision the giving of medicine or the use of instruments is not a necessary feature of the practice of medicine, but the simple agreement to diagnose and treat disease by any method for a fee is the essential factor. Under this ruling the osteopaths and even the Christian Scientists would be considered as practicing medicine.

The variety of treatment to be advised in a given condition is often a matter of opinion even among members of the same school, but the important point in attending a case of sickness is the recognition of the existing pathologic condition, especially in cases of contagious disease so that appropriate isolation measures may be carried out. In the *New York State Journal of Medicine* for March, 1907, Frank Van Fleet urges the passage of a single board bill which would provide that any person desirous of practicing medicine in its wider sense shall pass an examination

in all the fundamental branches of medical science, but eliminating the subject of practice, although it seems to us that the applicant might be examined in this also by an examiner appointed by the board and representing the same school of practice as the applicant.

In this way the public would be assured that the persons to whom they trust their lives shall at least be acquainted with the processes of disease, even if the methods of treatment employed are not in harmony with those of the regular school. Such a measure would sound the death knell of most of the "pathies" and do more to unite the profession than any attempts to suppress these various cults.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Blood-pressure: In the *Therapeutic Gazette,* for February, H. A. Hare considers the clinical significance of variations in blood-pressure, stating that cases of high tension may be considered as normal and pathological, the normal being those in which the tension is raised to a point above normal by exercise or excitement, as well as the condition which may be termed normal in one sense of the word, met with in the stage of onset of acute febrile diseases, when it may be an effort on the part of the body to supply more blood to all areas for protective purposes. Cushing has shown that the rise in intracranial injury or disease is essential to the preservation of life, and if he is right, how many persons have been hurried to their end by bleeding in apoplexy. He does not go into the discussion of whether arterial spasm and fibrosis is the cause or result of renal disease, it being sufficient to know that renal disease is often present, and that the prognosis depends very largely on its degree. It is a question whether an abnormally constant high tension is always evil, and ought to be reduced. He believes that the present attitude of the profession in regard to high tension is tending to the abuse of vascular relaxants in many cases. We must study the whole cardiovascular apparatus. We must endeavor to prevent an increase in tension, but we must not reduce tension simply because it is high, unless we find that the heart cannot stand the stress, or that the pressure is so high and vessels so fragile that rupture is threatened. As regards hypotension, when chronic, it usually depends upon feebleness of the heart muscle, but in one malady, exophthalmic goitre, it is not so much a result of cardiac feebleness as of vascular relaxation, the thyroid secretion acting as a powerful vascular sedative, and he believes adrenalin, if properly administered, of value in this malady. Hypotension is found in acute illness, first, at the critical period of acute infections as in croupous pneumonia: here, in a state bordering on collapse, the heart's action is excessive, trying to fill the leaking vessels, and the treatment calls not for cardiac stimulants, so much as for vascular stimulants, such

as strychnin and atropin. In enteric fever for example we find the relaxed vessel with its large, full, but low tension wave, and it here depends not upon a sudden fall of temperature, but upon toxemia, and feebleness of the general nervous system. A degenerative change in the muscularis of the vessel wall is another cause, and he has met with this state chiefly, (a) when profound toxemia has existed and the vessels have degenerated, a state often present in typhoid fever unless prevented by the cold bath; (b) when strychnin has been used as a stimulant for several days or weeks instead of being withheld for emergencies as it ought to be. These states are met with commonly in influenza as well as in typhoid fever, and in other asthenic toxemic diseases. Neither high nor low tension is in itself evil within certain bounds. Indeed each may be salutary. It is as unwise for the physician to give drugs simply because the arterial tension is high or low as it is for the captain to meddle with a ship because she does not lie on an even keel.

Digestive Ferments: Torald Sollman, in the *Journal A. M. A.* for February 9, summarizes certain facts about digestive ferments in this manner: Digestive ferments are administered on the therory that they supplement a faulty digestion. Evidently they could only be of use if the digestive disorder is due to a deficiency of ferments. This, however, appears to be a rare condition and the use of ferments is bound to be useless when the dyspepsia depends upon alterations of acidity, or upon motor insufficiency, or upon bacterial fermentation. Even when the ferment is really deficient it is doubtful whether the condition is properly met by giving pepsin. The work of Pawlow and his school indicates that the composition of the digestive juices is modified according to the work which they have to perform. Of the workings of this adaptive process we have as yet only the faintest conception, and to attempt to influence them by giving pepsin appears rather as crude bungling. Much more should be accomplished by searching for the causal condition; when this cannot be found or remedied, then pepsin may be tried since it might happen to fit the case and is harmless. Any deficiency in the gastric acidity must be corrected, or the pepsin is bound to be useless.

Ichthyol: In *Merck's Archives,* for February, E. T. Kegel writes as to the therapeutic actions of ichthyol, that it has been proven that it abstracts oxygen from tissues, producing thereby a marked diminution of any inflammation or local congestion and contracts and granulates wounds perfectly. It also has been shown that ichthyol has the power of penetrating the skin, since by applying its preparations to the unbroken skin and afterwards examining the urine, an increased amount of sulphur is found present in the latter. Ichthyol is quite harmless, easily taken and well borne in spite of its disagreeable odor, and he has failed to find any report of a case in which permanent poisoning or disagreeable symptoms have occurred. His first practical experience with ichthyol was in 1900, when he had a case of chronic articular rheumatism that had baffled him for some time. His attention was called to the use of a 25% ichthyol ointment, and he applied it to the

knee and wrist joints of his patient, covered this with cotton and mackintosh and was astonished to hear the next morning that his patient had slept that night without an opiate, to which he was accustomed. The treatment was continued for a week, when the patient considered himself cured, but with the slightest return of the rheumatic pain he calls for the ointment. His results in erysipelas have been the best and he quotes Gottheil as to its use in this disease: "As regards the treatment, the author found the antistreptococcus serum quite useless, regarding ichthyol as still the best remedy at our disposal, but he objects to the disagreeable soiling of the bedding of the patient." Unna and Von Nussbaum believe it a remarkable agent for introducing sulphur into the system, and locally it relieves the itching and diminishes hyperemia in eczema and acne. In simple dermatitis and ivy poisoning Kegel knows of nothing better, and it has given immediate relief in his hands. He asserts that from his experience ichthyol is deserving of the warmest endorsement, especially as an external remedy, and that in due time it will get official recognition.

Pneumonia: W. Parker Worster, in the *Medical Record* for February 15, asserts that it is most notable that pneumonia yields with promptitude to treatment intelligently applied at an early stage of the attack.

Even if called late, the physician can readily save the patient by proper management. His best efforts, however, will be futile unless he recognizes the fact that it is not a lung disease, but an infection with its chief manifestation in the lung dependent upon a toxemia. His article especially concerns the disease in children, and he states that nature has provided its own simple and effective remedy for pneumonia—water. The toxic agent circulating in the blood in pneumonia produces a toxemia, this toxemia spends its full force upon the nerve centers, and the object of treatment is to bridge over the danger, arising from the failure of the vital functions, by enhancing the patient's vital powers until the life period of the diplococcus is terminated, which is about seven days. The cold bath comes to the rescue, stimulating the nerve centers, which govern the functions upon whose capacity the patient depends to withstand the toxic agents circulating in the blood. The mere lowering of temperature is a secondary consideration. In the early stages of the disease he gives the full bath, beginning when the temperature reaches 102.5 with a full bath, at 95° every four hours, reducing the temperature of each bath two degrees until it reaches 80°, but not going below 80° with due regard to the effect produced. With the bathing there should be plenty of good hard thermic friction, which is the *sine qua non* in all cold baths. If dyspnea, somnolence, stupor or delirium should occur, the child is held in water at 100°, deep enough to cover its hips, for five minutes; after which several basins of water at 70° are poured from high up (if preferred, the operator standing upon a chair) upon the shoulders. This can be repeated every two hours if necessary, but it is seldom required, for the effect is magical. The patient is aroused to consciousness, inspiration is deepened and the nervous system is refreshed as by no other remedial agent. This procedure should be used when any head symptoms make their appearance.

Codein: The *Medical Council* for February (from the *Denver Medical Times*) states concerning codein that it is, according to Butler, one-fourth as toxic and effective as morphin. It is less depressing and more stimulant, does not constipate, cause headache or nausea, and rarely leads to the formation of a habit. Codein seems to exert a special, selective, sedative power over the pneumogastric nerve, hence its value in irritative laryngeal, pharyngeal and phthisical coughs with scanty secretion. Like morphin, it has proved of value in checking the progress of saccharine diabetes, and it has been used for long periods, without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codein was not followed by any special distress. In the treatment of the morphin habit, codein has not proved as successful as was once thought. One-eighth of a grain of morphin will give more relief and comfort to the patient than one or even two grains of codein and when the codein habit has been established as a substitute for morphin, it is only a question of time when the patient will revert to his old drug. The effects of codein on the alimentary canal are remarkable, in that it assuages pain as well or better than morphin and nevertheless does not check the secretions or peristalsis notably, unless the latter is excessive as in dysentery. The statement that codein is simply a "little morphin," only differing from the latter in the size of the dose, is an erroneous view, as can be ascertained by any one who closely observes the action of the two drugs. While morphin and codein both serve a useful purpose in holding glycosuria in check, neither is as effective in this respect as is the crude opium itself. It seems, therefore, that in the crude drug some other principle out of the great number existing may possibly be the long-desired remedy for diabetes.

Postpartum Hemorrhage: In *American Medicine,* for February, J. S. Raudenbush summarizes the various medicines for the control of postpartum hemorrhage as follows: As regards ergot he makes it a rule in all cases of labor to give one or two half dram doses of ergotole after the uterus is empty. He has seen no ill effects and is convinced that much good is the result. The fluid extract can be used in the same manner or ergotin may be given. In alarming and dangerous forms of postpartum hemorrhage, he gives aseptic ergot hypodermically. Its effects can be noticed almost immediately and he would not feel secure without its administration and he never uses it in any form or manner until he is convinced that no fragments of the placenta or membranes are retained in the uterus. In a very large number of cases strychnin is of as much value as ergot and in some cases of exhaustion and inertia it is of even greater value. It is best in all cases to administer it hypodermically in doses of 1.5, 2, or 3 milligrams (1-40 1-30 or 1-20 grain) and repeat whenever indicated by the condition of the pulse and uterus. It can be given in conjunction with ergot or digitalis and is a uterine as well as a cardiac and vascular stimulant. Whenever strychnin is given, watch for idiosyncrasies, remembering that overstimulation will result in a reaction and in the condition we are trying to prevent. When-

ever digitalis is given for postpartum hemorrhage, it should be injected subcutaneously in order to obtain quick results. It is well to combine it with strychnin since the latter acts quicker, but the digitalis will continue longer in its effects. The dose of digitalis is 10 to 30 minims, and of digitalin 0.6 milligrams to one milligram (1-100 to 1-50 grain). He has found digitalin to give most excellent results upon the pulse, general condition of the patient, and apparently upon the hemorrhage. Adrenalin chlorid is a good drug to use when the hemorrhage is not too severe or as a preventive of secondary postpartum hemorrhage when this is feared. Give five or ten minim doses by mouth or give hypodermically or intravenously in normal salt solution. Atropin does nicely in postpartum hemorrhage and is invaluable when shock follows the hemorrhage, and can here be combined with morphin.

Influenza: In the *Medical Record,* for March 2, W. H. Katzenbach considers relapses frequent in influenza and that one attack does not confer immunity against others. During an epidemic of influenza, the old, the chronically feeble, and those suffering with cardiac, pulmonary, or nephritic troubles should be guarded against any and all depressing influences. The patient should be kept at rest, and in quiet, and visits of friends and relatives should be prohibited. The nasal and bronchial secretions should be disinfected. The indications are to control the pain, quiet the cough, control the fever, maintain nutrition, eliminate the toxins, and induce sleep. The treatment might be begun with a dose of calomel and saline unless contraindicated. If pain is severe and nausea present, a moderate dose of morphin hypodermically will give relief. A single dose of phenacetin with codein will quiet the cough, relieve the pain, reduce the temperature and induce sleep. This may be followed by one of the alkaline salts. Alkaline waters should be freely given and antipyretics should be avoided, except possibly a moderate dose at the beginning. If the temperature is high and delirium present, a cool pack is of value. If the temperature is moderate and skin moist, baths may be dispensed with. Henry Dwight Chapin believes that young children are not so susceptible to the disease as adults and the fact that influenza may take on a grave form, or be followed by serious sequelæ, emphasizes the importance of an early diagnosis. The younger the child the more severe usually is the infection. The type of bronchopneumonia is much like the ordinary form so far as the physical signs are concerned, but early prostration is more marked, and the temperature is usually irregular and higher than the local lesion would seem to warrant. Convalescence is often protracted, and is frequently characterized by nervousness, insomnia, anorexia, vasomotor, or cardiac weakness.

Digitalis: In the *New York Medical Journal,* for February 16 (Bulletin général de thérapeutique) Houchard believes digitaline the most reliable of the constituents of digitalis and prefers it to the other preparations of the drug. He uses the crystallized digitaline of the French codex, which may be dissolved in oil for injection deeply into the muscle. These injections have the advantage of definite

dosage and prompt action and are rapidly absorbed, avoiding the danger of exciting any intolerance of the stomach. He indicates three methods of prescribing digitaline: (1) The massive or large dose, which is also the antiasystolic, and diuretic dose. During an attack of asystole he prescribes 50 drops of the solution (one to 1000) representing one milligram of digitaline, to be given in one or two doses in 24 hours. If the effects are not deemed sufficient, the remedy may be repeated at the end of six days in the same or a diminished dose. (2) The small dose which is also the sedative dose. He gives five to 10 drops of the solution (one to 1000) or a granule of a quarter of a milligram for three or four days, this is repeated every three or four weeks. This method is very useful in dyspnea with mitral stenosis, lengthening the diastole, and allowing more blood to enter the ventricle. (3) The very small dose, which is the cardiotonic or supporting dose. This may be continued for weeks or months, if periods of intermission every 15 or 20 days of several days are allowed. The dose is three or four drops of the solution (one to 1000) or a granule of 1-10 of a milligram given once daily. This will give tone to the heart without causing any toxic symptoms.

Academy of Medicine of Cleveland

CLINICAL AND PATHOLOGICAL SECTION

The fortieth regular meeting was held at 8 p. m., Friday, March 1st, 1907, at the Cleveland Medical Library. Program: 1. Malignant Growths of the Kidneys, with Report of Cases and Exhibition of Specimens, A. F. House, M. D.; 2. Pneumococcus Arthritis in Infants and Children, with Report of a Case, A. F. Furrer, M. D.; 3. Pubiotomy, with Report of a Case, A. H. Bill, M. D.; 4. The Value of the X-Ray in the Treatment of Skin Disease, W. J. LeFevre, M. D.

EXPERIMENTAL MEDICINE SECTION

The thirty-first regular meeting was held at 8 p. m.; Friday, March 8th, 1907, at the Cleveland Medical Library. The meeting was devoted to a Discussion of the Theories of Immunity. The discussion was opened by the following short papers: Metchnikoff's Phagocytosis Theory, Dr R. G. Perkins; Wright's Opsonin Theory, Dr L. W. Ladd; Ehrlich's Side-chain Theory, Dr C. F. Hoover; Arrhenius' Explanation of the Neutralization of Toxins, Dr T. Sollman; The Therapeutic Application of the Theories of Immunity, Dr J. B. McGee.

The forty-sixth regular meeting of the Academy was held at 8 p. m., Friday, March 15th, 1907, in the Auditorium of the Cleveland Medical Library. Program: 1. Chronic Polycythemia and Cyanosis with Enlarged Spleen (Vaquez's Disease), John M. Anders, M. D., Philadelphia, Pa.; 2. Conservative Treatment of Tubercular Joint Disease, W. G. Stern, M. D.

THE OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION

The twenty-seventh regular meeting of this Section was held Friday, March 2nd, 1907, at 8 p. m., at the Cleveland Medical Library. Program: 1. Observations on Static Findings in Refractions, J. E. Cogan, M. D.; 2. Presentation of Cases, J. N. Lenker, M. D.

New York Skin and Cancer Hospital

The Governors of the New York Skin and Cancer Hospital announce that Dr L. Duncan Bulkley will close his Clinical Course with four special lectures: March 27th—Practical Points in the Diagnosis and Treatment of Diseases of the Skin; April 3rd—Errors in Diagnosis and Treatment; Donts in Dermatology; April 10th—Danger Signals from the Skin; April 17th—The Significance and Treatment of Itching. And also announce a lecture by Dr William Seaman Bainbridge: April 24th—Some Phases of the Cancer Problem, illustrated by a series of cases; in the Out-Patient Hall of the Hospital, at 4.15 o'clock. The lectures will be free to the Medical Profession.

William C. Witter,
Chairman of Executive Committee.

St. Alexis Hospital Alumni Association

The fiftieth regular monthly meeting of the St. Alexis Hospital Alumni Association was held at The Hollenden, on Thursday, March 7th, 1907, 8 p. m. Program: Respiratory Obstructions in Children, Warner H. Tuckerman, M. D.; A Few Types of Gastric Neurosis, with Report and Treatment of Cases, A. P. Scully, M. D.

W. J. Manning, M. D., Secretary.

Book Reviews

Medical Jurisprudence, Forensic Medicine and Toxicology, by R. A. Witthaus, A. M., M. D., Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo, with the Collaboration of August Becker, Esq.; Chas. A. Boston, Esq.; Hon. Goodwin Brown; W. H. Bullard, M. D.; G. C. Cameron, M. D.; J. Clifton Edgar, M. D.; Jas. Ewing, M. D.; F. D. Fisher, M. D.; J. C. Johnson, M. D.; Roswell Park, M. D.; J. Parmenter, M. D.; Irving C. Rosse, M. D.; E. V. Stoddard, M. D.; George Woolsey, M. D.; J. H. Woodward, M. D. Second Edition. Volume One. New York, William Wood & Company, 1906.

The changes in recent years in the various laws which concern the medical profession have made a thorough revision of this valuable work necessary to keep it up to the high standard set in the first edition. Most of the first volume is given up to Medical Jurisprudence, treating on the one hand of the legal relations of the physician to the patient, and to the courts of law (in the capacity of a witness), and on the other hand of an elaborate and well arranged summary of the medical laws of the present day in the United States, Canada, and Great Britain. The laws governing the practice of medicine, the relations of real medicine to Christian Science, etc., the questions arising as to the degree of privilege of the communications of patient to physician, and the laws and customs concerning expert evidence are dealt with in very satisfactory detail.

In the second part the subject of Forensic Medicine is taken up. This includes, among much else, valuable information as to the coroner's duties and requirements, determination of the time of death, the appearance of the body after death from heat, cold and starvation, and accurate descriptions of the technic and armamentarium necessary for the proper per-

formance of medicolegal autopsies. The index at the end is adequate for the purposes of the book. The typography and general arrangement of the first edition have been preserved, and the division into four volumes prevents undue clumsiness. The book is one of extreme value, and may be most profitably consulted not only by the pathologist, but also by the physician who is anxious to keep himself up to date with regard to such laws of his community as especially concern him.

A Treatise on Diagnostic Methods of Examination. By Prof. Dr H. Sahli, of Bern. Edited, with additions, by Francis P. Kinnicutt, M. D., Professor of Clinical Medicine, Columbia University, N. Y.; and Nath'l Bowditch Potter, M. D., Visiting Physician to the City Hospital and to the French Hospital; and Consulting Physician to the Manhattan State Hospital, N. Y. Philadelphia and London: W. B. Saunders & Company, 1905. Octavo of 1008 pages, profusely illustrated. Cloth, $6.50 net; Half Morocco, $7.50 net.

The original edition of Sahli's well known text-book upon methods of clinical examination appeared in 1894 and was immediately accorded a unique place among all similar text-books. The great charm of Sahli's work lies not only in the style of the writer, the thoroughness and exhaustiveness of the teacher, but in the peculiarly happy way in which he approaches his subject, a method which quite distinguishes his work from all similar treatises, and gives it an individuality quite its own. The fact that surprises us most is not that the translation of this work has been demanded by English students but that it has been so long in coming. The translation and editorial supervision of the American edition is a very fortunate one, and American readers are placed at once under great obligations to Dr Kinnicutt and his associates for the way in which they have preserved the charm of the original text and enhanced its value for American readers by numerous editorial additions and annotations. This translation places Professor Sahli's work before English students, the most exhaustively thorough and sound work upon this subject included within a similar compass in any language. The English translation has been materially improved by the addition of a large number of really valuable half-tone and colored plates. Dr Janeway has contributed an interesting and valuable chapter upon sphygmomanometry. We are confident that this translation will win as large and as enthusiastic a following as has the original.

The Practical Medicine Series, under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post Graduate Medical School. Volume VII, Pediatrics, edited by Isaac A. Abt, M. D., Assistant Professor of Medicine (Pediatrics Department) Rush Medical College; Orthopedic Surgery, edited by John Ridlon, A. M., M. D., Professor of Orthopedic Surgery, Northwestern University Medical School, with the collaboration of Gilbert L. Bailey, M. D., Instructor in Orthopedic Surgery, College of Physicians and Surgeons. Series 1906. Year Book Pub.

Volume VII of the Practical Medicine Series, Pediatrics and Orthopedic Surgery, contains, in one small neatly bound volume of about 250 pages, abstracts from medical papers from the entire preceding year on more special subjects. By subscribing to the series, the general practitioner, for the sum of $10.00 annually, may be able to keep abreast of the

most modern medical thought and will have in his own library many valuable references in a compact form to which he can turn at a moment's notice. At the same time, the arrangement in several volumes enables those interested in special subjects to buy only the parts they desire.

Prevalent Diseases of the Eye. A reference handbook, especially adapted to the needs of the general practitioner and the medical student, by Samuel Theobald, M. D., Clinical Professor of Ophthalmology and Otology in the Johns Hopkins University; Ophthalmic and Aural Surgeon to the Johns Hopkins Hospital, and to the Baltimore Eye, Ear and Throat Charity Hospital; Consulting Ophthalmic and Aural Surgeon to the Home for Incurables, and to the South Baltimore Eye, Ear and Throat Charity Hospital. With 219 Illustrations and 10 colored plates. Philadelphia and London, W. B. Saunders Co., 1906.

The author is of the opinion that most treatises upon diseases of the eye written ostensibly for the general practitioner and medical student are not adapted to their needs, but rather to the requirement of the specialist. Such a work should recognize the fact that he is not skilled in the use of the ophthalmoscope, nor in testing the refraction, the muscles or the visual fields, nor qualified to perform the more delicate operations. In regard to the ophthalmoscope, he has not thought it desirable to encourage the general practitioner to rely upon it as a means of diagnosis, and has not even described it, and also has not described in detail the methods of measuring the refraction or the muscular anomalies or the visual fields. In the chapter upon the refraction and accommodation he states that it is not his purpose "to encourage the general practitioner to undertake the determination and correction of the refractive anomalies of the eye," but, on the contrary, "to impress upon him, what so many physicians fail to realize, that there is no branch of ophthalmic practice which more imperatively demands the skill and training of the specialist than does this matter of the measurement and correction of the refractive errors and muscular faults of the eyes." He lays emphasis on the important role that errors of refraction play in the causation of many serious diseases of the eyes and also in the production of other disorders than those of the eye, as, headache, neurasthenia, vertigo, insomnia, somnolency, disturbance of mental concentration, less frequently nausea, indigestion, tinnitus aurium, chorea, and exceptionally epilepsy.

He begins the volume with a chapter on general observations on diagnosis and another upon treatment of the diseases of the eye. The external diseases are described with considerable fullness while the diseases of the deeper structures are touched upon more briefly. His descriptions are clear, and the volume contains many valuable suggestions and much good advice. His personal views upon many subjects as they appear throughout the book are of interest and value. Under glaucoma he states his belief that complicated errors of refraction often play an important part in the causation of glaucoma, and he is of the opinion that "if in the incipient stage of every case of glaucoma, refractive and muscular anomalies were carefully searched for and as carefully corrected, there would be an appreciable diminution in the number of cases demanding operation." In cataract extraction from a considerable experience with the simple and the combined operation, he has come to prefer the com-

bined, and for some years has operated by this method only. Dr Theobald's name has long been associated with the use of the very large probes in the treatment of stenosis of the nasal duct. He is as thorough a believer as ever in their efficacy and has had no experience with excision of the lacrymal sac and does not believe in the use of styles. He believes that insufficiency of the internal recti muscles (exophoria) by inducing hyperemia of the overlying conjunctiva is an important factor in the causation of pterygium. He believes protargol may be employed with advantage for silver nitrate and copper in trachoma prefers argyrol or protargol to silver nitrate in gonorrheal conjunctivitis, and in spring catarrh has obtained the best results with bichloride of mercury.

The illustrations are numerous and the publisher's part has been well done. The book can be heartily commended to the student and the general practitioner for whom it was especially written.

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph. D., LL. D., Professor of Medicine and of Clinical Medicine at the Medico-Chirurgical College, Philadelphia. Seventh edition, revised and enlarged. Octavo of 1297 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.50 net; Sheep or Half Morocco, $6.50 net.

This, the seventh, edition of Anders' Practice maintains the standard of preceding editions, presenting a most complete and satisfactory treatise upon the subject. It is essentially practical, many subjects have been rewritten, new ones added as well, and the work represents throughout the best practice of today. It comprises 1300 pages, and is subdivided into 11 parts, each of which is amply treated. The subject of typhoid fever is very fully and judiciously considered; stimulants he thinks useful in about 50% of the cases. In using hydrotherapy he continues the baths until the evening temperature is below 101° (38.3 C.). He believes the time has come for the discontinuance of the coal-tar antipyretics and that intestinal antiseptics are indicated in cases in which tympanites is a prominent manifestation; of these he prefers salol, alone or with quinin. He also warns against the free use of the coal-tar antipyretics in influenza. In fact from the therapeutic side the book is very satisfactory and is by all means worthy of the highest recommendation.

Tuttle on Diseases of Children. A Pocket Text-Book of Diseases of Children. By George M. Tuttle, M. D., attending physician to St. Luke's Hospital, the Martha Parsons Hospital for Children and Bethesda Foundling Asylum, St. Louis, Mo. New (2d) edition, thoroughly revised. In one 12mo volume of 392 pages, with 5 plates. Cloth, $1.50 net; flexible leather, $2.00 net. Lea's Series of Pocket Text-Books, edited by Bern. B. Gallaudet, M. D. Lea Brothers & Co., Philadelphia and New York, 1907.

The book appears to fulfill its aim, viz., to present the subject in a systematic, orderly form, and in as few words as possible. Since no originality is professed, no criticism can fairly be made for lack of it. One could not get an extended knowledge of pediatrics from the study of such a book, but for the busy practitioner who must treat infants and children, of necessity, and wants to, and must quickly get at the meat of pediatric treatment, the book can be recommended. The subject matter is reliable and fairly up to date.

Golden Rules of Pediatrics, by John Zahorsky, A. B., M. D., Clinical Professor of Pediatrics, Washington University Medical Department, St. Louis; Ex-president of the Bethesda Pediatric Society; Attending Physician to the Bethesda Foundling's Home; Member of the American Medical Association and of the St. Louis Academy of Science; Editor of the St. Louis Courier of Medicine; Author of "Baby Incubators," etc., with an introduction by E. W. Saunders, M. D., Professor of Diseases of Children and Clinical Midwifery, Washington University, etc.. St. Louis. The C. V. Mosby Medical Book Co., 1906.

This volume of Dr Zahorsky's consists essentially of a collection of 14 aphorisms dealing with the general oversight, diagnosis, hygiene and treatment of infants. We do not remember that we have ever seen a work upon any subject arranged in a similar way, and though by no means an exhaustive treatise, it constitutes in reality a very complete resumé of the entire subject of pediatrics. It is the sort of work which one can pick up, open anywhere and glancing over its pages glean many a valuable suggestion. An aphorism well expressed has always a peculiarly subtle tenacity from which it is hard to get away, and it is this fact which makes this volume so suggestive and so helpful.

The author includes a formulary in connection with which he says it is an old custom to annex a formulary to works on pediatrics. "Its utility is unquestioned, but that the different prescriptions can also do harm cannot be doubted. * * * * * The prescriptions here given may help in difficult places, and either contain new drugs or combinations not so well known," it is always agreeable to encounter new suggestions in therapeutics. We can enthusiastically recommend this volume to the student and young practitioner who often is in a position when just such suggestions as are outlined in this volume will prove of great help.

A Text-Book of Obstetrics. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. Fifth Revised Edition. Octavo of 915 pages, with 753 illustrations, 39 of them in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $5.00 net; Half Morocco, $6.00 net.

Dr Hirst's volume upon Obstetrics has been so long and so well known, that any extended review really appears unnecessary. There are few men who have so uninterruptedly taught the subject of obstetrics to as large a group of students as has been Dr Hirst's privilege, and we may add pleasure. Among that group of men who have made the medical department of the University of Pennsylvania so widely sought after, few have exerted as happy an influence, as teacher and leader, as the author.

This, the last and fifth edition of Dr Hirst's well known text-book, represents the sum of his years of teaching and a large professional experience. It has been accorded a place among the first ranks of the American text-books upon obstetrics, and this, the last, edition more than sustains its well-deserved reputation. The arrangement of the text is systematic and leads gradually from the anatomy through the physiology of fertilization and that of the development of the embryo, to the physiology of pregnancy and its pathology.

The latter half of the volume takes up the physiology and management of labor, the mechanism and pathology of labor, and then takes up

the pathology of puerperium. The concluding chapters are devoted to obstetrical operations and the new-born infant.

In his large experience with students, the author has been able to estimate accurately the value of all the practical points and every step is made so clear that the student is accurately guided in every obstetrical manipulation or operation. The illustrations throughout the work, both the half-tone plates and the diagramatic sketches, are admirable and really serve to illustrate the text. A complete index concludes this volume, the press work and typography of which are all that could be desired.

A Manual of Diseases of Infants and Children. By John Ruhräh, M. D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore. 12mo volume of 404 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Flexible leather, $2.00 net.

The Manual of Diseases of Children by Dr Ruhräh, Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore, is a compact, well arranged little volume of 400 pages, equally adapted to students and the busy general practitioner.

The important subject of infant feeding and milk modification is given in unusual detail in a work of this size. This by itself with the remarks on "The Examination of Children" make the book worth while.

The section on "Therapeutics for Infants and Children" is not only useful to the student, but will become practically indispensable to him when he goes into practice. The addition of a chapter on Pediatric Literature seems highly commendable.

Books Received

Aids to Dental Surgery, by Arthur S. Underwood, M. R. C. S., L. D. S., Eng., and Douglass Gabell, M. R. C. S., L. R. C. P. Lond., L. D. S., Eng. Second Edition. New York, William Wood & Co., 1907.

Aids to Medical Diagnosis, by Arthur Whiting, M. D., M. R. C. P., Physician to the Tottenham Hospital and Assistant Physician to the Mount Vernon Hospital for Consumption and Diseases of the Chest; Lecturer in, and Dean of, the Northeast London Post-Graduate College. New York, William Wood & Company. 1907.

Aids to the Diagnosis and Treatment of Diseases of Children, by John McCaw, M. D., R. U. I., L. R. C. P., Edin., Physician to the Belfast Hospital for Sick Children. Third Edition. New York, William Wood & Company. 1907.

Psychology Applied to Medicine. Introductory Studies by David W. Wells, M. D., Lecturer on Mental Physiology, and Assistant in Ophthalmology, Boston University Medical School; Ophthalmic Surgeon, Massachusetts Homeopathic Hospital, Boston; Oculist, Newton (Mass.) Hospital. Illustrated, nearly 200 Pages, with Bibliography and Index. 12mo. Extra quality paper. Neatly bound in Cloth. Price, $1.50 net.

Transactions of the Luzerne County, Pa., Medical Society, for the year ending December 31st, 1906. Volume XIV.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume XXVIII.

A Text-Book of Pathology. By Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Fifth Revised Edition. Octavo of 977 pages, with 399 text-illustrations, many in colors, and 7 full-page colored plates. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $5.00 net; Half Morocco, $6.00 net.

A Manual of Normal Histology and Organography. By Charles Hill, Ph. D., M. D., Assistant Professor of Histology and Embryology, Northwestern University Medical School, Chicago. 12mo volume of 463 pages, with 312 illustrations. Philadelphia and London: W. B. Saunders Co., 1906. Flexible Leather, $2.00 net.

An Epitome of Diseases of the Nose and Throat. By J. B. Ferguson, M. D., of the New York Post-Graduate Medical School. 12mo, 243 pages, with 114 engravings. Cloth, $1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907. (Lea's Series of Medical Epitomes. Edited by Victor C. Pedersen, M. D., New York.)

A Text-Book of the Practice of Medicine. For Students and Practitioners. By Hobart Amory Hare, M. D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London. Author of A Text-Book of Practical Therapeutics; A Text-Book of Practical Diagnosis, etc. In one very handsome octavo volume of 1120 pages, with 131 engravings and 11 full-page plates in colors and monochrome. Second edition, revised and enlarged. Cloth, $5.00 net; leather, $6.00 net; half morocco, $6.50 net. Lea Brothers & Company, Philadelphia and New York, 1907.

Paraffin in Surgery. A critical and clinical study by Wm. H. Luckett, M. D., attending surgeon, Harlem Hospital, surgeon to the Mt. Sinai Hospital Dispensary of New York, and Frank I. Horne, M. D., formerly assistant surgeon, Mt. Sinai Hospital Dispensary. 12 mo.; 38 illustrations; 118 pages. Surgery Publishing Co., 92 William Street, New York City. Cloth, $2.00.

Text-Book of Psychiatry. A Psychological Study of Insanity for Practitioners and Students. By Dr E. Mendel, A. O. Professor in the University of Berlin. Authorized translation. Edited and enlarged by William C. Krauss, M. D., Buffalo, N. Y., President Board of Managers Buffalo State Hospital for Insane; Medical Superintendent Providence Retreat for Insane; Neurologist to Buffalo General, Erie County, German, Emergency Hospitals, etc.; member of the American Neurological Association. 311 pages. Crown octavo. Extra cloth. $2.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The Practical Medicine Series, comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology Chicago Post-Graduate Medical School. Volume X. Skin and Venereal Diseases, Nervous and Mental Diseases, edited by W. L. Baum, M. D., Hugh T. Patrick, M. D., William Healy, A. B., M. D. Series 1906. Chicago. The Year Book Publishers, 40 Dearborn Street.

Annual Report of the Board of Regents of the Smithsonian Institute, 1906.

Annual Report of the Surgeon General of Public Health and Marine Hospital Service of the United States.

Manual of Clinical Chemistry, by A. E. Austin, A. B., M. D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tufts College, Boston. D. C. Heath & Co., Publishers, 1907, Boston.

Biographic Clinics, Volume IV and V. Essays concerning the influence of visual function, pathologic and physologic, upon the health of patients, by George M. Gould, M. D., Editor of American Medicine, Author of "An Illustrated Dictionary of Medicine," "The Practitioner's Medical Dictionary," etc., "Borderland Studies," "The Meaning and the Method of Life," etc. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street, 1907.

The Elements of the Science of Nutrition. By Graham Lusk, Ph. D., M. A., F. R. S. (Edin.), Professor of Physiology at the University and Bellevue Hospital Medical College. New York City. Octavo of 326 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $2.50 net.

Medical News

Dr Nelson, of Steubenville, has been quite ill at his home.

J. D. Siddell and wife, of Columbus Grove, will soon move to Chattanooga.

A. H. Hewetson, of St. Clairsville, has been very ill for some time, is still in a critical condition.

Vogt G. Wolf, of Urbana, who recently underwent an operation, is reported as doing very nicely.

Frank P. Moore, of Lisbon, who has been seriously ill for several weeks, is still confined to his bed.

Franklin Burt, formerly of Norwalk, who has been some time in Hawaii, is expected to return soon.

J. N. Ellison, of Sardinia, has gone to New York City to take a two months' course in the New York Polyclinic College.

Dr Davis and wife, of Canal Dover, are at home again after an absence of a few months, which was spent in the west for the benefit of the doctor's health.

C. D. Morgan, of Galion, has gone to New York City, where he will spend a short time at the Roosevelt Hospital taking an advanced course in medicine and surgery.

The thirty-sixth regular meeting of the Lake County Medical Society was held at 8 p. m., on Monday, March 4th, at the Parmly Hotel, Painesville. Program: Reports and Presentation of Cases, "Diphtheria and its Antitoxin," S. W. Kelley and M. J. Lichty. Special Business. J. W. Lowe, Secretary, protem, Mentor.

The fourth monthly meeting of the Charity Hospital Medical Society was held Wednesday evening, March 13th, at the Hospital. Program: "Bell's Palsy," H. M. Tarr; "Presentation of Cases," H. J. Lee; "Foreign Body in Bronchus," S. H. Large; "Some Remarks on the Anatomy and Surgery of the Veins of the Neck." C. A. Hamann.

The fifteenth regular meeting of the Lakeside Hospital Medical Society was held at 8 p. m., Wednesday, March 27th, at Lakeside Hospital. Program: Exhibition Surgical Cases, Drs Allen and Briggs; Exhibition Medical Cases, Dr Lowman; Apnea, Dr Hoover; Report of Gynecological Cases with Specimens, Dr Bower; Pathological Specimens, Dr Russ.

A. B. Smith, of Wellington, who has spent the past winter in post graduate study at the Johns Hopkins University and at the leading Sanitoria for Tuberculosis in the east, has returned home. He contemplates opening a private sanitarium for tuberculosis patients in the near future, the exact location of which has not yet been decided upon.

The Journal of Inebriety after thirty years of continuous studies of the disease of inebriety and drug taking begins its new decade by entering upon comparatively a new field of physiological and psychological therapeutics, for the treatment of these neurosis. Arrangements have been completed by which *The Archives of Physiological Therapy* has been consolidated and will hereafter be published as a part of *The Journal of Inebriety*. This very able monthly has been developing parallel lines of study with *The Journal of Inebriety*. In the opinion of its managers its scientific value would be greatly enlarged by concentrating its work along some special lines. The disease of inebriety and its allied neurosis is a field of most practical interest, hence *The Journal of Inebriety* is selected as a medium for continuing the work of *The Archives of Physiological Therapy*.

The Cleveland Medical Journal

Vol VI May, 1907 No 5

Peptic Ulcer, Following Gastrojejunostomy

BY C. A. HAMANN, M. D., CLEVELAND

The following case of peptic ulcer of the jejunum, following gastrojejunostomy, seems worthy of being recorded, owing to the apparent rarity of this sequel of the operation; it also illustrates one of the risks incurred in the procedure.

G. S. F., aged 48, was a patient of F. H. Suchy, who had had him under observation for some time and had made the diagnosis of gastric ulcer. His symptoms were the classical ones—pain, tenderness upon pressure, emaciation, hematemesis and marked hyperchlorhydria.

I operated upon him on October 15, 1906, doing an anterior gastrojejunostomy, also an enteroenterostomy, the junction between the two limbs of the intestinal loops being made about four inches below the stomach. The Murphy button was used in both anastomoses and reinforcing sutures of silk were inserted to strengthen the union. He recovered nicely from the operation, there being no unusual symptoms of any sort. The smaller button was passed on the 11th day, and by this time he was taking solid food, the same causing no distress. On or about the 21st day after the operation he began to complain of epigastric pain, for which hypodermics of morphin were given from time to time. There was no vomiting, his bowels moved normally and there was no distension. He had no fever. Upon palpation, an indistinct mass could be felt in the epigastric and left hypochondriac regions; this mass was tender upon pressure. He was allowed to go home on the 24th day after operation as the abdominal condition was not looked upon seriously, indeed not much attention was paid to it. His death occurred rather sud-

Read before the Academy of Medicine of Cleveland, January 4, 1907

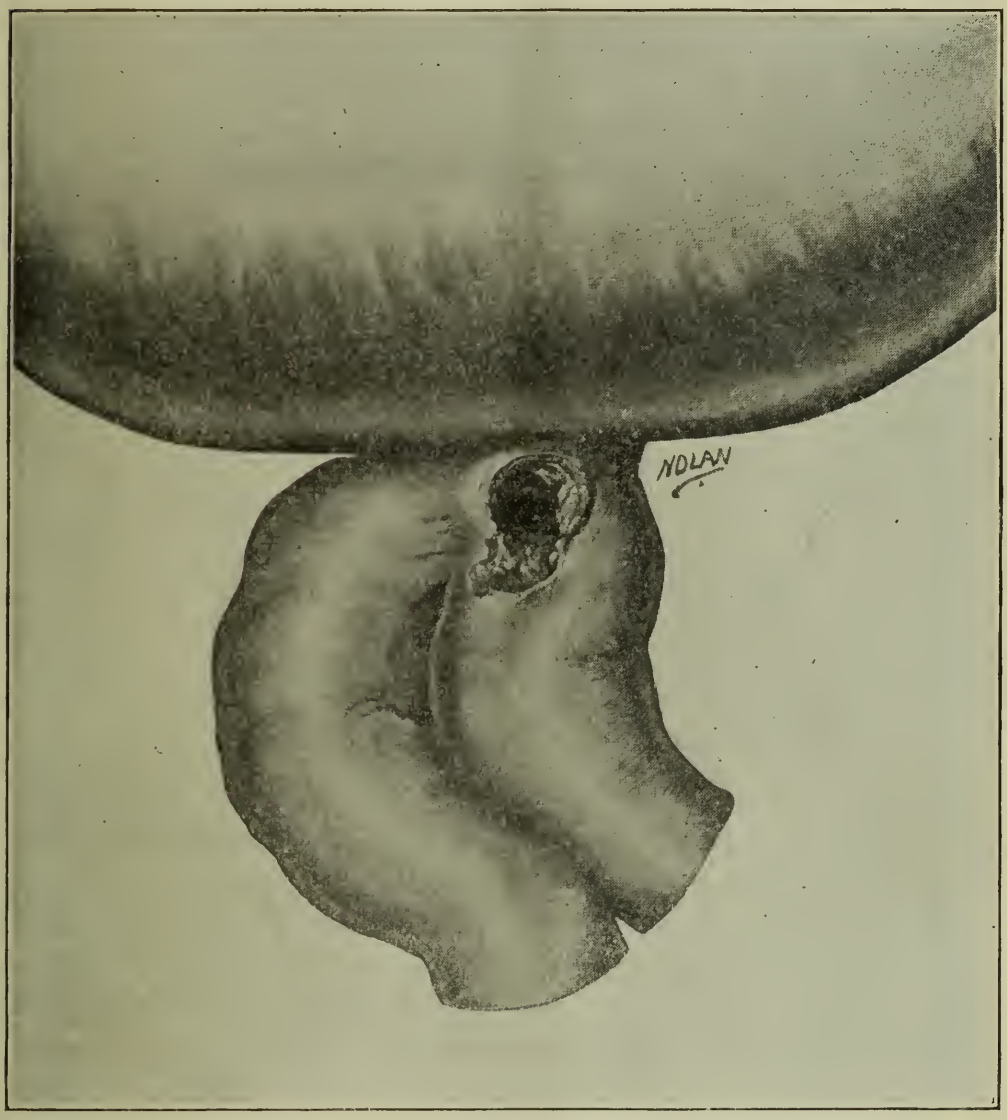
denly on November 10, 1906, 26 days after operation. He had felt well on the day before and there were no alarming symptoms.

The autopsy revealed a perforated ulcer about one inch in diameter, with a sharply marked border on the anterior wall of the jejunum, just beyond its junction with the stomach. There had been perfect union between the intestine and stomach. The button was in situ, but the position of the ulcer, and the perfect union between the serous surfaces of the anastomosed viscera showed conclusively, to my mind, that the button could not have caused the ulcer by pressure. The ulcer was exactly where the highly acid gastric juice would come in contact with the intestinal mucosa, and was a typical instance of peptic ulcer, following gastroenterostomy. General peritonitis existed, and remains of food were found in the peritoneal cavity. The gastric mucosa presented lesions which have been called erosions; no distinct round ulcer was found however.

The interest in this case centers in the postoperative sequel; attention should also be directed to the fact that no striking symptoms called attention to the serious process that was going on, for no disturbance was manifest till the 21st day, and even then, beyond the tenderness and the indistinct mass, there was nothing alarming. However, I admit that the significance of these was underestimated.

The operation of gastroenterostomy was introduced in 1882; it was in 1899, that is 17 years later, that the first case of peptic ulcer following the operation was reported by Braun[1], of Göttingen. Mayo Robson[2] reported a case in 1904, and Quenu[3] reported one in 1902. The only instance, as far as I know, previously reported in America, was one occurring in a dog, described by S. H. Watts[4]. A. Gosset[5] in an extensive article collected all the cases (31 in number) from the literature up to January, 1906; most of them by far are recorded by German surgeons. From the statistics collected by Gosset, we learn that of the 31 cases, 29 occurred in males; this is in striking contrast to the fact observed in gastric ulcer, which, as is well known, is much more common in females. It seems to have occurred most often after anterior gastroenterostomy, for out of 27 cases, 15 were anterior operations; it occurred once after Roux's operation; four times after anterior gastroenterostomy with enteroanastomosis; six times after the posterior operation and once after the posterior operation with enteroanastomosis. In this connection it is to be recalled that the anterior operation has been

done oftener than the posterior, at any rate in Germany, where most of the peptic ulcers have occurred. The mode of operation therefore seems to have had no particular influence. Mayo Robson points out that many cases must have passed unrecognized because nonperforating, and many others must have caused death by abscess formation or in other ways; the adhesions and



other complications having obscured the parts, so that at the autopsy the true nature of the affection was not ascertained.

The age of the patients in the statistics collected by Gosset varied from four months to 59 years. The time after operation at which the ulcer appeared varied from 10 hours to seven years. There were 10 deaths and 19 recoveries; in two the result was not stated. All the cases followed operation for benign disease. In 14 cases, in the record of which the mode of operation was

mentioned, nine were by the method of suturing, four were done with the Murphy button and one with the bone bobbin. In 21 of the cases collected by Gosset, the gastric juice was found normal in two; in two there was hypochlorhydria and in 17 there was hyperchlorhydria.

In 10 out of 14 cases collected by Watts, there was hyperacidity of the gastric juice, as was true of my own case; in some cases, however, the acidity was normal or decreased. There would seem to be a relation between the hyperacidity and the occurrence of postoperative peptic ulcer. On this account it has been advised to administer sodium bicarbonate after operations for gastric ulcer.

It seems that most, if not all, of the postoperative ulcers have occurred in the jejunum rather than in the duodenum, and it may be assumed that the duodenum is more resistant to the action of the gastric juice inasmuch as it is accustomed to it. When an enteroenterostomy is done, the bile enters, or is supposed to enter, the descending limb of the gut and does not come into contact with the mucosa of the bowel at the seat of anastomosis with the stomach and therefore can not neutralize the gastric juice; this might favor the formation of an ulcer. Kocher suggests that the gastric juice may stimulate the circular fibers of the jejunum to contract just below the stomach; thus a cul-de-sac would be formed, in which the retained acid secretion would have an opportunity to lie for a longer period of time and perhaps cause ulceration of the mucosa (Watts). It must be stated, however, that the exact causative factor or factors in the production of these ulcers are obscure and unknown.

The pathologic anatomy of these ulcers is the same as that of the peptic ulcer of the stomach and duodenum; they are almost always single, though in three cases they were multiple, four being present in an instance reported by Steinthal.

The symptoms in general resemble those of the corresponding lesions in the stomach. Tiegel has classified the cases into two groups: first, a group in which there are no symptoms at all until perforation takes place; thereupon, without any prodromes, the familiar evidences of peritonitis due to perforation of a hollow viscus appear; of Gosset's 31 cases, eight were of this kind: second, a group, in which, after a shorter or longer interval of health after the operation, the symptoms of gastric ulcer appear; there are also signs of adhesive peritonitis, the anterior abdominal wall becomes infiltrated and an indistinct mass can be felt. In

these cases there is a slowly progressing ulceration, perforation being prevented for a time by the adhesions which form. To this group belong 20 of Gosset's cases. In three cases a perforation of the ulcer into another part of the intestine, such as the transverse colon, occurred. The second group of cases has the lower mortality.

The treatment of peptic ulcer following gastroenterostomy is, of course, based on the general principles now recognized in abdominal surgery; in the sudden perforations (group one), immediate laparotomy is indicated; the ulcer is to be closed by suture if possible, the line of sutures protected by an omental graft, the abdomen washed out and drainage established. In the second group of cases, immediate or early operation is not as urgent as the adhesions delay perforation; the time to interfere would be a matter of judgment in the individual instance. When the abdomen is opened, adhesions would have to be separated, perhaps abscesses evacuated, and the ulcer closed by suture or excised; another gastroenterostomy might be advisable.

1. H. Braun—Verhandl. der Deutsch. Gesellsch. f. Chir., 1899, pp. 95.
2. Mayo Robson—Annals of Surgery, 1904, pp. 190.
3. Quenu—Bull. et. Mem. Soc. de Chir., 1902, pp. 250.
4. Watts—Johns Hopkins' Hospital Bulletin, July, 1903, pp. 191.
5. Gosset—Revue de Chirurgie, Jan. and Feb., 1906, pp. 54.

Early Aspiration in Pleurisy with Effusion

BY NORMAN C. YARIAN, M. D., CLEVELAND, O.

It may seem unnecessary to many of you, for me to come before this section with a paper upon such a commonplace subject as "Aspiration in Pleurisy with Effusion," and were it not my object to emphasize its *early* employment rather than the usual practice of later aspiration, I should have no reason for taking your time or asking your attention. I shall therefore confine my remarks to the one condition, effusion, and its bearing upon the course and termination of the disease.

The exudate of serofibrinous nature which is encountered in pleurisy is a product of inflammation. Like all other products of inflammation it is something foreign to the parts affected and must eventually be removed by nature or art before the patient recovers his health. Being a product of inflammation it must contain leucocytes, bacteria and their products, or toxins. As to the bacteria most often found we have the bacillus of tuberculosis which, by inoculation of the fluid, has been found present in at

Read before the Academy of Medicine of Cleveland, April 5, 1907

least 40% of all cases of acute pleurisy (only 60% of inoculations might be expected to show positive results if all cases were tuberculous). The pneumococcus is occasionally found both with pleurisies complicating pneumonia and those not so associated. Effusion occasionally occurs with rheumatism, syphilis, typhoid fever and the infectious diseases of childhood. If bacteria are so constantly present in the exudate it is only reasonable to believe that the exudate also contains greater or less quantities of their toxins and that they are absorbed to a greater or less degree into the circulation, giving rise to elevation in temperature, causing prostration and the many other symptoms which may be attributed to their action in other diseases. I believe that I may safely say that this does occur, for who has not seen the rapid improvement in the patient's condition after aspiration of the fluid, even though the effusion was small in amount? It has been observed by many that the temperature drops rapidly after the operation, much as it does after evacuating a purulent collection in any part of the body. Loomis and Thompson speak of this fact but say that "the effusion, as such, does not produce fever, although the latter often continues until the effusion has disappeared." They do not, however, give any explanation of the cause and effect.

The next effect most often observed to be due to the fluid is compression of the lung. This varies in different individuals and in the same individual at different stages of the disease, from the slightest degree to the most extreme condition in which the chest is practically filled with fluid. I think you will all agree that any considerable compression exerted for any length of time is likely to affect the lung unfavorably by collapse of the air vesicles, hindrance of the circulation and, more or less, collapse of the blood vessels of the lung. Would not prolonged collapse of the lung be likely to lower its resistance to infections? Remembering that at least 40% or more of the cases are due to the tubercle bacillus, may not this defective nutrition and expansion of the lung help to give the germs a permanent foothold which would help to explain the subsequent histories of so many cases of pleurisy? Displacement of the heart is looked upon as one of the most serious effects of effusions of some size. Associated with displacement we have also more or less compression of the heart and large blood vessels and this also helps to cripple their functions.

Dyspnea of varying degree results from compression of both

lung and heart and is not necessarily an index of the amount of effusion, as small amounts of fluid, collecting rapidly, often produce the effect as well as large ones which may have been formed more slowly. Dyspnea whenever present to any marked degree is recognized as an indication for removal of a part of the fluid. Many of the sudden deaths in pleurisy with effusion are to be traced to neglect of this indication.

Thickening of the pleura is another effect attributed to the prolonged presence of the effusion and the consequent delay in recovery. This thickening of the pleura, its contraction and consequent deformity of the chest are no doubt factors which affect the subsequent history of the case unfavorably. Forchheimer says: "The prevention of adhesions must not be overlooked nor underestimated, as they play an important role in the production of bronchiectasis, chronic pneumonias and deformities of the chest. From long experience, I feel justified in the statement that early withdrawal of fluid fills this prophylactic indication. There is a marked tendency to progressive weakness and anemia if the effusion persists beyond a certain period."

That large effusions are not devoid of danger to life is attested by the many recorded sudden deaths which have occurred in connection with the disease. No one will deny that in a considerable number of cases of effusion, even sometimes large effusion, the individual may recover without the use of medicines or surgical intervention. In fact purulent accumulations in the chest and other parts of the body may be absorbed or spontaneously evacuated through the efforts of nature; but does this fact warrant us in folding our hands when we are conscious of the presence of fluid and the effects which are likely to follow?

Let us review for a moment the indications which are laid down by various writers as warranting the operation of paracentesis. Tillman's Surgery says, "it is undertaken in case of serous, hemorrhagic or chylous exudate, only when, in consequence of compression of the lungs and heart, dyspnea exists to such a degree as to endanger life." This well represents the extremely conservative views of some of the older writers on the subject and in my opinion is entirely too conservative for safety. Who can tell in any particular case just when dyspnea has reached the dangerous period? Many of the instances of sudden death, or perhaps nearly all of them, have been due to waiting too long, and would it not be safer to aspirate small amounts of fluid at intervals of a few days if necessary, and prevent the development of any marked degree of dyspnea?

As expressing the views held by the majority of physicians we have the indications as given by Morrill Wyman, of Cambridge, Mass., and Henry I. Bowditch, of Boston, to whom the credit of introducing aspiration is due. Their conclusions concerning aspiration in pleurisy, expressed over 50 years ago, are still very generally held and are as follows: (1) The operation is perfectly simple, but slightly painful (cocaine was no doubt not used), and can be done with ease upon any patient in however advanced a stage of the disease. (2) It should be performed forthwith in all cases in which there is complete filling of one side of the chest. (3) They had determined to use it in any case of even moderate effusion lasting more than a few weeks and in which there should be a disposition to resist ordinary modes of treatment. (4) They urged this practice upon the profession as a very important measure in practical medicine; believing that by this method death may frequently be prevented from ensuing either by sudden attack of dyspnea or subsequent phthisis, and, finally, from the gradual wearing out of the powers of life or inability to absorb the fluid. (5) They believed that this operation would sometimes prevent the occurrence of those tedious cases of spontaneous evacuation of purulent fluid and those great contractions of the chest which occur after long continued effusion and the subsequent discharge or absorption of a fluid.

Osler says "Aspiration of fluid is the most thorough and satisfactory method and should be resorted to whenever the effusion becomes large or if it resists the ordinary methods of treatment." But he acknowledges that he rarely resorts to diuretics or diaphoretics and considers the use of iodid of potash of doubtful benefit.

Loomis and Thompson say "Internal medication can be expected to accomplish appreciable results in only a limited number of small, or at most moderate effusions. We believe that the best authority of the present day is strongly opposed to the prolonged use of such treatment exclusively, and to its continuance after a week or ten days have shown it to be inadequate. Catharsis with a dry diet receives some commendation in robust persons but diuresis is much less reliable." Relative to aspiration they say "It is indicated whenever life is endangered—the so-called *indicatio vitalis*. When the fluid has risen to the third interspace in front, no matter how rapidly it has formed or how little opportunity has been given for the trial of medicinal measures; effu-

sions of this size rarely disappear spontaneously within a reasonable period. In lesser effusions whenever absorption is unduly delayed. All are agreed that there is less danger in haste than in delay. A stationary period of several days duration is a normal incident of acute pleurisy. When, therefore, an effusion has pursued a typical course of acute rise (one, two, rarely three weeks) followed by a stationary period we would wait until the latter has lasted at least seven days before aspiration. In a case with indefinite history seen for the first time with established effusion, we would aspirate at once, or in a tolerably robust individual wait one week for the trial of internal remedies. In general the greater the debility and cardiac weakness, the earlier should aspiration be performed. There is no absolute contraindication to the operation."

In looking over the literature at hand I endeavored to find an author who would bear me out in the view that the operation is better done early than late and that local measures, internal medication and all other temporizing means are of really secondary importance except in the smallest collections of fluid or those which are not accompanied by symptoms of any importance and which yield readily to other treatment: I found that in his volume on "The Prophylaxis and Treatment of Internal Diseases" Forchheimer's views express so nearly my own, that I wish to quote a few lines from him. He reviews the use of cathartics, diuretics, diaphoretics, diet, tonic treatment, and local treatment and concludes as follows: "The one local measure which fulfills all the indications required for pleurisy with non-purulent effusion is the operative removal of the fluid. As compared with all the other methods just described it is more precise, more simple and less harmful. In all cases of primary pleurisy it is always indicated; it matters not whether the fluid has reached the top of the first or the fifth rib, whether the patient is in immediate danger or not. In secondary pleurisy the vital indication may be looked into for surgical intervention; but especially in the latter stages of myocardial insufficiency I have more than once been sorry that I did not remove the fluid from the chest immediately after its presence was detected. We hear much of the danger of aspiration but little of the dangers of the depressing general measures." Forchheimer has never had any bad results from aspiration and Dieulafoy could find no case of death from aspiration in which not more than 1,200 c. c. were withdrawn at one time.

If therefore not more than 1,000 c. c. are removed, slowly, cautiously, under the strictest aseptic precautions with the patient under careful observation, a small needle being used with very little negative pressure in the bottle, there should be no accidents from the operation. I usually prefer to have the patient in the recumbent or semirecumbent position and cease withdrawing the fluid whenever symptoms of faintness and depression come on. The apparatus which I prefer is the aspirator of Potain and I seldom exceed 1,000 to 1,500 c. c. of fluid at any particular operation, preferring to repeat the procedure if necessary, which is seldom the case. Cocaine is always injected and often a small incision is made to make the introduction of the needle easier.

The following cases are given briefly as illustrating the attitude of some physicians toward the operation and the results attending it in some of my cases.

Thos. G., aged 15, tall and slender, of rather slight build, developed pleurisy on the left side. He was attended by another physician during the acute symptoms and was discharged as convalescing and told to go to the country to recuperate. I saw him after a few weeks of what had been a very much delayed recovery, and found moderate effusion on the left side. I at once aspirated about eight to 10 ounces with the result that he made a rapid recovery, the remainder of the fluid being quickly absorbed. He has not developed tuberculosis at the present time, seven years later, but has had, however, several suspicious attacks of bronchitis.

Mrs. J. R. G., aged 22, developed acute pleurisy. The effusion began to be noticeable in about one week after the attack began. The right side of the chest filled rapidly and I aspirated about one week from the time it began to accumulate, removing 1,000 c. c. The patient made a rapid recovery with no further operative interference.

Edw. B., aged 35, and having a family history of tuberculosis, first contracted pleurisy at 22 years of age, following an attack of typhoid fever. The patient does not know whether fluid formed or not but he recovered without aspiration if it did. A second attack of pleurisy followed an operation for appendicitis in which the appendix had become gangrenous and drainage was made necessary. Fluid rapidly accumulated and I aspirated before dyspnea became marked and after he had been sick about one week. He made a rapid recovery and is now in fair health four years afterward.

Miss Lillian C., aged about 24, developed acute pleurisy of the left side with effusion followed about one week later by pleurisy of the right side with effusion. She was seen in con-

sultation with the attending physician about one month or six weeks after the beginning of her sickness which was considered as having been acute rheumatism by the attendant. She had been a pretty sick patient all through her illness and when I was called her condition was certainly critical, due to compression of both lungs and the heart from effusion in both sides. She could neither lie down in bed nor sleep at night because of her extreme dyspnea. Respiration was weak, hurried and shallow and her pulse was weak and rapid. She had some elevation of temperature. I advised immediate aspiration but was met by stubborn opposition on the part of the physician in attendance who wanted to "absorb it." I, however, insisted and prevailed, aspirating the left side first, removing about one pint, and in a few days aspirating nearly a quart from the right side. The effect of the first operation was very marked in improving her condition, she was able to lie down a little, slept somewhat, the temperature dropped and she was very ready to have the other side operated upon. Improvement was even more marked after the operation on the right side. The remaining fluid was allowed to absorb, which it did on both sides, and she had no further distressing symptoms. The convalescence was rather slow, due to her weakened condition. Recovery has continued complete.

I have aspirated in two cases of effusion, due to myocardial trouble, with relief in both, in the one case twice and in the other ten times with marked relief from dyspnea each time. Both eventually died from the primary disease.

The only case of acute pleurisy which I have had the misfortune to lose was one of pleuropneumonia with marked effusion on the right side. I proposed aspiration when the fluid was of moderate amount and the dyspnea (which was no doubt partly due to the pneumonia) not very severe. The consultant in the case felt that we had best wait a few days, and we did so, whether wisely or not I do not know, for the patient grew worse from day to day, the fluid increased and on the day we had set for aspiration we were summoned in a hurry and arrived in time to see him pass away. I have not a doubt had we aspirated that day, as we had intended, we might have had another case of sudden death to charge to aspiration, when the real cause of his death may possibly have been chargeable to our not having aspirated at an earlier date.

7405 Detroit Avenue

Unilateral Hypertrophy of the Leg with a Congenital Misplacement of Striped Muscle Tissue of the Foot

BY A. S. MASCHKE, M. D., CLEVELAND

The patient, a female aged four years and of a development corresponding to this age, was well-nourished and of normal intelligence but of a distinctly neuropathic disposition. She was born after a fairly expeditious and easy labor with the breech presenting. The family history is negative as regards the presence of congenital malformations or neoplasms. Shortly after birth a prominence was noticed on the sole of the left foot, filling out the instep. As the parents were told that it amounted to nothing they paid no further attention to it, until last summer when they noticed a peculiarity in her gait and sought medical advice. In December, 1906, the following notes were made concerning the physical condition. The child is well nourished and developed, 39½ inches in height and with no sign of previous rickets; the heart, lungs and abdominal viscera are normal. The child walks with a peculiar, awkward gait. The left leg and foot appear on inspection larger in every dimension than the right; there is a marked genu valgum of the left leg, probably compensatory on account of its increased length. On the bottom of the left foot there is a mass occupying and filling out the entire hollow of the instep; over the mass the skin is unchanged and freely moveable. The tumor has a soft, spongy consistency and has no well-defined boundaries, fading off imperceptibly into the surrounding tissues.

The second and third toes of the left foot present the characteristic appearance of a synostosis of the proximal phalanges and palpation seems to confirm this, but the X-ray examination shows a separate proximal phalanx for each toe and that the phalanges of the left second toe are considerably larger than the corresponding ones of the opposite side; the overgrowth is proportionally greater in this toe than elsewhere.

	Right.	Left.
Length from the anterior superior spine to the external condyle	19½ in.	19 in.
Circumference of the thigh	11 "	10¾ "
Circumference of the calf	8½ "	7¾ "
Inside border of the foot	6⅝ "	6⅜ "
Outside border of the foot	5⅝ "	5⅜ "

The hypertrophy involves all the structures, bony as well as soft parts. Muscular movements are normally executed on both sides; there is no atrophy of the right side, although one's first impression might be that the left side is the normal and the right

atrophied. The surface temperature of both sides is the same and sensation is intact. No difference exists between the two halves of the face, head or trunk or between the two arms, the overgrowth being limited to the right leg.

The tumor which was variously diagnosed as a lipoma, angioma and lymphangioma, was later removed by G. W. Crile, and to our surprise turned out to be composed of striated muscle tissue. After incision through the skin and superficial fascia the tumor, without a capsule, came into view and macroscopically looked like an ordinary skeletal muscle. It was not enclosed in a sheath and was separated from the underlying muscles of the sole by the plantar fascia. It terminated in tendinous insertions into the skin, forward underneath the proximal phalanges and backward near the heel. The excised tissue was examined microscopically by L. W. Ladd and proved to be ordinary, fully developed, striated muscle with regularly disposed sarcous elements, and must therefore be considered as an evidence of embryonic aberration without true tumor formation, since true rhabdomyomata never attain the full development of mature striated muscle. (Ribbert.)

A number of cases of congenital hemihypertrophy or unilateral gigantism have been reported, most of which involved the entire half of the body, the enlargement, however, usually being most pronounced in the extremities, especially in the lower. Cases involving a single extremity are much rarer but have been reported for both the arm and leg. Most of the instances of congenital hemihypertrophy have occurred in males and the right side has been the more often involved. Nevi and telangiectases have been described as accompanying hemihypertrophy in several cases; also synostosis of the proximal phalanges and in one case this latter condition existed in a pair of toes on each foot. These cases of synostosis, however, were reported before the X-ray era and are therefore open to criticism. I could find no case in the literature associated with other congenital tumors or misplacements.

Congenital tumors of various kinds have been reported, such as lipoma, angioma, lymphangioma, osteoma, chondroma, adenoma, epithelioma and teratoma simple and mixed. Rhabdomyomata occur most commonly in children and are probably almost always congenital, but no reference was found in the literature to a congenital misplacement of muscle tissue. Comparative anatomy, so far as I know, offers no clue for the interpretation of this anomalous placement of muscle-tissue as an

atavistic or reversionary phenomenon. Most of the above mentioned tumors have been at times reported as occurring on the legs, and congenital lipomata on the sole of the foot, have often been described.

I am unprepared to say whether or not a causal nexus can be established between the growth on the foot and the hypertrophy of the limb, for instance, by assuming that the mass, causing an increased blood-supply to the member, might thus lead to an overgrowth. My inclination is rather to the belief that, in accordance with the well-known tendency of congenital anomalies to be multiple, we have here to deal with a combination of two anomalies, the one rare and the other apparently unique, namely a congenital hypertrophy of the leg with an anomalous misplacement of muscle-tissue. It is interesting to again note that apparent synostosis of the proximal phalanges, which has been reported several times with hemihypertrophy, is also present in this case.

A Case of Chylous Cyst of the Thoracic Duct

H. F. BIGGAR, JR., CLEVELAND, O.

In August, 1903, Mr D. V. presented himself for examination. His case had been diagnosed as an umbilical hernia. His age was 38, he was a farmer leading an active life and had never been ill with the exception of some eruptive fevers incident to childhood. The family history was negative. His condition was that of a well nourished, muscularly developed man. He had first noticed, about six months previously, a small enlargement in the centre of the abdomen. This gradually became larger; there was no pain and no impairment of the bowel functions; the kidneys were active. Urinary analysis was negative, showing a specific gravity of 1021, acid reaction, no sugar, no albumin and no pathologic renal products. Blood examination was negative, showing hemaglobin 85%; red cells 4,200,000 and whites 8,200. Physical examination of the thorax, heart, arteries, reflexes and abdomen was negative, excepting for a tumor at the level of the umbilicus. This tumor was about the size of a cocoanut, when the patient stood in the erect position the tumor would rise a little above the navel and in the median line. The abdominal walls were muscularly rigid. There was no pain on palpation. In the diagnostic examination hernia was eliminated as well as intramural abscess, on account of the change of position of the

Read before the Cleveland Academy of Medicine, April 5, 1907

neoplasm in the different postures. Abdominal exploration was advised and accepted.

He entered Lakeside Hospital August 18th, 1903, and was operated upon the following day. Under anesthesia, when the abdominal muscles were relaxed, the tumor was freely movable and evidently pediculated. This important symptom had been obscured by the tense rigidity of the recti muscles at the first examination. Upon opening the abdomen a round tumor, smooth and symmetrical, and six inches in diameter, was disclosed. It was attached to the mesentery of the jejunum by a pedicle, and had a serous peritoneal covering. The tumor was cystic in character and distinctly fluctuating. It was delivered from the abdominal cavity and an attempt was made toward enucleation. In stripping off the peritoneal covering the mass was punctured and emitted a clear milky white fluid, a specimen of which was collected in a test tube and immediately sent to the pathologic department. In a few minutes the fluid was reported as pure chyle. The tumor-sac was trimmed off; the pedicle ligated and with the serous sac stitched to the peritoneum as in cholecystotomy and the abdomen closed with tubular drainage.

The patient held a normal course for three days, when suddenly there developed great distention, fecal vomiting, a rapid feeble pulse and collapse. The wound was hurriedly opened (without anesthesia) to relieve a possible bowel obstruction. The entire small intestine was found to be thickened, edematous, dark bluish in color but with no apparent obstruction.

High rectal tubes were passed to relieve gas, with no result. The intestinal canal was emptied by intra-abdominal assistance with no lessening of the edema of the gut. Salines and stimulants were of no avail and the patient died within an hour. An autopsy showed autochthonous thrombosis of the superior mesenteric vein and the site of the tumor to be at the receptaculum chyli, the origin of the thoracic duct. The remainder of the duct was normal.

During the operation there had been no excessive bleeding or unusual manipulation of the mesentery.

The thoracic duct has its origin at the root of the mesentery in the receptaculum which is ovoid in shape 1/6 to 1/8 inches in diameter and two to three inches in length. The duct, about 16 inches in length, together with the right lymphatic duct, drains the abdominal lymphatic system, and empties into the venous circulation at the beginning of the left innominate vein. I mention this as there have been some injuries to the lymph vessels

of the neck treated by surgical anastomosis, although, if we consider the natural collateral relationship, this procedure is not always necessary.

Sir Astley Cooper ligated the thoracic duct of many dogs. In some the receptaculum burst, and death resulted, but it was in those cases in which there was insufficient lymphatic anastomosis.

Krauss says the amount of lymph in the human body is equal to one-third of the body weight, while Ludwig and Majendie estimate it at one-fourth. By tapping the thoracic duct in man Lesser obtained 5½ litres in 24 hours.

Cayley reports a case of rupture of the receptaculum into the peritoneal cavity, followed by peritonitis and death. He concludes that chyle is as irritating to the peritoneum as urine, bile and gastric secretion. Obstruction of the thoracic duct has been observed by the extension of cancer of the stomach, uterus and bowel; while cancerous masses immediately surrounding the duct have not produced chylous ascites. Lymph increases in quantity under the influence of pilocarpin and is diminished by ergotin.

Though the thoracic duct has been obstructed or injured quite frequently, I find in the literature very few reports of tumor formation. Osler says that he once saw a cyst of the duct about the size of a hen's egg.

In the above case there was not an excessive amount of chyle lost through drainage during the three days of life after the operation, perhaps on account of the packing around the drainage tube; yet, did this have an influence on the formation of the thrombus? In mesenteric thrombosis the differential diagnosis from ileus, volvulus or intestinal obstruction is very difficult; the symptoms being, clinically, nearly the same. The prognosis is very grave, the mortality, even when the true condition is diagnosed, being about 94%.

The treatment of mesenteric thrombi or emboli, when recognized, offering the most favorable results, is surgical. The gangrenous gut should be quickly excised and the distal and proximal ends fixed in the wound to await a subsequent anastomosis. Of 47 operative cases collected by Jackson, Porter and Quinby, four recovered, a mortality of 92%.

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Epithelioma in Carbon Workers

A. W. LUEKE, M. D., CLEVELAND

In presenting this paper, tonight, it is not my purpose to call to your attention anything new, but a subject which is known in medical literature under the titles chimney sweeps' cancer, tar and paraffin workers' cancer and epithelioma of the scrotum. On account of the vast majority of cases occurring in the scrotal skin, it is quite often described as cancer of the scrotum, although the epithelioma may occur on the extremities, face or penis. In England this disease is prevalent among the chimney sweeps and therefore bears the name of chimney sweeps' cancer.

The experience of the surgeons in our city has not been amongst the artisans employed in the above named industries, but among the employees of one of our large industrial establishments, namely, the carbon works. Ogston, in his book on dangerous trades, refers to the chimney sweeps and to oil, tar and paraffin workers, but does not mention carbon workers. I believe a great many of our Cleveland men have encountered this disease, Dr Hamann has seen six cases, and Dr House informed me that he has seen quite a number of them.

Sir Percival Pott called attention to this type of cancer, that is chimney sweeps' cancer, during the eighteenth century. In 1832 Earle gave a detailed account of cases occurring at St. Bartholomew's Hospital. Other English surgeons referring to this subject are Sir James Paget, Sir Astley Cooper and Butlin, the latter delivered three lectures upon cancer of the scrotum before the Royal College of Surgeons in 1902.

In 1875 Volkman, of Halle, published his article on "Tar, Paraffin and Soot Cancer," which was followed in 1880 by Tillmann, who published a paper *"Ueber Theer, Russ und Tabakskrebs";* French writers referring to this subject are Vidal and Nelaton.

This disease occurred rather frequently in England, especially in the days of the chimney sweep. The subject seemed to arouse considerable interest there in the first half of the last century but waned as surgeons in other countries failed to take cognizance of this malady.

In 1875 Volkman published his articles on three cases of epithelioma of the scrotum which he observed in workmen of the tar and paraffin works in the neighborhood of Halle. In

Read before the Academy of Medicine of Cleveland, April 5, 1907

his article, delivered at the Royal College of Physicians and Surgeons, Butlin declares that cancer of the scrotum is still prevalent among English sweeps, that out of 242 deaths occurring among members of that trade, from 1887 to 1889, 49 died of cancer. In Germany, France and Austria the disease is quite rare, Nelaton calling attention to its infrequency in France.

Koring, from 1875 to 1890, did not see one case of carcinoma of the scrotum, while Von Esmarch wrote to Butlin, "Although stone coal is used for heating in Germany, cancer of the scrotum does not occur." In Belgium, also a coal burning country like England, only a few cases were observed.

Gallet in 33 years of practice saw 28,000 Belgian coal miners, not any of whom were affected with the disease, while Wimwarter, of Liege, saw only one case. In the Allgemeine Spital, of Vienna, only one case of epithelioma of the scrotum was observed from 1874 to 1884 and not a single case at the Berlin Charite from 1878 to 1885. Setherwaite reports one case at the Boston City Hospital from 1881 to 1886. Van Buren, in his text-book of Genito-Urinary Diseases, claims epithelioma of the scrotum is a rare disease in America.

It occurs at a younger age than other cancers of the squamous type. Of 20 cases at St. Bartholomew's, two cases occurred between the ages of 25 and 30; two between the ages of 30 and 35; two between the ages of 35 and 40; five between the ages of 40 and 45; ten between the ages of 45 and 50 and eight between the ages of 60 and 65. Of 39 cases of cancer of the scrotum, occurring at the above hospital, seven occurred in men under 40 years of whom six were chimney sweeps.

The method of making carbons at the National Carbon Company, which I visited recently, is as follows: a coke, which is made from the residue of crude petroleum, after the oils, naphthas and paraffins have been removed at the refineries, is shipped to the carbon factories, where it is ground up in a milling machine. This ground product is then mixed with an oily liquid, derived from tar or pitch, to make the fine particles adhere to each other. At the next stage the mass is placed in moulds and with hydraulic dies stamped into the desired shape. Then the carbon is placed in an oven and baked for 24 hours. It is from the moulding department, where the men come in contact with the oily and sooty mass, that my cases came. The men in the different departments wear gloves to protect their hands, although their wrists are more or less exposed. At this trade the men handle the ground coke, which is similar to the irritant causing

the chimney sweeps' cancer, with the additional irritant, the oil of the tar and paraffin worker. The officials of the plant seemed to be ignorant of the prevalence of cancer amongst their laborers. The men, mostly foreigners, ignorant of the iritating material on their gloves and hands, are apt to get this oily soot between the folds of the scrotum when they urinate.

The soot, the products of the tar and paraffin or the oily mass handled by the carbon workers are probably indirectly the excitors of the epithelioma. It is improbable that the cancer germ, if it exist, is to be found in the above named materials, as they are all subjected to high degrees of heat, which would undoubtedly destroy any germ. Nor does the mixture itself excite the cancer, but it causes a mechanic or chemic irritation of the skin, especially that of the scrotum, between the folds of which the soot or oil lodges. The skin becomes chronically inflamed, dry and rough; then moist eczema follows with the formation of crusts and scales. The hair follicles are inflamed, being the seat of an acneform eruption.

The skin becomes thickened and the secretory ducts patulous, and soot finds its way into their openings, giving them a black appearance. Continued irritation produces nodules of epidermis around the ducts in the shape of warts (soot-warts or Russ-warzen). These papillary neoplasms, being further irritated, are scratched off again and again and in some cases cancerous degeneration takes place. Although these warts are found as often on the arm as on the scrotum, they scarcely ever undergo malignant change on the extremity. These tumors or ulcerations display a hard, infiltrated, uneven base, the edges of which are steep and sometimes undermined. On the surface of the ulcer yellow dots are seen, which may be squeezed out upon pressure; these show the characteristics of cancer pearls upon microscopic examination. The scrotum may be the seat of one or more epitheliomata, while it often presents from one to a dozen warts in addition to the cancer.

These warts may exist for years and some workmen have their scrotums covered with soot-warts none of which need undergo cancerous degeneration, but owing probably to some special irritation one may become more prominent, more fixed and the center may ulcerate. The ulceration generally spreads along the skin but may also penetrate the deeper structures as the tunica vaginalis and testes. The growth is generally removed nowadays before it involves the whole scrotum and the perineum as it did in the days before anesthetics.

The infection of the lymphatic glands occurs late in the course of the disease, although Tillman claims that it is early. In a case observed by Curling in 1852, and in two cases reported by Lawson in 1872, the primary disease occurred in the lymphatic glands of the groin. Tiersch, who mentions these cases, believes them to be secondary to undiscovered epitheliomata of the scrotum. Butlin is of the opinion that they were secondary to epitheliomata or beginning epitheliomata of the scrotum, the skin of which had long been irritated by foreign bodies but had showed so great a resistance that the original neoplasm had aborted. In this way many apparently secondary cancers may be explained. The tumors show the structure of squamous cell epithelioma with characteristic epithelial lobules and pearls. The prophylaxis consists in keeping the skin clean by frequent bathing. The men ought to be instructed not to touch the skin of the face or scrotum with their gloves or dirty hands. Any eczema which may arise should be treated.

The treatment is the same as that for any squamous cell epithelioma of the skin, that is, removal with any neighboring infected gland. Undoubtedly excision is the best means although X-ray treatment might give the desired result.

The prognosis is good if the process is confined to the original tissue. Butlin claims nine cures out of 22 cases. Even if the deeper structures are involved the prospect of successful operation is better than with other forms of cancer.

CASE I. September, 1902. An ulcerating epithelioma of the scrotum about the size of a half dollar with a number of soot-warts. The tumor was removed and the patient was well two years afterwards.

CASE II. 1904. An ulcerating scrotal epithelioma with no lymphatic involvement. The growth was excised. On April 3, 1907, there was no local recurrence but on the left side of the neck was an ulcerating surface about the size of a quarter, occurring on the site of an old soot-wart. The ulceration began about three months previously. He had given up employment in the carbon works in 1904 after the removal of the first tumor. This later tumor was also removed together with a soot-wart on the other side of the neck.

CASE III. March 1907. An ulcerating growth slightly posterior to the angle of the mouth on the site of a soot-wart. Posterior to this is a soot-wart which is also beginning to ulcerate. A microscopic examination of these, after removal, showed squamous celled epitheliomata.

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Certified Milk

We understand from the Milk Commission that the demand for certified milk has been growing constantly since the date of the annual report of the Commission in December, 1906. The shipments from the farm during the last week in March were the largest so far reported for a single week, and those for the entire month were exceeded only by the shipments of October and November, 1906.

The increasing sales testify to a growing confidence in and appreciation of the product. Until now there has been no regular distribution of certified milk in the south end of the city, but with the spring, a branch office at 7224 Broadway, by the Walker-Gordon Laboratory, it will be possible for physicians of the south end to secure certified milk, modified milk and the other well-known products of the Laboratory by regular delivery. The increased facilities in this district will undoubtedly develop an increasing demand.

The Economic Value of Preventative Medicine

Measures with this end in view, as a rule, fail to impress themselves with sufficient force upon municipal voters. One has only to look at the fate of many proposed sanitary works in our cities and towns to realize the truth of this. For example, the death tribute which typhoid fever claims from Philadelphia has for years been appalling, the necessity for filtered water has been constantly urged, but today the same contaminated water is largely in use, although we believe a filtration plant to handle the whole supply is now under construction. This is merely an instance of a very common state of affairs.

It has been shown conclusively that measures of a sanitary nature are usually good business propositions, the actual cash value of lives that are needlessly lost would in a short time more than repay the whole cost of such improvements.

The value of a crusade against mosquitoes, entirely aside from its medical purpose in preventing the spread of malaria, is pointed out by Smith in the April number of the *Popular Science Monthly*. He shows that many districts which would prove ideal summer resorts, or be valuable as dairy or stock farms, are rendered useless for such purposes on account of the mosquito plague during the summer months. Many of these areas could be practically freed from these pests if sufficient money were spent, and the resulting increase in the value of the property would usually exceed the cost of the improvement. It is only of late that much effort has been made in this direction and mainly with the view of fighting malaria and yellow fever.

Business concerns are beginning to realize the value of preventative medicine and many industrial companies now maintain well equipped hospital rooms upon their premises and supply immediate medical aid to those of their employes accidentally injured. By so doing they greatly reduce the chances of their having to defend suits for damages. The German insurance companies, aware of the inroads that phthisis makes upon their risks, have assisted largely in the establishment of sanatoria for the treatment of such cases, realizing that the restoration to health of some of their clients, and that the educational value of these institutions in limiting the spread of the disease, would in the end prove of the greatest value to them and well worth the cost of the investment.

The economy of hospital treatment to the patient is pointed

out by Dr George E. Gorman, whose article in the *Argus* is quoted in the Albany *Medical Annals* for April. He shows what a saving it may effect a family if a sick member be sent to a hospital, not as a free patient, but as one paying both the hospital charges and also the attending physician. This is especially true as regards infectious disease; a person has, for instance, scarlet fever, the other members of the family including the breadwinners will in all probability have to be quarantined for a considerable time and they will also run great risks of themselves acquiring the disease. If, in such instances, on the first outbreak of the disease the affected person could be moved to an isolation hospital much of the needless expense of quarantine could be obviated.

The local papers have been drawing attention to the fact that Cleveland has very poor hospital facilities for dealing with the usual infectious diseases; the recent report of a committee of the Academy of Medicine corroborates this view. For many years, apparently, the City Government has failed to make sufficient appropriations to maintain the efficiency of the City Hospital in a first class condition, and yet from a purely business standpoint it is the greatest mistake. The local Health Department is doing most excellent work in fighting contagious disease and its efforts would be most powerfully aided by the existence of ample and satisfactory hospital facilities for such cases. There seems to be at present some difficulty in obtaining funds for needed improvements but Mr Cooley promises that they will be obtained in some way or other, and the amount needed should be regarded by the Council as an indispensable emergency grant.

Epidemic Cerebrospinal Meningitis

Northern Ohio has been visited of late by a virulent type of this disease and, although Cleveland itself has almost entirely escaped, there is a great possibility of the appearance of the disease in the city. The Health Officer, Dr Friedrich, in a circular letter to the profession, very properly calls attention to this fact and urges that cases be reported immediately upon their discovery and that as complete isolation of the patient as possible be observed.

At present we seem almost powerless in our fight against this disease, the causative agent and pathology are well known but treatment seems to be of little avail. The serum produced by Flexner has been very satisfactory in animal experiments, and it is to be hoped that the clinical results, when it is employed in

human beings, will prove of equal value. The serum was used in a few of the Castalia cases and we understand with apparently beneficial results, although complete reports have not yet been made; by the time the serum was obtained the epidemic had practically ceased, so that there were very few cases available in which it could be tried.

The St. Louis Medico-Legal Commission

In the April number of the JOURNAL, in an editorial note, we commented on the subject of expert testimony, calling attention to the recommendation of Dr Allen McLain Hamilton for the establishment of a permanent board of alienists to judicate *in re* the sanity or otherwise of an alleged criminal.

Through the courtesy of the editor of the St. Louis *Medical Review,* we have had our attention called to the fact, which had hitherto escaped our knowledge, that in St. Louis they have had a tentative plan of this kind in operation since the beginning of 1905. In the St. Louis *Medical Review* for October 13, 1906, there is an interesting editorial reporting the great success of this plan in St. Louis. The credit for its successful evolution belongs to Dr Henry J. Scherk, the City Dispensary and Jail Physician. After a trial of over two years, it has been shown to be eminently just and acceptable to both sides. It has been applied in many cases and has been practically successful in every one. After a trial of 15 months, Dr Scherk was able to report "that in no single instance had a report of the commission been rejected by the jury in those cases in which the defense has refused to accept the opinion of the commission and has brought the case to trial and attempted to prove a condition opposite to that of the report of the commission."

In a personal letter from the editor of the St. Louis *Medical Review,* Dr Millican tells us that after the commission has decided that a party is sane or insane, no matter how the interested parties may have thought about the matter, in no single instance have they attempted subsequently to contravene the previously accepted report of the commission.

The committee, as constituted under the St. Louis plan, consists of three experts chosen, because of their experience and knowledge of nervous and mental diseases, by the court and jail physician; together with the jail physician as a fourth member of this committee, by virtue of his office and his interest in the charges under his care. In the suggestion first outlined by Dr

Scherk in 1905, which should govern this committee, we quote in full the third and fourth paragraphs as of special interest in this connection.

"Whenever, in the opinion of the Circuit Court, the circuit attorney, or the jail physician, there is committed to the jail a prisoner in whose case there is any suspicion of mental disease, either past or present, which can have any bearing whatever upon the crime for which the prisoner has been arrested, such a prisoner, upon coming to trial, should be examined by this body of experts, either singly or collectively as the case may demand, for the purpose of determining his responsibility, irresponsibility, the degree of irresponsibility and his final disposal, if his irresponsibility is established.

"The decision of this body is to be submitted in writing to the judge before whom the prisoner is to be tried, or to the grand jury. If the decision is not unanimous, a dissenting opinion can likewise be submitted."

It is a great pleasure to learn of the successful development and working of this plan in St. Louis and it is indeed true that, in this respect, St. Louis presents to the world a practical demonstration of the operations of certain principles that are still being considered everywhere else as theoretical problems. To those particularly interested in this subject, and we all of us should be, we would refer directly to the articles appearing in the St. Louis *Medical Review* for June 10, 1905, and October 13, 1906.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Oxytocics: Arthur R. Cushing, in the *Journal of Physiology* for December, 1906, summarizes the experimental action of drugs upon the uterus. He asserts that in malaria the administration of quinin has so often been followed by abortion that many authorities deprecate its use in pregnancy; and on the other hand, quinin injection has been advocated in obstetrics to induce labor pains when these are deficient. Insofar as he knows, there have been no experiments on animals, and in fact few systematic observations in patients on this phase of activity in quinin. He found that injections of the hydrochlorid in the rabbit and the cat (five or 10 milligrams) generally causes marked contraction of the uterus. The contraction was a short one compared with that induced by ergot, the uterus often resuming its former degree of relaxation after one or two minutes, according to the amount of quinin injected. He is not aware whether this action is confined to the uterus, or affects other forms of unstriated muscle, but, in any case, the experimental confirmation of the clinical observation encourages further trial in obstetrics. Aloes has long enjoyed a reputation in uterine disease, but its

effects have generally been attributed to passive congestion of the pelvic organs, through local irritation and consequent hyperemia of the intestinal mucous membrane. He found that five or 10 milligrams of barbaloin injected intravenously induced immediate contraction of the uterus, and the rhythm of the movements was often accelerated afterwards; after larger doses the uterus did not relax completely, for a considerable time after the injection. Insofar as ergot was concerned the most marked action was the prolonged contraction of the uterus, which Dale ascribes to a substance acting on the muscle directly. It was equally marked in rabbits and cats, and was not influenced by the stage of gestation. Barium in small quantities, such as five or 10 milligrams of the chlorid, causes a marked increase in the tone of the uterus, and after larger amounts a complete contraction. The anesthetics are generally credited with causing relaxation and slowing or arresting of the contractions of the uterus in labor, but in his experiments their effect was generally slight, or in some cases entirely absent.

Rheumatism: In the *Monthly Cyclopedia of Practical Medicine* for February, Woods Hutchinson is strongly inclined to regard rheumatism as a neurotoxis, occasionally deepening into a neuritis, of multiple postinfective or other toxic origin. The best results in the way of treatment are got by controlling the acute pain with the milder analgesics, and especially such as obtund nerve pain, like phenacetin, chloretone, ichthyol and the salicylates, and then promoting the elimination of the toxins in every possible way, by hot baths and sweats, hot mineral waters, the alkalies, the iodids, urotropin, etc. Any specific action on the part of the salicylates is a myth, as they have been clearly shown to neither shorten the course of the attack, nor diminish cardiac complications, while they increase the frequency of relapses. Their sole value lies in their analgesic and mild intestinal and urinary antiseptic effects; and these can often be obtained in one-third of the time with far less disturbance of the stomach and nerves by phenacetin and chloretone (five grains of each every hour till pain is relieved or four doses are taken), then every three hours followed by ichthyol.

Arhovin: In the *Therapeutic Review* for March, Ernst R. W. Frank states that the bacteriologic investigations made in recent years with sandalwood oil have shown that this oil does not possess a gonocidal action and this is probably true also of copaiba balsam, and the other balsamics. The real cause of the inadequacy of every treatment of gonorrhea rests on anatomic grounds. Arhovin, a new agent in the internal treatment of gonorrhea, is not a balsamic but an aromatic liquid, and on account of its taste can only be taken in capsules, and is readily absorbed. It is stated that arhovin possesses antibacterial power, and its decomposition products are capable even in cases of alkaline or ammoniacal fermentation of producing an acid reaction in the urine. Arhovin oil in contact with gonococcus cultures caused their death in from one to two hours. His experiments showed that arhovin, as well as other internal remedies, does not render local antisepsis superfluous in the destruction of the gonococcus, and he believes albargin the

best of the silver preparations. Arhovin, however, will be welcome, even more than the balsamics, by reason of its sedative analgesic action on the inflamed mucosa of the urinary tract. All known balsamic agents employed in the internal treatment of gonorrhea have the disadvantage of producing irritation in the gastrointestinal canal, and upon the kidneys; even after the continued administration of arhovin, however, in a considerable number of cases, he has never heard the slightest complaint nor noticed any signs of irritation, even when the dose reached 10 to 12 capsules per day, each 0.25 grams, for three or four days in succession. In cases of gonorrhea, or other bacterial infections of the urinary passages, he found the irritating symptoms greatly lessened, if not entirely banished, by arhovin, and he therefore looks upon it as a useful agent in the treatment of inflammatory, and especially gonorrheal diseases of the urinary tract.

Scarlet Fever: Edward Leland Kellog, in the *New York Medical Journal* for March 9, believes that in scarlet fever the importance of giving water freely cannot be overestimated. Care should be taken, however, not to over distend the stomach by giving too much at one time. It is important to have the excretory function of the skin reassert itself as early as possible so as to relieve the extra strain thrown upon the kidneys, and the long continued use of emollients after desquamation is well advanced is a mistake. It is his custom to limit the oiling of the body to the early days of the disease, and then to use it only in those cases in which the skin is much irritated, or pruritus is a prominent symptom; and for this purpose cacao butter is excellent. In cleansing the nose, throat and nasopharynx, a douche of normal saline is the solution ordinarily used. He has never found this method to produce any ear complication. Early and free paracentesis, when the middle ear was affected, left little or no impairment of hearing, while in those which ruptured spontaneously, the ultimate results were not so satisfactory. The treatment of the discharging ear consisted of bichlorid irrigations (one to 4,000) and in the subsiding stage of instillations of zinc sulphate solution, three grains to the ounce, the canal between the treatments being plugged with sterile cotton. The treatment of nephritis is largely prophylactic, consisting of milk diet for three full weeks combined with the use of large quantities of water, the specific gravity of the urine being kept below 1010. The treatment of cervical adenitis is largely prophylactic, and consists of thorough disinfection of the nose and throat. When the glands become painful and tender, it is his custom to apply an ice-bag over a layer of flannel for 48 hours unless it causes neuralgic pains. At the end of that time, if further treatment is required, hot flaxseed poultices are applied freely, and usually with great benefit. This treatment has never produced suppuration. Ichthyol ointment hastens resolution.

Iodin: John Egerton Cannaday, in *American Medicine,* calls attention to the use of iodin in surgical work. To iodin the staphylococcus is far more resistant than is the streptococcus; while it takes a 1-100 solution five minutes to kill the former, a 1-500

solution is fatal to the latter in two minutes. Dr Kinnaman's conclusions are that in a solution of iodin varying from one-fifth to one-sixth percent, we have a germicidal agent of marked potency. Its bactericidal power is far superior to mercuric chlorid, the acknowledged leader of all other antiseptics. Iodin in weak solution as an irrigation is of much value in the treatment of suppurative conditions, as suppurative arthritis, abscess empyema, etc. He has several times used a one-percent solution in the treatment of suppurating sinuses and wounds, with the result that there was a prompt disappearance of pus, and an abundant formation of healthy granulation tissue. It must not be forgotten that, although iodin is the most harmless of antiseptics, it and its compound iodoform are active agents and as such should be used with caution. They are under certain circumstances powerfully toxic. It is after injection into serous cavities that the most serious results are seen. The pyogenic membrane lining the tuberculous or pus cavity seems to possess the power of immunity to a marked degree. The old and enfeebled patient will be much more susceptible to the poisonous action than the more robust, and an individual suffering from septic infection will tolerate much more iodin without the symptoms of poisoning than one under normal conditions. He uses a one-half of one percent solution (alcoholic) for purposes of hand disinfection preliminary to operative work in all cases in which rubber gloves are not worn and the same solution is made use of in the preparation of the site of operation incision. Dilute ammonia water removes the light brown stain, and the clinical results of this method have been superb. He believes that iodin constitutes a near approach to a perfect antiseptic, in that it is nontoxic in effective strength, one-fourth as poisonous as mercuric chlorid, though more powerful as a germicide. It possesses great power of penetration, is easily prepared and is stable.

Nuclein: In the *American Journal of Clinical Medicine* for February, Ernest S. Heilman believes that nuclein when given by the mouth has little effect in increasing leucocytosis, but that when used hypodermically, an increasing leucocytosis followed in every case. The indications for its use then would be limited to those diseases of pus-producing organisms which produce a local reaction, abscesses of all varieties, serous membrane inflammations, all acute infections attended with a local inflammation, erysipelas, pneumonia, phthisis (with cavities), pyemia, meningitis and diphtheria. The nuclein field of usefulness being limited to those diseases in which the infection is combated by a hyperleucocytosis, diseases like malaria, measles, epidemic influenza, typhoid fever, and tuberculosis, in which the resistance is not due to a phagocytosis, would not be influenced by nuclein.

Cardiac Stimulants: S. E. Earp, in the *Central States Medical Monitor* for March, states concerning cardiac stimulants, that they are agents which enforce power to the circulation, and that ammonia, camphor and alcohol are good examples. There is some question perhaps in regard to alcohol, but if some men produce contradictory argument, it is overcome by physiologic evidence, and some of the most eminent

pharmacologists affirm that it is one of the most important cardiac stimulants. Wood claims that the diversity of opinion is due to the different doses used, and it is the small dose that acts as a stimulant, the toxic dose reducing the rate and force of the pulse. Small doses elevate blood-pressure, although a drug may stimulate the heart and yet have no constant effect on the blood because it depresses the vasomotor condition. He concludes that in small doses alcohol acts upon the heart as a direct stimulant, and in large doses as a depressant or paralyzant. In certain diseases in which dropsy is a symptom, pilocarpin is often used, but in cardiac dropsy it is contraindicated because of its depressing influence upon the heart. The hair sometimes darkens under its use.

Arterial Degeneration: Joseph L. Miller, in the *American Journal of the Medical Sciences* for April, concludes, as the results of experiments in producing arterial degeneration, that there are a number of substances capable of producing vascular changes. At the present time this list includes bacterial toxins, extract of suprarenal, and various similar synthetic preparations, phloridzin, digitalis, nicotin, physostigmin, barium chlorid and lead. The majority, but not all of these, increase the pressure. This may be largely accounted for by the fact that those who have done experimental work have selected those substances which increase pressure, as they have considered this an important factor in the change. He found that both physostigmin and barium chlorid, two new agents in the list of those capable of producing arterial changes, cause an arterial degeneration, the latter producing changes apparently differing from adrenalin. He demonstrated that the subcutaneous injection of adrenalin may cause a very distinct rise in pressure, thus annulling the evidence, that when arterial degeneration follows the subcutaneous use of this drug, it is necessarily due to its toxic rather than its pressure effect. He was also able to inhibit the pressure action of the adrenalin by the use of amyl nitrite. For this reason arterial changes following the combined use of these substances does not prove that the process is toxic, as was maintained by Braun.

Hemorrhage in Typhoid: In *Merck's Archives* for March, the subject of hemorrhage in typhoid fever is treated by Tasker Howard. As hemorrhage is most likely to occur during the ulcerative stage, it cannot occur therefore until about the third week of the disease, and it may occur from an unhealed lesion even after convalescence is apparently established. The question of the treatment of hemorrhage must be answered differently in each individual case. If the collapse is sufficient to endanger the patient's life, it must of course be met energetically, care being taken not to overstimulate the patient, and thus cause a continuance or a recurrence of the hemorrhage. The application of external heat, bandages to the extremities, elevation of the foot of the bed, the use of normal saline solution, and such diffusible stimulants as camphor, caffein and ammonia must all be resorted to at times. Absolute rest is of the greatest importance. To procure absolute rest of the bowel, and thus afford a favorable opportunity for clotting, it is usually advised

to give morphin freely by hypodermic, while protest has been entered against this practice, morphin seems to be more efficacious than any other drug and in severe or continued hemorrhage, particularly where there is great restlessness, morphin may be the means of saving life. Astringents given by the mouth can have but little effect, and he has but little faith in the use of adrenalin. The calcium salts, perhaps the lactate five to 15 grains three times a day, and the use of gelatin, both increase the coagulability of the blood. He believes that our interference in the course pursued by these patients consists in combating the collapse only when it becomes dangerous, securing quiet of mind and body with as little medication as possible, and endeavoring to increase the coagulability of the blood. No rules can be invariably followed. Each patient must be treated as conditions present indicate.

Strophanthus: In the *Journal A. M. A.* for April 6, R. A. Hatcher summarizes the relative value of strophanthus and digitalis, stating that strophanthus has not rivaled digitalis in the extent of its use, except perhaps for a short time after the former was brought into prominence by Fraser. Strophanthus, and to a greater extent, its active principle strophanthin, act much more promptly than digitalis or digitoxin. Strophanthus also produces much less vasoconstriction in the splanchnic area than digitoxin does, and while this is a disadvantage in shock, it is often desirable in producing diuresis, since the constriction of the vessels in the kidney by digitoxin may seriously interfere with the diuretic action. Strophanthus too causes practically no constriction of the coronary vessels, in contrast with the action of digitoxin, with which the constriction was found to be so marked at times as to completely mask the other actions on the heart. Cumulative effects too are not so readily induced with strophanthin as with digitoxin. Further advantages of strophanthin over digitoxin are its greater solubility in water; it is not irritating and therefore may be injected hypodermically; it is much more active and not nearly so expensive as digitoxin. It should be borne in mind that the tincture of strophanthus of the present revision of the Pharmacopeia is of 10% strength, while that of the previous edition was but half as strong, and the physician should assure himself that the patient gets the stronger preparation. In conclusion he asserts after extensive experiments that there is no difficulty in obtaining tincture of strophanthus in the open market of quite as uniform potency as the tincture of other drugs not standardized, and that the seeds do not undergo deterioration on being kept for several years, so having an advantage over digitalis leaves, which rapidly deteriorate. Digitalis continues to be of very variable strength, and the strength of the infusion varies greatly with the manner of preparing it, the infusion from the powdered leaf being more potent than that from the leaves simply broken up in the mortar as is often the case.

Hyoscin Morphin: In the March number of the *Critic and Guide,* Emory Lanphear calls attention to the use of the hyoscin-morphin-cactin compound, not only as a means of producing analgesia for surgical operations, but also as a substitute for the com-

monly used morphin-atropin combination for the relief of pain, stating that after one has employed the newer formula for mere anodyne effect, he will not return to the use of the old-time mixture, and he summarizes its advantages over the morphin-atropin formula as (1) it does not interfere so much with peristalsis; (2) it does not dry the throat so badly; (3) it does not cause so much nausea and headache; (4) it increases the heart's action more effectually and for a longer time; (5) it produces a degree of exhilaration most agreeable to the patient; (6) it induces a more perfect freedom from pain and the sleep is more nearly like that of normal slumber. The formula of the Abbott-Lanphear tablet is chemically pure hyoscin hydrobromid grains 1-100, chemically pure morphin hydrobromid grains 1-4, cactin (from cactus grandiflorus) grains 1-67.

Academy of Medicine of Cleveland

The forty-seventh regular meeting of the Academy was held at 8 p. m., Friday, April 19, 1907, in The Auditorium at the Cleveland Medical Library. Program: Tumor of the Brain, Report of a Clinical Case, H. G. Sherman, M. D., W. T. Miller, M. D.; Some Surgical Lesions of the Central Nervous System, Charles H. Frazier, M. D., Philadelphia, Pa.

Clinical and Pathological Section

The forty-first regular meeting was held at 8 p. m., Friday, April 5, 1907, at the Cleveland Medical Library.

Program: Dr Hitchings showed some Japanese paper ice bags; Dr Bunts presented a specimen of thrombosis of the popliteal artery resulting in gangrene of the leg and occurring in a case of pneumonia. The following papers were read: Early Aspiration in Pleurisy with Effusion, with Reports of Cases, N. C. Yarian, M. D.; Chylous Cyst, Report of a Case, H. F. Biggar, Jr., M. D.; Epithelioma of Carbon Workers, with Report of Cases, A. E. Leuke, M. D.; Congenital Myoma of the Foot with Overgrowth of the Leg, Report of a Unique Case, A. S. Maschke, M. D.

Experimental Medicine Section

The thirty-second regular meeting was held at 8 p. m., Friday, April 12, 1907, at the Cleveland Medical Library. Program: Transfusion in Carbon Monoxide Poisoning, G. W. Crile and C. H. Lenhart; Further Researches on the Treatment of Shock, G. W. Crile; The Clinical Significance of Cyanosis, C. F. Hoover; The Effect of Transfusion on the Metabolism of Dogs, H. D. Haskins and G. W. Crile.

The Ophthalmological and Oto-Laryngological Section

The twenty-eighth regular meeting of this Section was held Friday, April 26, 1907, at 8 p. m., at the Cleveland Medical Library. Program: Discussion and Presentation of Interesting Cases of the Fundus, W. E. Bruner, C. C. Stuart; Discussion and Presentation of Cases of Papilloma of the Larynx in Children, J. N. Lenker, W. R. Lincoln, A. H. Marvin, J. M. Ingersoll.

The Lakeside Hospital Medical Society

The Lakeside Hospital Medical Society held its sixteenth regular meeting Wednesday, April 24, 1907. Program: Presentation of Surgical Cases, G. W. Crile; Presentation of Surgical Cases, D. P. Allen; Presentation of Medical Cases, J. H. Lowman; Ectopic Gestation with special reference to the Treatment of Tubal Rupture, H. Robb and M. B. Bonta; Pathologic Specimens, H. C. Russ. The following officers were elected: E. F. Cushing, President; R. H. Birge, Vice-President; C. W. Stone, Secretary.

St. Alexis Hospital Alumni Association

The fifty-first regular monthly meeting of the St. Alexis Hospital Alumni Association was held at The Hollenden, on Thursday, April 4, 1907, at 8 P. M. Program: Report of a Few Cases, A. M. Cheetham, M. D.; Arteriosclerosis, Wm. Clark, M. D.

Annual Meeting of the American Academy of Medicine

The 32d Annual Meeting of the American Academy of Medicine (Specializing in Medical Sociology) will be held at the Hotel Dennis, Atlantic City, on Saturday, June 1, and Monday, June 3, 1907.

PROVISIONAL PROGRAM.

Friday, May 31, 8.00 P. M.—Annual meeting of the Council.

Saturday, June 1, 10.30 A. M.—Executive session of the Academy.

12.00 M.—Open session of the Academy.

Report of the Committee on "The Teaching of Hygiene in the Public Schools."

Report of the Committee on "The Comparative Value of the First Degree in Our American Colleges" (final report).

PAPERS.

"The Communal Life of Physicians: Its Cultivation and Value." By Leartus Connor, Detroit.

"The Superiority of the Playground to the School-room." By Woods Hutchinson, of Arrow Head Springs, California.

"Insurance for Defectives." By J. A. Spaulding, Portland, Me.

(There will be a recess for lunch during this session.)

8.00 P. M.—Open session of the Academy.

Annual address before the Academy—Casey A. Wood, of Chicago, President of the Academy. "A Medical Career and the Intellectual Life."

Monday, June 3, 1907, 10.00 A. M.—Executive session of the Academy.

11.00 A. M.— Open session.

Symposium—The Relation of the Medical Profession to the Housing of the People.

Papers by Drs Gertrude U. Light, S. A. Knopf, of New York, and others.

Symposium—The Relation of the Profession to Medical Legislation.

Papers by Drs P. S. Conner, of Cincinnati, Henry W. Cattell, Henry Beates, Jr., of Philadelphia, and others.

Every reputable college-bred physician is eligible for membership in the American Academy of Medicine, and it invites all who are interested in the medical aspect of the social problems of the times to unite in its study of these problems. Blank applications and literature may be obtained from the secretary, 52 North 4th Street, Easton, Pa.

American Medical Editors' Association

The 38th annual meeting of this Association will be held at Atlantic City on Saturday, June 1, and Monday, June 3, with headquarters at the Marlborough-Blenheim Hotel. This active Association now numbers nearly 150 members with many applications in hand for action at the coming meeting. An interesting program has been prepared and the following are among the papers to be presented:

President's Address—The Future of Medical Journalism, by Jas. Evelyn Pilcher, M. D., Ph. D., LL. D.

Short comings of Physiology, The Chief Obstacle to Medical Progress, The Need of Editorial Intervention in Such Questions, by C. E. de M. Sajous, M. D., Philadelphia, Pa.

How can we make Medical Journalism Better? (a) For Our Readers. (b) For Our Advertisers. (c) For Ourselves. By W. C. Abbott, M. D., Chicago, Ill.

A Word or Two From an Ex-Journalist, by Samuel W. Kelley, M. D., Cleveland, O.

The First Medical Journals, by O. F. Ball, M. D., St. Louis, Mo.

The Psychology of Medical Journals from the Reader's Standpoint, by T. D. Crothers, M. D., Hartford, Ct.

Further Reflection on the Official versus Independent Medical Journals, One Year's History, by Wm. J. Robinson, M. D., N. Y. City.

Journalistic Suggestions from a Semi-Disinterested Standpoint, by Wm. Porter, M. D., St. Louis, Mo.

The Situation, by C. F. Taylor, M. D., Philadelphia, Pa.

Some Aspects on Medical Journalism, by W. F. Waugh, M. D., Chicago, Ill.

The Neglect of American Mineral Springs and Climatic Resorts by our Medical Press, by G. T. Palmer, M. D., Springfield, Ill.

A Few Feeble Remarks, by W. A. Young, M. D., Toronto, Ont.

The American Medical Editors' Association, Past, Present and Future, by Joseph MacDonald, Jr., M. D., N. Y. City.

On account of the largely increased membership of this Association, it is anticipated that the coming meeting will exceed any prior meeting in point of attendance.

The Annual Editors' Banquet which is always the social event of the week will be held at the Marlborough-Blenheim Hotel on Monday evening, June 3, 1907.

Second International Congress of Physiotherapy

The Second International Congress of Physiotherapy will be held in Rome, Italy, on the 13, 14, 15 and 16 of October, 1907, under the Presidency of Hon. Prof. Guido Boccelli; Secretary, Prof. Carlo Colombo, Via Plinia, 1, Rome. The American Committee have been appointed with Francis B. Bishop, of Washington, D. C., as President, Wm. Benham

Snow, 349 West 57th St., New York, Secretary, and Albert C. Geyser, New York, as Treasurer, with a special committee as follows: Fred H. Morse, Mechanotherapy; Margaret A. Cleaves, Phototherapy; Wm. James Morton, Radium-therapy; Morris W. Brinkman, Rhythmotherapy; Gurran Pope, Hydrotherapy; M. H. Kassabian, Radiography; Geo. C. Johnston, Radiotherapy; Chas. Denison, Climatology; G. Betton Massey, Massive Cataphoresis; David E. Hogg, Thermotherapy; Edward C. Titus, Electrotherapy.

The Pathological Society of Philadelphia

The Pathological Society of Philadelphia, which is one of the oldest, if not the oldest, society of its kind on this continent, will celebrate its semi-centennial in May, 1907. Instituted at a time when pathology scarcely had a foot-hold in this country, it has kept pace with the tremendous development of that science, and has had a share, not only in giving Philadelphia its eminence as a medical center, but also in fostering the scientific spirit in America.

The celebration, which may rightly be considered an event of national importance, will extend over two days, Friday, May 10, and Saturday, May 11. On the first day addresses will be delivered by Frederick G. Novy, of Ann Arbor, Michigan, on "The Role of Protozoa in Pathology"; by Simon Flexner, of the Rockefeller Institute, New York, on "The Newer Pathology"; and by A. E. Taylor, of the University of California, on "The Dynamic Point of View in Pathology."

In the afternoon, at four o'clock, a commemorative meeting will be held in the Pennsylvania Hospital, where the first meetings of the Society, in 1857, took place. At this meeting, William Osler, Regius Professor of Medicine, Oxford University, will deliver an address on "Pathology and Practice."

At a dinner in the evening, prominent men from all parts of the country will respond to toasts.

An exhibition meeting of interest to pathologists, clinicians, and surgeons will be held on Saturday, May 11, 1907.

The date of the celebration will enable those to be present who have been in attendance upon the Congress in Washington, and those who are coming east a little in advance of the meeting of the American Medical Association.

American Gastro-Enterological Association

PRELIMINARY PROGRAM OF THE TENTH ANNUAL MEETING OF THE AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION, TO BE HELD AT ATLANTIC CITY, N. J., JUNE 3 AND 4, 1907.

President's Address, H. W. Bettmann, Cincinnati.

Cases of True Intestinal Dyspepsia, Max Einhorn, New York.

Remarks about Disturbances of the Secretion of Gastric Mucus, J. Kaufmann, New York.

Paper, S. J. Meltzer and L. Kast, New York.

The Effect of Destruction of the Salivary Glands (by Disease or

Experiment) on the Gastric Secretion.—A Possible Internal Secretion of the Parotid Glands, J. C. Hemmeter, Baltimore.

Study of Urinary Acidity, A. L. Benedict, Buffalo.

An Unusual Case of Ulcer of the Stomach, J. M. T. Finney and J. Friedenwald, Baltimore.

Gastric Ulcer Complicated with the Symptoms of Cholelithiasis, J. A. Lichty, Pittsburg.

The Factors Concerned in the Healing of Peptic Ulcer, F. B. Turck, Chicago.

Incomplete Forms of Basedow's Disease in Relation to Gastro-Intestinal Disorders, J. P. Sawyer, Cleveland.

Gastric and Intestinal Disturbances Caused by Hernia, Max Ballin, Detroit.

Observations and Deductions from Examination of Feces for Occult Blood, C. D. Spivak, Denver.

Therapeutics of Mineral Waters of the French Lick Type in Gastro-Intestinal Disorders, G. D. Kahlo, Indianapolis.

The Gases of the Intestine, with Demonstration of an Original Apparatus for the Collection and Analysis of Stomach and Intestinal Gases, S. Basch, New York.

Demonstration of Estimating Percentage of Proteids, Fats and Carbohydrates in Food, Irving Fisher, New Haven.

Medical Interne (Male)

GOVERNMENT HOSPITAL FOR THE INSANE.

June 13-14, 1907.

The United States Civil Service Commission announces an examination on June 13-14, 1907, at the places mentioned in the list printed hereon,[1] to secure eligibles from which to make certification to fill at least five vacancies in the position of medical interne (male), at $600 per annum each, with maintenance, in the Government Hospital for the Insane, Washington, D. C., and vacancies as they may occur in any branch of the service requiring similar qualifications.

The Department states that it reserves the right to continue or terminate appointment at the end of one year, or to promote the appointee at the expiration of that length of service.

The examination will consist of the subjects mentioned below, weighted as indicated:

SUBJECTS	WEIGHTS
1. Letter-writing (the subject-matter on a topic relative to the practice of medicine)	5
2. Anatomy and physiology (general questions on anatomy and physiology and histologic or minute anatomy)	15
3. Chemistry, materia medica, and therapeutics (elementary questions in inorganic and organic chemistry; the physiological action and therapeutic uses and doses of drugs)	10
4. Surgery and surgical pathology (general surgery, surgical diagnosis; the pathology of surgical diseases)	20
5. General pathology and practice (the symptomatology, etiology, diagnosis, pathology and treatment of disease)	25

1. Those in Ohio are Cincinnati, Cleveland, Columbus, Ironton, Toledo, Zanesville.

6. Bacteriology and hygiene (bacteriologic methods, especially those relating to diagnosis; the application of hygienic methods to prophylaxis and treatment) 10
7. Obstetrics and gynecology (the general practice of obstetrics; diseases of women, their pathology, diagnosis, symptoms, and treatment, medical and surgical) 15

Total 100

Two days will be required for this examination. Men only will be admitted.

Age limit, 20 years or over on the date of the examination.

This examination is open to all citizens of the United States who comply with the requirements.

Applicants must indicate, in answer to question 15 of the application form, that they are graduates of reputable medical colleges.

This announcement contains all information which is communicated to applicants regarding the scope of the examination, the vacancy or vacancies to be filled, and the qualifications required.

Applicants should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the board of examiners at any place mentioned in the list printed hereon, for application Form 1312. No application will be accepted unless properly executed and filed with the Commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

As examination papers are shipped direct from the Commission to the places of examination it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

Issued March 30, 1907.

Book Reviews

Peterson's Obstetrics. The Practice of Obstetrics. By Eminent Authorities. Edited by Reuben Peterson, A. B., M. D., Professor of Obstetrics and Diseases of Women in the University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich. Large octavo, about 1087 pages, with 523 engravings and 30 full-page plates in colors and monochrome. Cloth, $6.00 net; leather, $7.00 net; half morocco, $8.00 net. Lea Brothers & Co., Phiadelphia and New York, 1907.

The present tendency in the preparation of medical works which are intended primarily as text-books is to have them consist in reality of a series of monographs upon the various subdivisions of the work, contributed by men who have some special qualifications for speaking authoritatively upon their particular subject. This volume has been prepared in accordance with this plan and the repetition of the same subject matter in different chapters by their respective authors, although bound to occur in some degree, has been reduced to a minimum.

The subject has been discussed in a comprehensive manner and since

gestation, labor and the puerperium are normal, physiologic functions, they are first considered in their normal aspect. Their pathologic variations are then taken up and finally obstetric operations and the care of the new-born infant. In discussing the puerperium, a good deal of latitude is advised in allowing the patient to get up, instead of following a stereotyped rule, the patient's condition furnishes the best index in deciding this point. The adoption of massage and other measures devoted to a restoration of the supporting function of the abdominal muscles is emphasized, a valuable suggestion too often omitted in works of this sort. The importance of satisfactorily ascertaining that there is a complete restoration of the parts to a normal condition, before the patient is discharged, is also impressed.

The value of hebotomy as compared with symphysiotomy, which is discussed at far greater length, is very guardedly expressed on account of the lack of statistics and the comparative newness of the procedure.

There are a large number of excellent illustrations, many of them photographs from the University of Michigan Maternity, others have been selected from standard works. The typography and general appearance of the book is very satisfactory.

American Practice of Surgery, a complete system of the science and art of surgery, by representative surgeons of the United States and Canada. Editors, Joseph D. Bryant, M. D., Albert H. Buck, M. D., of New York City. Complete in eight volumes. Profusely Illustrated. Volume One. New York, William Wood and Company, 1907.

This first volume of a very extensive system proves, on close inspection, to have been most carefully prepared. It deals with the general consideration of surgery as a whole, and has therefore left those details connected with special diseases or regions to subsequent chapters dealing more particularly with them. It is impossible to avoid a certain amount of repetition in works of this sort which are compiled by a large number of men, even in this volume the chapter on Inflammation and that upon Disturbances of Nutrition have overlapped to some extent.

An extensive introduction considers the evolution of surgery in America from the earliest settlement of the country, at which time surgery was very similar to that employed in Great Britain. Later, with the establishment of medical schools, the teaching became more distinctly American and especially during the last 30 years surgery has so developed that the technic and results of American surgeons today are surpassed by none. The biographic articles and portraits of the men, who in the past have played so prominent a part in this development, are of great interest. The history of the discovery and use of ether as an anesthetic is very thoroughly and impartially described.

Part I, Surgical Pathology, is subdivided among several contributors. Inflammation has, as usual, the first place, Warthin, of Ann Arbor, gives the various causes and the varieties as occurring in different tissues and as due to various etiologic agents, the protecting forces and modes of repair and the symptomatology and general indications for treatment.

Nicholls, of Montreal, discusses Disturbances of Nutrition, such as the various hypertrophies, atrophies, degenerations, infiltrations, necro-

ses, ulcerations, circulatory disturbances, alterations of the blood and inflammatory products. He has also contributed the chapter upon Tumors and Tumor Formation, which is dealt with in a general way without going into the symptomatology or treatment. Both of these chapters are well illustrated by many original cuts.

The Process of Repair and Regeneration with the general measures employed in aiding these is written by Nichols, of Boston.

McGraw, of Detroit, contributes the Theories of Tumor Formation which follows Nicholls' article on Tumors previously mentioned, and Gaylord, of Buffalo, presents the Parasitic Relations of Cancer, giving in detail the important researches upon mouse tumors, which have been carried out by him in the New York State Cancer Laboratory.

Part II, Complications and Sequelæ, is divided into two chapters, the first is by Pilcher, of New York, upon the Infections of Occasional Occurrence, and deals with simple infection, gangrene, septicemia, pyemia, erysipelas and tetanus. Of necessity this covers a good deal of the ground already discussed in some previous chapters, but amplifies their details by considering the subject more from a clinical standpoint.

Surgical Shock, by Bloodgood, of Baltimore, completes this section. The various etiologic factors concerned, the different views as to the nature of shock, the circumstances contributing to shock, such as length of operation, anesthesia, hemorrhage, etc., are given, and finally the various methods of treatment used to forestall or remedy the condition.

Part III, General Surgical Diagnosis, by Joseph D. Bryant, of New York, deals with history taking and the principal diagnostic methods, the details of which are, however, left to the chapters of Regional Surgery. The Body Fluids in General Surgical Disease, especially as regards their diagnostic value, is briefly given by Harlow Brooks, of New York, no mention of the opsonin theory is given and the reader is referred to special text-books for the more technic details. Hickey, of Detroit, discusses The Epiphyses and their Radiographic Interpretation, and the succeeding chapter by Dodd and Osgood, of Boston, deals with the Technic of Radiographic Work, both chapters are abundantly illustrated.

Part IV, General Surgical Treatment, by Moore, of Minneapolis, details the methods of antisepsis and sterilization, the various suture materials with detailed methods of preparation, the instruments used and the application of surgical principles in the care of wounds.

Part V, General Surgical Prognosis, by Bacon, of New Haven, considers the influence of age, sex, constitution, the integrity of organs and functions and environment as affecting the prognosis.

This volume is handsomely bound, excellent paper is used and the typography and illustrations are most creditable. Among the several systems of surgery which already exist or are appearing, this one will occupy a leading place.

The Elements of the Science of Nutrition. By Graham Lusk, Ph. D., M. A., F. R. S. (Edin.), Professor of Physiology at the University and Bellevue Hospital Medical College, New York City. Octavo of 326 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $2.50 net.

In this volume of 326 pages, Professor Lusk has given a very com-

prehensive summary of the literature on the subject of diet, nutrition and metabolism. Not only is the metabolism of normal individuals fully discussed, but also the metabolism in cases of myxedema, exophthalmic goiter, diabetes, phosphorus poisoning, fever and gout.

The question of dietary standard is, of course, considered in some detail. Professor Chittenden's work on this line is given careful attention.

The appendix gives full tables showing the composition of ordinary food materials. Of special interest to the practitioner should be the chapters on purin metabolism and metabolism in diabetes. The book can be heartily recommended as being reliable and up-to-date. It should be of interest to every scientific physician and to all who are interested in physiologic problems.

Plaster of Paris and How to Use It, by Martin W. Ware, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor in Surgery, N. Y. Post Graduate Medical School. 12mo; 72 illustrations, about 100 pages. Surgery Pub. Co., 92 William St., N. Y. City, Cloth $1.00.

A very useful little book furnishing information, a knoweldge of which is so often taken for granted and hence omitted from larger works on surgery. The technic of the use of plaster is essential for good results and very full details are given for mixing it, making plaster bandages, casts, splints, etc., while the last chapter is devoted to the very important subject of its use in dental surgery. A number of illustrations are of great aid in explaining the text.

Essentials of Obstetrics. By Charles Jewett, M. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, Brooklyn, N. Y. Third edition, thoroughly revised. 12mo, 413 pages, with 80 engravings and 5 colored plates. Cloth, $2.25 net. Lea Brothers & Co., Philadelphia and New York, 1907.

A handy and practical little volume containing about 400 pages of reading matter, designed to meet the needs of students in their review work or as an introduction to more elaborate treatises on the subject. The work appears to be thoroughly modern and certainly seems to include the essential facts and principles of obstetrics. The mechanism of labor is explained more clearly and in fewer words than in most text-books. The portion of the book devoted to the general preparations of labor and the directions for the nurse in regard to the preparation of the bed are given in considerable detail. The technic to be employed for the accoucheur as well as that of the nurse and the preparation of the patient are fully gone into also.

Whitman's Orthopedic Surgery. A Treatise on Orthopedic Surgery. By Royal Whitman, M. D., Instructor in Orthopedic Surgery in the College of Physicians and Surgeons, New York; Chief of Orthopedic Department in Vanderbilt Clinic, New York. Third edition, revised and enlarged. Octavo, 900 pages, with 554 illustrations, mostly original. Cloth, $5.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

The fact that a third edition of this excellent treatise on Orthopedic Surgery follows the second so quickly, is sufficient evidence of its popu-

larity with the profession. We know of no single volume on this subject which gives a better idea of its principles and practice than this one. The text is clear and concise, the illustrations numerous and illuminating, and the description of apparatus is simple and easily grasped by the general practitioner and student. The second edition was so recently reviewed in these columns that extended comment is unnecessary. The whole volume has been brought up to date, the conspicuous additions being in the chapters on Bloodless Reduction of Congenital Hip Dislocation and on Tendon and Nerve Transplantation.

Woman. A Treatise on the Normal and Pathological Emotions of Feminine Love. By Bernard S. Talmey, M. D., Gynecologist to the Metropolitan Hospital and Dispensary, New York. For physicians and students of medicine. Twenty-two drawings in the text. 225 pages. Practitioners' Publishing Company, New York.

The author describes the normal and pathologic sexual peculiarities of woman, more particularly from a psychologic standpoint, but he also considers the evolution of sex and the anatomic and physiologic aspects of the subject. A chapter is also devoted to the hygienic measures to be observed and the treatment necessary in the various abnormal conditions. The subject is one about which every physician is sure to be consulted sooner or later and as his instruction in it during his college course is either none at all or very little, he must acquire some knowledge of it from some such work as this.

Progressive Medicine, Vol. III, September, 1906. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare. M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 298 pages, 14 illustrations. Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00; carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

This number of Progressive Medicine is up to the usual high standard of this publication. It is volume III in the yearly series, and summarizes the progress in the various subjects of Diseases of the Thorax and its Viscera, including the Heart, Lungs and Bloodvessels, by William Ewart, M. D., F. R. C. P.; Dermatology and Syphilis, by William S. Gottheil, M. D.; Obstetrics, by Richard C. Norris, M. D.; Diseases of the Nervous System, by William G. Spiller, M. D. A complete index is a most convenient addition to the volume. Each subject is quite fully covered and the volume forms a most valuable epitome of the recent advances in the subjects noted. The work of which it forms a part would seem to be almost indispensable to the physician.

Books Received

The Abdominal and Pelvic Brain with Automatic Visceral Ganglia, by Byron Robinson, B. S., M. D., Chicago, Ill., Author of "Practical Intestinal Surgery," "Landmarks in Gynecology," "Life-size Chart of the Sympathetic Nerve," "The Peritoneum, its Histology and Physiology," "Colpoperineorrhaphy and the Structures Involved," "The Mesogastrium," "Splanchnoptosia," Professor of Gynecology and Abdominal Surgery in

the Illinois Medical College; Consulting Surgeon to the Mary Thompson Hospital for Women and Children, and the Woman's Hospital of Chicago. Frank S. Betz, Hammond, Indiana.

A Manual of Obstetrics. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women in the Medical Department of the George Washington University, Washington, D. C., and in the Medical Department of the University of Vermont, etc. Tenth edition, enlarged and thoroughly revised. 12mo., 688 pages, with 30 illustrations and three colored plates. Cloth, $2.75, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Essentials of Chemistry and Toxicology. for the use of students in medicine, by R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology in Cornell University. Thirteenth Edition. Revised by R. J. E. Scott, M. A., B. C. L., M. D., Author of "The State Board Examinations Series." New York, William Wood & Company, 1907.

The Technic of Modern Operations for Hernia, by Alexander Hugh Ferguson, M. B., M. D., C. M., F. T. M. S., Commander of the Order of Christ of Portugal; Professor of Clinical Surgery, Medical Department of the University of Illinois; Professor of Surgery at the Chicago Post-Graduate Medical School; President of the Chicago Hospital; Surgeon to the Chicago and Post-Graduate Hospitals; Fellow of the International Surgical Association, American Surgical Association, Chicago Surgical Society, etc., etc., Chicago, Ill. Illustrated by reproductions of original drawings from the author's collection. Chicago, Cleveland Press, 1907.

Physical Diagnosis, with Case Examples of the Inductive Method, by Howard S. Anders, A. M., M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia; Physician to the Philadelphia General Hospital, Tuberculosis Department; Late President of the Pennsylvania Society for the Prevention of Tuberculosis; Member American Medical Association, American Climatological Association, American Association for the Advancement of Science, etc. With eighty-eight illustrations in the text and thirty-two plates. D. Appleton & Company, New York and London, 1907.

Medical News

Dr Doty and family, of Bluffton, have moved to Lima.

J. B. Tennell has resumed the practice of medicine at Piqua.

C. F. Reiff, of Fremont, is suffering from an infected hand.

O. Pomeroy and wife, of Chardon, have returned from the South.

Albert Rufus Baker, of Cleveland, has removed to 636 Rose Building.

S. S. Wilson, of Xenia, who has been in Cuba for three weeks, is at home again.

T. B. Wright, of Circleville, has gone to California for a visit of several weeks.

F. P. McVay, of Athens, is ill at his home, suffering from an attack of pneumonia.

Frank Frost, of Lebanon, has been appointed secretary of the State Board of Pharmacy.

J. R. Gilbert, of Lorain, who was taken seriously ill some few days ago, is rapidly improving.

E. C. Lewis, of Canal Dover, who was taken suddenly ill some little time ago, is reported as improving.

W. J. James, formerly a practicing physician of Leesburg, is reported dangerously ill at Excelsior Springs, Mo.

Dr Blackford, of Middletown, has been appointed one of the censors of the Pulte Medical College, of Cincinnati.

Geo. F. Wright and wife, of Ellsworth, Kansas, who have been visiting in Tiffin, Ohio, have returned to their home.

S. S. Halderman, wife and daughter, of Portsmouth, recently took a trip to Chattanooga, Tenn., and Myrtlewood, Ala.

J. G. Bower, of Newark, who has been in West Baden, Indiana, for the past two weeks for his health, is at home again.

C. D. Bonner has taken up his permanent residence in Marysville, having moved his household goods from Pharisburg.

A. D. DeHaven, of Xenia, who has been on the sick list, is suffering from an injury to his back received several years ago.

Lawrence Grosh and Peter Donnelly, both of Toledo, have sailed for London, where they will visit the hospitals for six weeks.

DeMarr Erskine, of Steubenville, who is sojourning in Florida after his serious illness with typhoid fever, is reported as recovering nicely.

P. U. Onell, of Ironton, has gone to Chicago, where he will take a post-graduate course in electro-therapeutics. He will return about June 1st.

The 37th regular meeting of the Lake County Medical Society was held at 8 p. m. on Monday, April 1st, 1907, at The Parmly Hotel, Painesville, Ohio. Program: Reports and Presentation of Cases; Miscellaneous Business; Some Features in the Diagnosis and Treatment of Typhoid Fever. G. W. Moorehouse, Cleveland.

Edward C. Register, who is well known both as the editor of the Charlotte Medical Journal and as Professor of the Practice of Medicine in the North Carolina Medical College, has written a new book upon Practical Fever Nursing. W. B. Saunders Co., of Philadelphia, will soon issue this volume, which will no doubt prove extremely useful as Dr Register is well fitted to give an opinion upon this eminently practical subject.

The 33rd annual report of the Cincinnati Sanatarium for the year 1906 shows a very satisfactory condition of affairs. The daily average of patients has been 93.15 and 214 were admitted during the year. The buildings have been extended and improved. The results in the treatment of mental cases, for which the institution is especially intended, have been most satisfactory. The scientific side has received due attention by the investigations carried out in the clinical laboratory.

The regular monthly meeting of the Mahoning Valley Medical Association was held Tuesday evening, April 16th, and the regular routine business for the past month was disposed of. Several important matters which were to have come up at the meeting were postponed until the next regular session, which will be held sometime next month. The financial affairs of the association were found to be in good shape. R. H. Montgomery is president; Sidney McCurdy, secretary; C. D. Hauser, treasurer, and T. J. Rundel, vice-president.

Deaths

We regret to hear reported the deaths of two men who have been intimately connected with the medical profession. John Weyth, the head of the manufacturing firm of John Weyth and Brother, that has been so well known to medical men, died in Philadelphia, March 30th, 1907.

The firm of Parke-Davis & Co. has also suffered the loss of its President, Theodore D. Buhl, who died in Detroit on April 7, 1907. Both of these men have done much in advancing the scientific scope of pharmaceutical knowledge and to many physicians the news of their deaths will appeal as a personal loss.

The Cleveland
Medical Journal

Vol VI June, 1907 No 6

Report of a Case of Gangrene of Both Legs Following Pneumonia

H. J. LEE, M. D., Cleveland

The patient, a girl of eighteen years and good previous history, was admitted to the Medical Ward of Charity Hospital, March 8, 1907. Two days before, while at work, she was seized with a chill followed by high fever. Physical examination at the hospital showed a girl of fair development and nutrition, skin sallow and pale over body, face flushed; pupils equal and reacting to light and accommodation. No movement of alae nasi; herpetic eruption over upper and lower lips. No edema of face or extremities. Axillary and inguinal glands palpable. Chest flat; respiration 42; breathing labored. Left side had greater expansion; pain at height of inspiration in left back just below border of scapula. Auscultation and percussion in right side normal. Left side on percussion showed dulness extending from tenth rib below up to middle of scapula. Slight Skodaic resonance at upper border of dulness. Auscultation showed bronchial breathing over area of dulness. No rales heard. Vocal resonance markedly increased in same area as was also vocal fremitus. Heart normal in size and position; sounds distinct and clear; rate 120. Abdomen not distended. Spleen and kidneys palpable. No edema of extremities.

Her illness continued as a case of uncomplicated pneumonia until the eighth day when crisis occurred, the temperature falling from 102° to 99.4°. She became quite weak during the crisis. The heart dilated out to the nipple line; the beat became irregular, and the first sound at the apex markedly rough.

Read before the Clinical and Pathological Section of the Cleveland Academy of Medicine, May 3, 1907

On the tenth day of illness, the right toes became cold and painful. This began with severe pain in the knee; on the following day the right foot and calf became cold and discolored. No popliteal pulse could be felt. On this day the left leg became painful at the knee and cold and discolored. There was no popliteal pulse, but the pulse was distinct in the femoral.

On the fourteenth day there was a distinct bigeminal pulse. The line of demarcation became distinct, and both legs were amputated on April 5. On the morning of the operation the patient developed a septic pneumonia in the right lung (lower lobe) and at the time of operation she was coughing almost incessantly, expectorating large quantities of thin bloody mucus. The operation was done under spinal anesthesia, a very small amount of chloroform being used—not over one dram.

The patient stood the operation well and has steadily improved since. The cough which developed on the morning of the operation subsided within 24 hours, and the patient has done fairly well since, although at present there is some dulness in the lower part of both lungs.

This case, in my experience, is unique, and I have been unable to find very much written on this complication of pneumonia. By most authorities it is not even mentioned. Fitz says that symmetric gangrene may follow pneumonia but mentions no case, and he evidently refers to a different condition from that which existed in the case I have reported.

Osler says that a rare complication is embolism of one of the larger arteries and says that he saw a case in Montreal in which embolism of the femoral occurred, necessitating the amputation of the limb.

A case is reported in Nothnagel's Encyclopedia of Practical Medicine of gangrene following pneumonia in a child, necessitating the amputation of one foot, the other having two toes affected. The popliteal pulse was absent in one leg only. The editor says this is the first recorded case of postpneumonic gangrene in a child.

Dr T. A. Weed of this city informed me recently of a case in which embolism of the brachial artery occurred, following pneumonia, necessitating the amputation of the arm. Symmetric gangrene and gangrenous spots in different parts of the body have been reported by several observers.

Dr F. H. Hamilton in the *New York Medical Journal* for July, 1880, reported a case of gangrene in one leg:

The patient, a laborer, 37 years old, three weeks before admission to the hospital had had an attack of acute pneumonia. Ten days after its commencement, and while convalescent, he was seized with pain in the right leg followed by loss of sensation in the right foot which became cold. During the week following the toes became dark and dry. The next week the leg became discolored to within four or five inches of the patella. No pulsation could be found in the femoral below a point one inch below Poupart's ligament. The limb was in a condition of dry gangrene nearly to the knee. Above this point the skin was hyperesthetic. Hot fomentations were applied, and twenty-six days later, when a line of demarcation had formed and the ulceration had progressed to the bone, the amputation was performed. No anesthetic was administered, the parts being dead. Once or twice the patient complained of severe pain as if nerve filaments, which had escaped the general sloughing, were present. The patient made a good recovery.

A case is reported in the *Canada Medical and Surgical Journal,* Vol. 8, 1879 and 1880, page 151, which has been inaccessible to me.

In the *London Lancet,* December 27, 1884, the following case is reported:

A cooper was attacked with pneumonia about two months prior to his admission to the Sheffield Public Hospital. When convalescent and nearly restored to health, while walking across the room, he was suddenly seized with pain in both legs and feet which soon became cold, numb and slightly swollen. On admission to the hospital both legs and feet were quite cold, destitute of feeling and slightly swollen. The femoral arteries could be felt pulsating in the groin, but no pulsation could be made out lower down. The lungs were everywhere resonant and the breath sounds normal. There was no cough or dyspnea; the heart action was tumultuous, the sounds normal and the pulse 75 per minute. The urine was scanty and presented nothing abnormal. Two weeks after admission complete paralysis of the left arm and leg and slight paralysis of the right side of face occurred. The patient gradually grew worse and died three weeks after admission. Autopsy revealed a firm clot in the right middle cerebral artery. The heart weighed 18 ounces, the valves were healthy. There was commencing atheroma on the lining membrane of the aorta near its commencement. The rest of the aorta and primary branches were healthy. The femoral arteries were healthy. A firm clot was found in the right popliteal artery and similar clots in the left artery and posterior tibial arteries. Above the clots the arteries were empty; below they were full of dark blood.

Dr F. F. Attix of Lewiston, Montana, in the *Journal of the American Medical Association,* April 28, 1906, reports a case as follows:

Patient.—A. J., aged 56, male, medium height, weight and figure.

History.—The patient has always used alcoholic beverages in moderation. The present illness began January 20, 1906. Twelve days previously, he developed what he thought to be a cold; he used domestic remedies, but was not careful to avoid needless exposure. This state of affairs lasted for 10 days. On the eleventh day he sent word that he could not leave his bed and a physician was summoned.

Examination.- Auscultation and the physical signs showed that there was pneumonia in the right lower lobe which was approaching resolution. The temperature was 103°, pulse 160, and respiration 60. There was cyanosis and the lower extremities were cold.

Consultation.—On the following day I was called in consultation. At that time there was mental apathy and moderate effort was necessary to rouse the patient who then showed mild delirium. The pupils were moderately contracted and equal; the tongue was red, dry and fissured. The rectal temperature was 102.5°, the respirations varied from 46 to 50, and the pulse was 146, regular, of medium volume and with no signs of arterial sclerosis.

The area of cardiac dulness was normal, with moderate strength of the heart muscle and no signs of endocarditis or of pericarditis. The lower lobe of the right lung was in the stage of resolution. There was moderate orthopnea. The urine was voided in large quantities on an average of every hour, and the feces passed once daily.

During the night before I saw him the patient had suddenly developed pain in the right thigh, which was still present when I examined him. Tenderness and hyperesthesia were also present. There was a perceptible swelling about the center of Scarpa's triangle on the right side, and on palpation an indurated mass could be detected, below which there was no femoral pulse. Complete anesthesia of the skin was present to a point two inches above the knee, where the skin was hyperesthetic and cyanotic. The skin of the leg was very dry, cold and clammy, with a tendency to ulceration over the ridge of the tibial bone. The left leg was in much the same condition, although the embolus had lodged in the lower portion of the popliteal space on this side.

Termination of the Disease.—The toxemia developed and the patient died 14 hours later.

Autopsy.—A partial autopsy was made 48 hours after death by Dr Tice, who made the following report: "At the profundal branch of the femoral artery an embolus had lodged and extended for one-half inch down the profundal branch and one inch down the main artery. Below this point the artery was patulous. Above (as far as opened to Poupart's ligament) the artery was filled with loose clotted blood. No further autopsy was allowed." No bacteriologic examination has been made of the emboli at this time to determine if they were infected.

Three cases of gangrene of the leg following pneumonia are reported by Charles Langdon Gibson of New York in *The Annals of Surgery,* Vol. 38, page 380:

One of these cases was 67 years of age, one 43, and the third 61. All male. All of these cases came on suddenly, accompanied by acute pain, during defervescence or after it had occurred—one on the seventh day, one on the 13th day and one on the 14th day. Amputation was performed in all three cases—in one 12 days after the first symptoms of obstruction and after a line of demarcation had formed. Amputation was through the lower third of the thigh. The patient recovered from the operation, but the flaps broke down from insufficient nourishment. Three inches more of the femur were removed. This also failed to meet the indications, and the wound was reopened and two inches more were removed when the flaps again broke down. The patient became melancholic, necessitating his removal to Bellevue, and he was lost sight of.

The second case developed first symptoms on the seventh day of pneumonia just as defervescence began. Amputation was performed through the condyles 22 days later. The flaps broke down. Two sinuses extended down to the bone but gradually healed. Examination of the amputated leg showed a clot beginning in the popliteal artery and extending a short way down in the tibials. (It is not stated in the report of this case whether the line of demarcation had formed.)

In the third case pneumonia had subsided and the patient was in good condition when, 14 days after his illness began, he was seized with pain and numbness in the left leg which became cold and discolored. Amputation was performed through the lower third of the thigh 18 days

after the first symptoms of obstruction appeared and after the line of demarcation had formed. The flaps were found bloodless and the amputation was at once extended two inches higher. The wound healed without necrosis or infection, but the patient's condition was never satisfactory, and about four weeks after operation he passed into a condition of apathy and died two weeks later with symptoms of progressive cardiac exhaustion. No dissection of the leg was permitted.

Dr Gibson's remarks upon these cases are so instructive that I quote them in full:

The symptoms of vascular obstruction seem to have developed in all three cases suddenly or at about the time of defervescence. The gangrene of the leg was on the same side as the pneumonia; but no significance is attributed to this fact. None of the cases showed any obvious kidney or cardiac changes, nor did the urine contain sugar. The previous histories showed no features of possible interest as etiological factors.

Such cases of gangrene as have just been described, occurring suddenly in the course of a pneumonia in previously healthy subjects, are admittedly rare. Welch alludes to Osler's having seen one such case due to embolism. I have asked a large number of practitioners as to their experience in this matter, with negative results. I have made as yet no systematic attempt to investigate the subject, but since 1895, when Case 1 occurred, have been on the lookout for some reports of similar experiences, without coming across any in the literature.

My belief that these cases were directly due to the pneumonic condition, and not to some other intercurrent or accidental process, is based chiefly on the following circumstances:

That a pathologic condition accompanying pneumonia, which would explain the purely mechanical process, is stated by Welch to exist.

That the gangrene was of the dry form due to blocking of the artery.

That the typically sudden onset of symptoms was in favor of an embolism rather than a thrombus, beginning in the arteries of the leg proper.

That the patients showed no obvious vascular and cardiac lesions favoring the theory of the transferring to the leg of an embolism orginating in such process.

That the age of two of the patients, 61 and 67, does not give greater weight to the theory of thrombosis due to senile changes, because I am able to cite two cases of sudden cerebral manifestations following pneumonia occurring in healthy men of 35 or thereabout.

In addition, it may be said that even if this theory of a direct mechanical sequence can be reproached with having lapses that prevent its entire acceptance, it is open to fewer such objections than any that may be offered in opposition.

With regard to the conditions at the site of the pulmonary lesion which may possibly give a direct origin to the embolic process, the evidence, it must be confessed, is meagre. Pathologists with whom I have conferred deny ever having observed any such thrombosis of the veins necessary for this explanation. If existing, it must undoubtedly be exceptional, and it is possible that, in the absence of systematic observation of this point, its infrequent occurrence may have been overlooked, and we may yet have confirmations of the views here expressed. I find in Welch's article on "Thrombosis," in Albutt's System of Medicine, Vol. 7, page 160, this statement:

"One sometimes finds in inflamed areas, less frequently under other conditions, the vessels, particularly those of small caliber, partly or completely filled with fibrillated fibrin, presenting such an arrangement and configuration as to indicate coagulation during life. . . . . In croupous pneumonia such fibrinous masses are regularly present both in the capillaries and larger vessels of the hepatized area. These purely fibrinous coagula are of anatomic rather than clinical interest."

With regard to the possibility of the gangrene being due to localized arterial disease, while this view has to be entertained, there is little to be said in favor of it. The most prominent argument, that two of these cases were over 60 years of age, is not enough. Such localized changes come for the most part considerably later in life. The starting point is often referred to traumatism, and the history is that of a gradual process, that is, a slowly progressive thrombosis, contrasting sharply with the acute manifestations just described, which it seems more reasonable to refer to an embolic process.

Moreover, there is direct evidence in two of our patients that such was not the case, in that the clot only extended a short distance into the tibial vessels. Assuming then for granted that we have to deal with an embolic occlusion of the arterial supply, we come to the question of its possible origin in other portions of the arterial system. We are at once confronted with the fact that such possibilities do exist in many and varied forms, and the theory of probabilities would give the preference to such an origin rather than the apparently remote one which I have favored. Two of the patients come within the later periods of life, when cardiovascular degenerations chiefly occur, though, as a fact, most of the severer manifestations are developed at a still later period. Such people, for the most part, show either symptoms or visible external evidences—thickened vessels—not presented by my patients; although it is admitted that very considerable local changes may exist without these general manifestations.

We have also to consider the formation of cardiac thrombi, the occurrence of which might be favored by the cardiac strain resulting from pneumonia.

True cardiac thrombi are quite rare, and, if due to the pneumonia, should occur more particularly in the fatal cases when the heart flags, whereas those cases described were not of extraordinary severity, and the fact of their recovery is rather against such a theory. None of these cases presented signs of valvular lesions, so I doubt if the cause of the embolism can be ascribed to the transferrence of the vegetations which occasionally accompany such lesions. It does not seem necessary to consider the possibility of so-called malignant endocarditis.

While admitting that these cases may be explained by the accidental manifestations of intercurrent previously existing cardiovascular changes, I prefer to hold to what seems to me the reasonable theory of a direct sequence of events referable to the pneumonia, with the hope that by calling attention to such a possibility others may be induced further to study these points.

The experience acquired in these cases furnishes the opportunity of considering some practical points in regard to when and where to amputate.

Shall we amputate while there is any active pneumonic process, and can there ever be sufficient urgency to require such interference before complete resolution of the pulmonary process?

Shall we wait for the establishment of a line of demarcation, or is it desirable to anticipate its formation?

These questions can be best considered by settling the question whether we shall ever anticipate the formation of a line of demarcation. My own feeling is *not* to wait, if the pulmonary condition favors intervention, in the belief that, even with the formation of a line of demarcation in the mid-leg, it will generally be better judgment to amputate above rather than below the knee. Moreover, the early operation might save more of the leg, assuming that the tendency of the clot once formed is to progress upward, as was shown in Case 1, quite rapidly, and would have perhaps required properly to overcome it an amputation at the hip-joint. The extension of the clot and the promptness of re-established compensatory circulation cannot be accurately gauged, while the pulmonary condition can be more definitely ascertained. Therefore, I should say, on general terms, wait till the lung condition allows, and then amputate without further delay. All three of these cases stood the operation well.

As regards the anesthetic, spinal anesthesia for those who choose to use it would seem to meet the conditions admirably. I prefer, for general anesthesia, the risk of irritating a damaged lung with ether to that of inviting collapse from chloroform of a heart enfeebled by severe sickness.

With regard to the site, one should not be deterred from amputating at a point where the vessels are found obstructed by thrombi, because it is self evident that the nourishment of any one point comes from a higher level. One will be guided by previous observation of the condition of the limb at the point of incision, that is, its degree of warmth and the activity of the return circulation after temporary local ischemia from pressure of the finger. If, on division, the skin oozes freely, one may safely amputate at that point; if not, reamputate till this requirement is satisfied, even if the other tissues do not seem to respond to the same degree.

These cases, ten in number, are all that I have been able to find recorded in which gangrene of the extremities has followed pneumonia. In all these cases there is no evidence given that there was endocarditis or other heart complication present. While in the case I have reported marked dilatation of the left ventricle occurred the day following the crisis, and the following day a very rough systolic murmur was heard at the apex, so that we were justified in thinking vegetations had broken loose from the valves of the heart and been carried to the point of obstruction. None of these cases had diabetes or any renal complication, nor was there in the previous history of any of them anything that could account for the occurrence of such a complication.

Dr Gibson's belief that the condition is directly due to the pneumonic condition and not to some other intercurrent or accidental process, may be justified in his cases but may be questioned in the one I have reported, as there was a condition present, viz., endocarditis, probably of septic origin, which could have caused the condition which followed.

The question when to amputate in these cases seems to me an important one. Dr Gibson asks, "Shall we wait for the establishment of a line of demarcation?" If, as he seems to think, the clot once formed tends to progress upward, there would be some argument in favor of operation before this line has formed; but if the extension of the gangrene upward is due to the fact that the collateral circulation is sufficient to nourish the limb partially and for a time, but not completely and permanently, then it would seem best to wait until we see how much of the limb will die.

Dr Gibson asks, "Shall we amputate while there is any active pneumonic process, and can there ever be sufficient urgency to require such interference before complete resolution of the pneumonic process?" No hard and fast rule can be formulated. Each case must be decided by itself. The complication does not occur until late in the progress of the pneumonia, and probably

the delay of a few days would do no harm if the patient did not become septic. Amputation should, however, be done before this happens to insure the best recovery. In the case I have reported, the patient was septic some days before we could get permission to operate, and it was only when a fatal termination was in sight that the patient consented to the amputation. The operation was done a few hours after the septic pneumonia had begun to develop in the right side—the one not previously affected. The septic process was promptly arrested. Should symptoms of sepsis develop, amputation should be done at once.

Spinal anesthesia would seem to be the best method. If complete anesthesia could not be induced a few whiffs of chloroform, which were given in this case, would not be objectionable.

NOTE BY DR. F. E. BUNTS

An operation had been urged as soon as a line of demarcation had formed, but consent was refused both by the girl and her parents. The absence of popliteal pulsation from the onset, and the fact that the gangrene was, owing to the shutting off of the arterial supply, dry gangrene, made it seem advisable to wait for this line of demarcation as long as septic symptoms did not supervene. Along with the occurrence of sepsis, which finally made its appearance, came the septic pneumonia of the lung not previously attacked, and at this unfavorable time an operation was urged by the family.

Under ordinary circumstances I have been distinctly opposed to spinal anesthesia but this case seemed to be one in which it was not only indicated, but almost compulsory, owing to her exhausted state, sepsis, pneumonia and endocarditis.

In consultation with Dr Lee it was decided to attempt a double amputation under cocain spinal anesthesia. A two per cent solution was used in divided doses, giving altogether nearly four-fifths of a grain. Possibly less would have been sufficient but I was expecting to see the tactile sensation abolished in the skin of her thighs and legs, but after protracted waiting this did not occur, so that a few drops of chlorofom were dropped on the mask and as soon as her attention was thus diverted a simultaneous bilateral amputation was begun by Dr Banker and myself. The right thigh was amputated at its middle and lower third, the left leg at its upper and middle third, the skin appearing well nourished but the muscles almost bloodless. Aside from the cut through the skin, the operation was, I believe, painless. There was no evidence of shock and on the following morning the

patient was propped up in bed eating for the first time, with apparent relish.

At the recent meeting of the American Surgical Association at Washington, Prof. Kuster of Marbourg, Germany, presented an elaborate review of several hundred cases operated upon by him under spinal anesthesia. He is a warm advocate of this method in cases in which the lesion lies below Poupart's ligament, preferring novocaine to the other preparations because he believes it to be less dangerous and attended by fewer unpleasant complications. I judged, however, from the discussion which followed that though it had been used enthusiastically by some and to a limited extent by many in this country, that the general feeling was that the method has no special advantages over general anesthesia save in exceptional cases. This seemed to me to be one of the exceptions and the result has been more than gratifying.

Malignant Tumors of the Kidney—With a Report of Cases

BY A. F. HOUSE, M. D.,

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Of the malignant tumors found in the kidney, the great majority are either sarcomata or carcinomata. Both of these growths may attack the kidney primarily or secondarily, but as the secondary infection never becomes of clinical importance, and is very seldom recognized during life, it would be unnecessary to consider it in this paper.

Renal growths are about equally frequent in the two sexes and occur as often on one side as the other. The ages at which malignant growths are most frequently found are rather striking. Kelynock has tabulated 160 cases as follows:

Up to the age of one year	12 cases.
From one to two years	23 cases.
From two to three years	16 cases.
From three to four years	17 cases.
From four to five years	six cases.
From five to nine years	10 cases.
From nine to 18 years	no cases.
From 18 to 25 years	seven cases.
From 25 to 35 years	eight cases.
From 35 to 45 years	17 cases.
From 45 to 55 years	22 cases.
From 55 to 75 years	22 cases.

Read before the Clinical and Pathological Section of the Cleveland Academy of Medicine, March 1, 1907

It will thus be seen that more than half the cases occurred in the first decade of life, while only 15 occurred between the ages of nine and 35 years; of the remaining 61, 31 occurred between the ages of 45 and 60. According to this table, malignant tumors of the kidney may be considered clinically as the tumors of childhood and those of adult life, of 138 cases of sarcoma collected by Walker (Annals of Surgery) 116 occurred before the fifth year of age. Trauma and heredity, so far as I know, have no influence in causing tumor of the kidney, while nephritis, suppuration and calculous disease are accidental and secondary, rather than primary causes. It is impossible to distinguish clinically between tumors of the kidney itself, tumors of the suprarenal gland and tumors of the perirenal tissue.

The tumor is either circumscribed or diffuse. Carcinoma of the kidney is less frequent than sarcoma; it is usually of the tubular variety, in a delicate very vascular stroma the columnar epithelial cells are arranged in the form of tubules. The tumor gradually displaces the parenchyma of the kidney, and when the pelvis and the ureter are reached, it produces obstruction to the flow of urine secreted by the intact part of the kidney. Later the tumor may perforate the capsule of the kidney and extend to the adjacent organs. Lymphatic infection takes place usually at a late stage. If the tumor is large it may produce intestinal obstruction by extending to the colon or by pressure.

Hematuria is a frequent symptom after the tumor has invaded the pelvis of the kidney. It is impossible in the early stages of the disease to distinguish sarcoma from carcinoma. If, however, the probable existence of a malignant tumor of the kidney can be made out, and careful search proves that the opposite organ is in a healthy condition, a radical operation is indicated if the disease has not extended beyond the capsule of the kidney.

The following two cases of carcinoma are unique, inasmuch as they occurred in twin sisters. In each case the right kidney was the seat of the primary lesion. One died without operative intervention, the other died 18 months after a nephrectomy. The symptoms were so nearly alike in each case and so typical of carcinoma of the kidney, that it seems unnecessary to give but a short report of one of the cases.

Mrs. M., aged 38, married, mother of four children, had always enjoyed good health until the summer of 1883, when she first began to have some pain in the right lumbar region. This pain was at first accompanied with hematuria. At times the

pain was extremely severe and had all the characteristics of renal colic, and only ceased when elongated narrow blood clots, which had the shape of the ureter, had passed. About this time a tumor in the right loin could be made out on palpation. At no time was there any pus in the urine, nor was the tumor very sensitive except during one of these paroxysms of pain. She began to grow emaciated and became nervous and apprehensive. I had some months previously made a diagnosis, in the other sister, of cancer of the kidney, which was considered inoperable at the time I saw her, and which was verified two months later by a postmortem. Soon after the death of her sister, Mrs. M. decided to have a nephrectomy done, which was performed on October 14, 1883. She made a slow, though good recovery, and died 18 months after of metastases.

As already stated, sarcoma of the kidney occurs more frequently than carcinoma, and especially in the first decade of life. The growth of the tumor is rapid and the tumor usually reaches an enormous size before it destroys life. The mass is usually smooth and psuedofluctuation may be present. The diagnosis of sarcoma of the kidney is usually not very difficult; the only affections for which it is liable to be mistaken are hydronephrosis, pyonephrosis, or, if on the right side in the adult, it may be mistaken for a distended gall-bladder. The retroperitoneal location of the tumor can be determined by inflation of the colon, should there be any question as to its being intra- or retroperitoneal. Soft sarcoma of the kidney presents pseudofluctuation on palpation, and if a cyst occupies the anterior surface of the kidney, true fluctuation can be felt.

Early hematuria, so characteristic of this disease in the adult, is but rarely met with in children, the striking condition being the wasting away of the child, coincident with the very rapid growth of the abdominal tumor. As the tumor grows, it extends forward into the outer segment of the umbilical region and finally it may come to occupy the whole half of the abdomen, extending down into the false pelvis and up into the epigastric region, as in one of my cases, a child, two and one-half years old, or it may even encroach upon the opposite half of the belly, as in the following case:

Albert A., aged three years; the youngest of four children of which one brother and two sisters are well and healthy; father and mother strong and enjoy good health; no history of any specific diseases. The last week in June, 1906, the child fell on the sidewalk, striking on his abdomen. The mother says that from that time on he complained of pain in the abdomen.

Four weeks later, while giving the child a bath, she noticed a marked prominence of the abdomen, more especially so on the right side. About this time the child became peevish and irritable, his appetite was not good and he began losing flesh.

Present examination: Inspection shows an enormously distended abdomen, more prominent on the right side and in the right lumbar region, abdominal veins enlarged and prominent, tumor is not affected by respiration as is usual in these cases. The child is emaciated and pale. Palpation gives a firm, irregular mass, slightly mobile from side to side but not upwards or downwards. The tumor extends well up under the right costal arch, which is crowded outwards, and down into the pelvis. The mass occupies two-thirds of the abdominal cavity. Urinalysis is negative. *Diagnosis:* Sarcoma of the kidney.

The parents were informed of the gravity of the case, either with or without an operation. They, however, insisted on having the tumor removed, which was done by the intraperitoneal method, the child dying 52 hours afterward.

The prognosis in malignant growths of the kidney is bad unless an early diagnosis is made and the entire kidney removed. In children the expectation of life is less than in the adult, scarcely ever reaching two years, the majority dying in a few months. In the adult, the growth is much slower and the expectation of life varies from two to five years, the cause of death being usually from hemorrhage, cachexia or uremia.

The treatment of malignant tumors of the kidney, like other malignant growths of the body, is wholly operative, and our success depends largely upon an early diagnosis. Age is no contraindication to the operation and the incision through the lumbar region is the ideal method if the tumor is not too large to be removed through this space. If, however, this cannot be done, then the intraperitoneal method must be used.

From the present status of renal surgery, I believe that with the increasing facilities, which give better and more accurate methods for making an early diagnosis of malignant tumor of the kidney, operative intervention will meet with far greater success in the future than has been so in the past.

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Abdominal Section During Pregnancy for Ovarian Tumor (Dermoid) with Twisted Pedicle, with Report of a Case

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As is well known a spherical non-adherent cyst with a long pedicle is liable to rotate and, as a result of the rotation, the venous outflow from the tumor being interfered with, a hemorrhage into its interior takes place, which at times is sufficient to cause the sudden collapse and death of the patient. If the patient survives this accident and the rotation should persist the blood supply of the cyst may be entirely cut off and gangrene takes place.

Clinically the recognition of such cases is often easy, especially when the existence of the tumor has been previously known. If strangulation occurs, the patient suddenly complains of a sharp pain in the lower part of the abdomen with a more or less marked sensation of faintness. Her face is pale. The tumor suddenly enlarges, and on palpation it is found to be tense and painful. If the patient survives the first attack the symptoms may become progressive, and as a rule she is confined to bed and peritonitis ensues. The cyst, which originally was free, at times becomes involved on all sides with adhesions. Suppuration may follow with chills and fever. With the cutting off of the blood supply and the occurrence of the hemorrhage into the interior of the cyst, the tumor becomes more like a foreign body and inflammation occurs in the adjacent peritoneum, and vascular adhesions are formed which in time more or less replace the normal blood supply. In some cases the pedicle may atrophy and become detached, leaving the tumor to continue as a parasitic growth. Küstner believes that the tumors of the right side, as a rule, rotate from left to right, while left ovarian tumors rotate from right to left. Why these tumors should rotate is a matter of considerable speculation. One theory is that the large multilocular cysts show a marked tendency to the formation of a single large cyst cavity, with a number of secondary ones, and a movable tumor will invariably turn until the convex surface of the large cyst comes to lie in relation to the concavity of the distended anterior

Read before the Clinical and Pathological Section of the Cleveland Academy of Medicine, May 3, 1907

The introductory remarks for the most part are abstracted from Kelly's Operative Gynecology.

abdominal wall; this causes a partial reduction which does not tend to increase. It is generally in the spherical tumors the size of a man's head that more than one twist in the pedicle occurs and the rotation for the most part is due to alternate relaxations and contractions of the anterior abdominal walls, acting most markedly on that portion of the tumor which lies nearest to the median line. The tumor which, as a rule, does not lie exactly in the median line is then nipped from time to time between the linea alba and the projecting vertebral column. In the case of a pregnant uterus the liability to torsion of the pedicle is naturally increased as the enlarging uterus infringes upon the tumor and often causes it to rotate in an attempt to occupy the narrowing space to the best advantage. Thus in 109 cases of ovarian tumor complicated by pregnancy torsion occurred 10 times.

The history of our case and the chief points of interest in it are briefly as follows: Mrs. E. W. (referred by Dr G. L. Bowman) was admitted to the Gynecologic Ward of Lakeside Hospital, June 12, 1906. She had been married four years, her age was 19 and her occupation housework. She had had two children, the first two years old, the second had died when five months old in December, 1905. No miscarriages. Her catamenia had been irregular, profuse, with cramp-like pains in the lower abdomen. The last menstrual period had appeared early in March, 1906. On admission she complained of a movable "lump" in the lower abdomen noticed during the previous month. This caused sharp and cutting pains when it changed its position. The pains in the abdomen had been more severe during the previous two days. She had had some discomfort since she became pregnant four months before, but she had had no special abdominal pains until one month previously when the abdomen became sore and she began having sharp pains. At that time she noticed the mass mentioned above. The tumor mass had been tender on pressure. Of late the attacks of pain had reappeared every few days. Since she first noticed the mass it had grown in size. Three days before she was admitted to the hospital she began to have severe pains in the lower abdomen, with vomiting, and the tumor mass became even more sensitive. She had had no chills or fever. On admission the following note was made:

The patient is poorly nourished, but her general condition has no special bearing upon the case. On palpation, an ovoid mass can be outlined with its long axis lying transversely; it is rounded, smooth, firm and somewhat elastic, it is movable in all

directions but more so from side to side. Forced movements cause considerable pain. The percussion note over the mass is somewhat modified but tympanitic. The area of modification measures six by four inches. On admission her temperature was 99.4, the pulse 108. In the hospital she has complained of occasional attacks of cramp-like pains in the lower abdomen which can be relieved by hot applications locally, together with codein internally.

On bimanual examination the cervix is found in the axis of the vagina; the uterus is movable and sagging in the pelvis, with the fundus forwards. The uterus feels pregnant. The right ovary is small and not adherent. The left ovary cannot be satisfactorily made out.

Diagnosis: Ovarian cystoma, with a twisted pedicle, together with a pregnant uterus.

She was sent into the hospital on account of the abdominal pain, which with the pregnant condition suggested a ruptured ectopic gestation. We were, however, able to exclude the latter condition on account of the position and movability of the tumor, and we felt sure that we were dealing with an ovarian cystoma and that the unusual, sharp pains meant that the pedicle was twisted.

Operation: At the time of the operation on opening the abdominal cavity a considerable quantity of free serohemorrhagic fluid was found. The uterus was in anteposition, enlarged, softened, freely movable. The right tube and ovary appeared to be normal. Springing from the left side of the pelvis was the tumor felt on bimanual examination. This proved to be a smooth-walled cyst of the ovary, with a long pedicle, twice twisted on itself from right to left. The outer half of the tube was greatly swollen and congested, owing to its being caught in the torsion. The omentum was much thickened and congested. The appendix was free but intensely injected in its outer third. Left salpingo-oöphoro-cystectomy and partial excision of the omentum were performed.

Convalescence: Postoperative condition and recovery from ether were good. June 25, incision dressed; good union. July 10, patient discharged. Convalescence has been steady and uneventful. Patient now free from pain.

Vaginal examination: Cervix points downwards and backwards, is somewhat patulous. The uterus presses closely against the anterior abdominal wall, the fundus reaching halfway between

the symphysis and umbilicus. No masses, no tenderness on the sides.

Pathologic Report (Dr M. Bonta): The specimen consists of an irregularly ovoid mass, measuring three cm. by eight cm., consisting of a tube and an ovarian tumor. The surface of the tumor is smooth, glistening, deeply congested, and areas of ecchymosis are here and there noted. The tumor mass on palpation is fluctuant. It has a rather narrow, long pedicle, that has undergone torsion, in which the tube was caught at about the junction of its inner and middle third. The surface of the tube is dark in color, and free from adhesions; its walls are greatly swollen. On cutting into the tumor mass, a brownish, chocolate-colored fluid is found in its interior. Throughout this are a great number of black hairs growing apparently from the tumor wall. Here and there are masses of softish, sebaceous material. There are several loculi to the tumor.

The tissues of these specimens are so densely infiltrated with blood that a *microscopic examination* is without value.

Diagnosis: Dermoid cyst of ovary, with twisted pedicle and hemorrhagic infiltration of the lateral structures.

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An Analysis of 175 Consecutive, Unselected Abdominal Sections

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The presentation of this paper is impelled by two motives, the chief one, I must confess, is to counteract what I fear is the prevailing tendency, viz., to select, or at least to report, operative cases which promise no mortality rate, for the sake of the surgeon's reputation and to the everlasting injury of true surgery.

The second, which is more scientific, is to actually analyze a consecutive series of cases in order to invite criticism and comment and learn in what respects I might have done better or more wisely. The series of cases reported begins at a point a few months ago, when my records began to assume such shape that minor details were noted, and ends just recently enough to have been certain that no cases have died in the hospital as the consequence of operation or from the continuation of the disease process for which the operation was done. Some of the exploratory cases will unquestionably die at their own homes from the

Read before the Sixth Councilor District Society, March 2, 1907

latter cause, but the only practical way to deal with operative mortality is that adopted by the Mayos, classifying as operative recoveries those patients who leave the hospital alive. In this series no cases were selected, every case, no matter how desperate unless actually moribund, was operated upon if operation offered any more hope than medical treatment, and no case was operated upon unless operation was indicated, no matter how willing the patient might be to submit to surgical treatment.

Out of the total of 175 cases, acute appendicitis was the indication for operation in 33. Of this number but one case was secured before periappendicular suppuration, perforation, or gangrene had taken place. Localized abscess was present in 14 cases and in two instances the patients died.

Diffuse peritonitis was present in six cases, all of which number recovered. General peritonitis was present in three cases and of these patients one died and two recovered. In the remaining nine cases either perforation or gangrene was present, and two of these patients died, in both the appendix was gangrenous; one patient developed a secondary abscess in the pelvis, due, I am confident, to lack of a sufficiently large incision and sufficient drainage; the other died after two weeks, from general septicemia. Thus of 33 instances of acute appendicitis five died, a mortality rate of 15%, which is truly appalling. A critical analysis of these cases will, however, reveal the cause of death, as but two were operated upon within 24 hours of the onset of acute symptoms. In every case but one there had been a time when operation would certainly have been successful; this one case was the patient that died from septicemia and the general condition was decidedly such as to render operation a matter of extreme gravity. The mortality rate from operation for acute appendicitis will continue excessively high so long as operation is deferred from day to day, with the expectation that recovery will take place or that operation can be performed as a matter of last resort. In such a limited number of cases there should not have been 14 of abscess, six of diffuse peritonitis and three of general peritonitis, which, when summed up, means that more than two-thirds of all the cases were in an advanced state of suppuration, and that the rest had either perforation or gangrene. Stated in other terms, there were 33 cases of acute appendicitis, 31 of which were presumably fatal, the other two having been operated upon during the first 24 hours, before their true condition became known, one of these would have died under any form of treatment. The true death rate

was therefore five out of 32 cases that were *hopeless without operation,* so that the mortality rate of 15% is not that of the operative treatment of acute appendicitis but, on the contrary, 85% of otherwise hopeless cases were saved. The mortality rate, if all instances of acute appendicitis were subjected to operation would not be more than two or three percent, as the most reliable statistics show that from 75% to 90% recover spontaneously and it is practically certain that none of these would die were the appendix removed. Incidently I have learned, to my own satisfaction, that limited incisions, small drains, etc., will do for incipient cases but are apt to prove disastrous in late, wide-spread infections. During the period covered by this report there were 21 cases of ordinary chronic or relapsing appendicitis operated upon during the quiescent stage and all of these patients recovered as a matter of course. Two secondary operations were performed for persistent fistula, following the evacuation of abscess cavities without the removal of the appendix, both patients recovered. One case of tuberculosis of the appendix recovered. One case of perforated ulcer of the cecum with abscess recovered. This makes a total of 57 cases of appendicitis, not counting such cases as were found associated with other conditions, in which a diseased condition of the appendix was not the primary cause calling for operation. In this connection I wish to call attention to the fact that considerably more than one-half of all these appendicitis cases were acute and that no so-called chronic cases were subjected to operation upon suspicion, also that in the acute cases there were no operative deaths, every case succumbing to a continuation of the disease.

The next largest series was composed of inflammatory pelvic lesions, of which there were 43. Twenty of these were ordinary instances of chronic salpingitis, some with and some without involvement of the ovary. None of them were instances of so-called cystic or sclerotic ovaries, but all, with one exception, showed evidence of marked salpingitis. In the one exception there was occlusion of the fimbriated ends of the tubes but the mass upon palpation was small. All were operated upon through the anterior abdominal wall and all recovered. Twenty-three were febrile cases ranging in degree from subacute, usually gonorrheal in origin, with evening rise of temperature of one or two degrees only, to the virulent infections with high temperature and rapid pulse. Of these, 12 underwent radical operations with removal of the diseased organs with two deaths; one was an

acute case of gangrene of the tubes, the only instance I have ever seen; the other was a patient that had been bedfast and slowly declining for months. One of these patients developed a fecal fistula which is still open, four months after operation. Six patients were operated upon through the abdominal wall during the febrile stage, for drainage of ovarian abscesses, with or without additional abdominal drainage being carried out. These were all postpartum or postabortum cases, and with one exception the abscess was well defined in the interior of a very large ovary. The exception was a case of criminal abortion with true general peritonitis, which recovered. All of these patients recovered. Five were cases of acute ovarian and pelvic infection, four following abortion and one after full term labor; all of these cases recovered after vaginal laparotomy and drainage. A summary of this class will show that of 20 nonfebrile cases, with extirpation of the tubes, none died, although 19 had serious lesions and extensive adhesions. In 12 febrile cases having extirpation performed there were 10 recoveries and two deaths, one of which can undoubtedly be attributed to operation, although the patient would certainly have died without it. Of 11 cases of simple drainage, all recovered. The etiology of these diseased conditions of the tubes and ovaries is interesting. Of the 20 nonfebrile cases it is likely that 16 were of gonorrheal origin, the other four were puerperal. Of the 23 febrile, six were probably gonorrheal, 15 were certainly puerperal, one was due to perforation of the uterus during curettage and one was the result of curetting a uterus with diseased appendages. The indications governing operation in these cases have been briefly as follows. Operation has been advised in all cases having a distinct tubal mass without elevation of temperature. All cases of acute gonorrheal salpingitis have been advised to have operation performed in the quiescent stage, and patients with a distinct suspicion of gonorrheal infection with tubal masses have been operated upon even if the temperature showed a slight evening rise. Abortion cases with evidence of pelvic infection have at once been opened and drained from below if Douglas' pouch was in the least involved. If Douglas' sac was not invaded, they were operated upon only in the event of evidence of suppuration in the ovary and then drainage only was practiced unless the ovary could be removed without danger of rupture, or the acute stage was long past. Puerperal cases, owing to the fact that the ovary is usually high in the abdomen and becomes fixed there by adhesions, are rarely amenable to operation

through the vagina and were therefore otherwise managed, as were the abortions, viz., by non-interference in the case of a localized lesion until distinct evidence of suppuration intervened, or until the febrile stage was well past. While the puerperal infections are more dangerous to life than the gonorrheal, the latter practically never recover spontaneously while the puerperal ones frequently do, a fact which I believe is readily explained by the more frequent involvement of the tube in gonorrheal, and the ovary in puerperal inflammatory processes.

The next largest series consisted of 16 cases of ectopic pregnancy. One case was diagnosed before rupture, and removal was easy and without the necessity for haste which is so frequently present in ruptured cases. One case was septic and died later from septic myocarditis. Five cases were operated upon during acute collapse, two dying within a few hours. Of these five, three were apparently moribund at the time of operation, and by all the rules of surgical procedure should have been allowed to die without interference, but one was saved, the mother of five small children. Eight were not seen until the primary hemorrhage was past and from which there had been more or less complete recovery, but with just one exception there were distinct evidences of more or less secondary hemorrhage and with that one exception all were exsanguinated and in poor condition for operation, they were not, however, in acute collapse or partially or wholly unconscious as were the preceding five. This case without secondary hemorrhage was one of three instances of tubal abortion in the series, the other two having bled very freely. There were no deaths in these eight operations. One case only could be designated as a pelvic hematoma and this was opened and drained through the vagina. The only curious thing about this series is the large number of cases, practically 9% of the total, being ectopic pregnancy. In the consideration of ectopic pregnancy, the most important question is that of diagnosis, as I am firmly of the opinion that there can be no question so far as the treatment is concerned. Diagnosis means operation. The text book statement that a history of previous sterility is important is totally misleading, as eight, or 50%, of the series were multipara. One had previously been operated upon for tubal pregnancy upon the other side, and but one of the remaining seven could be definitely stated to have been sterile. Menstruation had been perfectly regular in one case and normal pregnancy had been presumed to be advanced three months in another. One

suffered from profuse and prolonged menstruation, without knowing the cause. In but two cases was operation undertaken without a definite diagnosis of ectopic pregnancy, one of these was presumed to be an enormous pelvic abscess and the operation in the other was exploratory. In several instances during this time I have opened the abdomen, thinking I had an ectopic to deal with, and found pyosalpinx instead. The greatest dependence is to be placed upon one or more missed menstrual periods followed by sharp pelvic pain which radiates over the entire abdomen, and is associated with the signs of more or less severe concealed hemorrhage:—faintness, acute anemia, etc., whether associated with a rapid pulse or not. Temperature variations are also extremely misleading, for while the primary condition is that of subnormal temperature, rapid elevation to a moderate degree is so common that the wait for subnormal temperature may persist until the patient is actually moribund. Some cases have a palpable mass upon bimanual examination. Many have none at all especially at the time of primary rupture. The exquisite pain upon examination has always been a characteristic feature if the patient was conscious. The totals of this series are 16 operations with three deaths, one from sepsis in a long delayed case, two from shock and hemorrhage, both individuals were moribund when placed upon the table. One of the latter two cases was diagnosed within a few hours, but the hemorrhage was furious, the other had marked symptoms for two months, had fainted repeatedly and when finally calling a physician had her terminal hemorrhage from the detachment of a four months placenta from its site. This operation was performed in exactly seven minutes, the patient rallied well, became conscious and continued to improve for six hours, when she died instantly, apparently from pulmonary embolism. In cities where hospital facilities abound the question arises as to the propriety of operating without moving the patient in cases of collapse. My plan has been to operate where it could be done the most quickly and with proper preparation, and all of these patients were taken to the hospital under the impression that proper preparation could be made more rapidly there than at home. Imperfect asepsis and death from peritonitis have seemed to me in no way preferable to death from a few minutes delay.

There were 12 gall bladder cases. In one, of unknown origin, with long standing jaundice of the most acute type, cholecystenterostomy was performed, one was a discharging gall

bladder fistula which was not cured by operation. One was cholecystitis of pure typhoid origin. In nine there were gall stones, in the common duct in one case, in the gall bladder and cystic duct in eight cases, in four of the latter there was suppurative cholecystitis in addition. Only one of these presented any marked peculiarities, and in this instance the gall bladder had perforated, and stones had escaped into the omentum where an abscess, containing several ounces of pus, had formed about them. In all the gall bladder cases, but the one mentioned as having a cholecystenterostomy done, a cholecystostomy was performed after the removal of any concretions present. Only one case had a persistent fistula and radical operation was refused by the family at the time of operation. There were no deaths and in fact the terminal condition in all but this one case was satisfactory.

Ovarian lesions demanding operation numbered but five, aside from the infections already counted under the head of oöphorosalpingitis; one ovarian cyst which became infected during an attack of typhoid and was opened and drained; one broad ligament cyst; one fibroma of the ovary; and one case of ovarian dermoid, rotated upon its pedicle and gangrenous, the condition having been present for five days at the time of operation. The last case died 20 hours later from a continuation of the septic condition present at the time of operation. There were no sclerocystic ovaries removed. Four cases of uterine fibromyoma, all of which were of large size and presented symptoms, demanded supravaginal hysterectomy; none of them were small nodules on an otherwise normal uterus, and all recovered without incident excepting for a femoral phlebitis in one instance. One case of prolapsus uteri demanded ventrofixation in addition to plastic work and eight cases of retroversion were operated upon; those beyond the probable child-bearing age had ventrosuspension performed, in the others, intra-abdominal shortening of the ligaments was done. One of these cases had had two previous operations and had been confined to bed for months with profuse menorrhagia and such severe backache that moving about was impossible; she wished no chances to be taken and so the uterus was removed, this proved to be a wise procedure as convalescence was rapid and examination of the uterus showed that fatty infiltration had practically destroyed its muscular structure. The indications for operation in cases of displacement of the uterus were, first, the persistence of the displacement for several years after the last pregnancy; second, the failure of

pessaries to correct the displacement or the refusal of the patient to allow the use of such appliances; third, and the most important of all, the evident responsibility of the displacement for the discomfort from which the patient suffered.

The great majority of all cases of retroversion during this period were treated by the repair of injuries incidental to childbirth followed by the employment of the knee chest posture for a short time daily for months. There were, of course, no deaths. There were three Cesarean sections included in these cases, two for contracted pelvis and one for central placenta prævia. Both operations for contracted pelvis were undertaken after more than 24 hours labor. The case of placenta prævia was a complete success, both mother and child surviving. In one case of contracted pelvis the mother lived and the child was delivered alive but died the following night from profuse hemorrhage from the nose and mouth. In the other case of contracted pelvis the mother had exophthalmic goiter and abdominal section was performed merely because it required a shorter anesthesia than craniotomy. The child lived but the mother died on the fifth day from bilateral pneumonia. But a single patient with carcinoma of the uterus presented herself sufficiently early to justify radical operation and in this case Wertheim's operation was performed, death resulting from intestinal obstruction on the fifth day.

There were six cases of organic intestinal obstructions, two strangulated hernias. One had had symptoms for three days and reduction had been effected with the neck of the sack still embracing the gut; this patient would unquestionably have recovered but for a bad valvular heart lesion, as after the operation all abdominal symptoms subsided at once. In the second case the symptoms, although of slight moment, had persisted for a week, she was comatose when operated upon and died on the fourth day from pneumonia; autopsy revealed an interstitial nephritis but the rapid and characteristic rise of temperature led me to the conclusion that the pneumonia was septic in character. One case of chronic obstruction, of some years standing, with acute attacks supervening, was found to be due to the contraction of pelvic adhesions; this case died and death was undoubtedly due to the operation. One case of intussusception recovered, as did two of obstruction due to strangulation by bands of adhesions. One of the latter was postoperative and an ileosigmoidostomy was done. The other was due to a band running from the tip of the

appendix. There were six inguinal hernias, all operated upon by Bassini's method with no deaths.

Of the remaining twelve cases, in three exploratory operations were done for what proved to be in each instance inoperable malignant disease, all three patients recovering from the operative interference, but two have since died and the third certainly will. One patient with typhoid perforation, operated upon twelve hours after perforation, died on the fourth day. Two cases of true general peritonitis, in both of unknown origin but certainly not appendical, died. Two patients had tuberculous peritonitis, both of which improved after operation, one having since died. There was one instance of hour glass stomach in a tuberculous girl who died after gastro-enterostomy, this should be counted as an operative death. One patient with subphrenic abscess recovered after drainage, another with an intra-abdominal abscess from an old infection, did the same, and one patient with a curious ascites from hepatitis, simulating intestinal obstruction, improved and left the hospital, but died later from the liver affection.

An analysis of the deaths will prove interesting. In the total of 175 cases, there were all told 20 deaths. Of the five deaths from appendicitis, four could have been prevented by earlier operation, one patient would probably have died in any event. There were two deaths after salpingo-oöphorectomy, one operative, the other from a continuation of the general sepsis which was present at the time of the operation. Three deaths resulted from ectopic pregnancy. One patient had been ill for weeks and had been treated during this time for pelvic inflammation. One had been ill for two months and during that time had consulted a physician but once, at the very outset when a diagnosis was difficult to make, and had refused to allow any further visits. One died at the time of primary hemorrhage and in spite of an early diagnosis.

There was one death after Cesarean section following 48 hours of labor, the patient had a palpably contracted pelvis and grave general illness which in itself contraindicated prolonged labor. One death followed hysterectomy for carcinoma of the cervix which was so advanced that the most radical operation possible offered the only hope of ultimate recovery. How many similar cases were seen and refused operation because of the advanced stage of the disease, I am unable to say, but there were more than a few.

Three deaths resulted from various forms of intestinal

obstruction, one was due to the operation, the other two not. All these patients could have been saved by earlier operation. Two deaths were due to general peritonitis of unknown origin, which in one case had lasted several days, the other patient was operated upon early. One death followed gastro-enterostomy in a tuberculous girl, who had undergone several months of fresh air treatment in the hope that she might be sufficiently built up to stand the shock of operation and have her stomach placed in a condition in which it might drain freely and thus assist in the digestion of a sufficient amount of food to restore her health. There were therefore four operative deaths and of these four only one could have lived without operation and even in that one it is very doubtful. There were 16 deaths from a continuation of the previous condition which demanded interference. In this series four abdomens were opened unnecessarily, but without in any way compromising the patients' lives, under the presumption that something might be done for the relief of the symptoms from which they suffered. In 13 instances during the same period the abdomen was opened too late. This delay was very frequently the fault of the patient or friends either in refusing to have a surgeon called at all, under the mistaken notion that a surgeon always wants to operate, or else in refusing operation when it was clearly indicated. Even if the family physician has been slow in advising consultation, I have always attributed it to the fact that in the vast majority of medical cases coming under the physician's observation, delay for a few days clears up the diagnosis and points out the line of treatment to be pursued. In addition, he always fears to alarm the patient by a suggestion of early consultation and it is too much to expect of any man that he shall be equally expert in the diagnosis of all sorts of medical and surgical conditions. There are some conditions, however, in which neither the antagonism of the patient nor any other consideration should swerve him from his plain duty, either to stay by his case until a diagnosis is made, or to have surgical consultation. Those conditions are revealed in the mortality statistics given for ectopic pregnancy, intestinal obstruction and acute appendicitis. So long as surgery is made the court of last resort in these diseases, just so long will an unjustified opprobrium be thrown upon it, only less in extent than that with which it is justly charged either when the abdomen is opened and normal ovaries removed for hematomata that are really only ripe Graffian follicles and for cysts that are no more nor less than trifling

distensions of unripe follicles or when microscopic lacerations of the cervix and perineum are repaired for every condition from headache to neurasthenia and insanity. I wish to make a plea here also for the more accurate differentiation of various forms of pelvic inflammatory processes. Pelvic peritonitis and parametritis are names which should be banished from medical nomenclature as indicating disease entities. In but very few of them is it impossible to make an etiologic diagnosis upon which proper treatment can be based and it is not until a pelvic abscess forms that the peritoneal factor becomes an important element. These cases should not be grouped together and either palliative or radical treatment be advised in all of them. Rather treatment should be based upon knowledge of the widely different natural history and termination of such conditions as gonorrheal salpingitis and puerperal ovaritis; fewer deaths will then occur from radical operation in the acute stage of the former class, or during palliative treatment in the widespread suppuration of the latter. In conclusion I wish to assert my conviction that the general belief, which seems to be gaining ground, that abdominal surgery is perfectly safe so long as an aseptic technic is followed, is entirely wrong. While on the one hand, he who confines his activities to the removal of ovaries and appendices which demand the use of the microscope to demonstrate their pathology and never ventures into the field of acute disease, save in incipient cases, should have few or no deaths with a reasonably good technic; on the other hand, he who shirks no operation no matter how desperate, if operation offers the faintest ray of hope, will always have a very perceptible mortality rate and this is especially true of the delayed acute lesions, patients with which are so apt to be left to die without an attempt to save them because of the damage their deaths will do to the operator's mortality statistics.

The Treatment of Gleet

BY CHAS. G. FOOTE, M. D.,
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Gleet is only a symptom and not a disease, and the only excuse I have to offer for bringing this subject before the attention of the section is because this symptom is usually treated as a *symptom* by the average practitioner without any endeavor to ascertain the underlying condition or the location of the disease

Read before the Clinical and Pathological Section of the Academy of Medicine of Cleveland. May 3, 1907.

proper. I desire above all to bring to your consideration the multiplicity of pathologic conditions which may give rise to this symptom, with particular regard to their treatment.

By the term "Gleet" (the "Gutenmorgentropfen" of the Germans, and the "Goutte militaire" of the French) we mean the presence of a discharge of a chronic nature at the urinary meatus, most often noticed on getting up in the morning. This may seem a slight matter to us, but to the average man, the subject of this condition, it is something very serious. These patients frequently become dupes of charlatans, who encourage them in the idea that they have some serious ailment, and as a result they often become sexual neurasthenics. In a considerable number of cases the disturbance is psychic and the slight discharge which can be detected is the result of persistent efforts at milking the urethra. Lydston says: "In some instances the patient cannot detect the secretion save by squeezing the urethra. Some patients would really experience disappointment if the morning 'tear' of urethral secretion should chance to be absent. The vigor and pertinacity with which they 'milk' the urethra to obtain the melancholy satisfaction of exhibiting a drop or two of mucus in evidence of their alleged deplorable condition is worthy of a better cause." In the large percentage of cases, however, the discharge is due to some definite pathologic lesion.

In order to intelligently treat this symptom, therefore, it will be necessary to consider these various lesions.

1. Chronic urethritis is probably the most frequent condition with which we have to deal. But in order to be still more exact, it will be necessary for us to determine further, whether gonococci are still present in the discharge, whether the inflammation is located in the anterior or posterior urethra, or whether we have to do with a general diffuse catarrh or localized hyperemic or granular patches, circumscribed infiltrations, organic stricture or folliculitis. In order to find out whether we have an anterior or a posterior urethritis, the patient should be instructed to pass his urine in two glasses. If the first glass is cloudy and the second clear, it signifies that the inflammation is in front of the triangular ligament. If the second glass is also cloudy, it shows inflammation of the deep urethra. In this latter class of cases we will often have frequent and painful urination to indicate the location of the trouble. Another test for ascertaining whether the inflammation is located in the anterior or deep urethra, is to let the patient pass part of the urine in the bladder; after which

the surgeon makes firm pressure from above downward over the prostatic urethra with the finger in the rectum. The patient passes the remainder of the urine in the bladder, and if there is posterior urethritis there will be considerably more shreds and pus than are present in the first glass. In the cases of anterior urethritis, injections of the mineral or vegetable astringents, or argyrol or protargol, if gonococci are present, will often produce a cure. If the trouble is in the deep urethra, these injections will be of absolutely no benefit, and we must resort to intravesical irrigations of potassium permanganate or the organic silver preparations, or instillations, with an Ultzmann syringe, of silver nitrate one-half to 2% or even higher, argyrol 20% or Thallein sulphate 10 or 15%. If the discharge is due to hyperemic or granular patches, which can be determined with the endoscope, the only intelligent way to treat them is by direct applications of strong solutions of silver nitrate, 15 to 60 grains to the ounce, or copper sulphate, 40 to 60 grains to the ounce, or by the passage of a full sized sound which will break up the granulations and promote repair. The presence of superficial or deep infiltrations can sometimes be felt externally when located in the pendulous urethra, and they can usually be definitely located with the endoscope or the olive tipped bougie. The presence of shreds in the urine is very suggestive. I desire at this time to express the conviction that the large majority of cases of gleet are due to these infiltrations. They are often, if left untreated, the starting point of organic stricture, and are best treated by gradual dilation every four or five days either with sounds or, better still, an Oberländer's or Kollmann's dilator. The dilation should be continued according to the amount of reaction which follows, until a 32 or 35 French is reached or even higher in some cases. I could less afford to dispense with the use of these instruments in the treatment of such cases, than any other, for the results have been very satisfactory. The cutting or dilation of a stricture is usually sufficient to cure a gleety discharge. In folliculitis, which can be detected by the endoscope, dilation often cures by mechanically emptying the glands and follicles of the urethra, or cauterization through the endoscope may be required.

2. Chronic prostatitis and seminal vesiculitis. I know of no condition which is so frequently overlooked as chronic inflammation of these organs, despite the fact that they are frequently the cause of a gleet. Frequent or painful urination with deep perineal tenderness and prostatorrhea or spermator-

rhea with mental depression in the case of the prostate, point to involvement of the prostate or vesicles, and by rectal examination we find either some enlargement of the prostate with areas of softening and tenderness on pressure, and pus-cells present in the discharge obtained by expression of the prostate, or, in the case of the seminal vesicles, a sausage-shaped induration extending up on either side of the bladder, with tenderness, hemospermia and symptoms of bladder irritation. The treatment of chronic prostatitis with massage, hot rectal enemata, intravesical irrigations or instillations into the prostatic urethra will usually result in a cure. Similar treatment directed to the seminal vesicles is also productive of good results.

3. Tumors, foreign bodies and calculi. We rarely have malignant growths of the urethra, but the most frequent form of tumor is the papilloma. These can be diagnosed by the endoscope, and can be removed by the snare or the galvanocautery; in tumors of the deep urethra, perineal section may be necessary. Foreign bodies of all sorts and descriptions are occasionally found, usually introduced through sexual perversion, or accidentally, as by the breaking of a catheter. Their presence can be determined by the endoscope, and they can be removed in this way with special urethral forceps, or by perineal section, which latter procedure is the best in most cases. Calculi can be diagnosed and treated in the same way.

4. The vigorous erection usually present in the morning in young healthy men, due to a full bladder, is usually accompanied by some moistening of the meatus or the presence of a few drops of mucus. This may or may not cause serious concern to the individual, but if he has had some urethral disease or sexual abnormality, it may assume great importance in his eyes. If we can exclude any pathologic condition, we can assure the patient that his trouble is purely imaginary, or, if necessary, instruct him to drink considerable water before retiring and to jump out of bed and urinate immediately upon awaking, before he has a chance to look for any discharge.

5. Sexual overstimulation, perversions, coitus condonatus, coitus interruptus, excessive masturbation, or sexual excitement without gratification may cause a chronic discharge, or perpetuate and aggravate any pathologic condition already present. This usually shows itself by a drop or more of thin mucus in the morning. If these habits are persisted in we may eventually have the

production of a chronic urethritis, prostatitis or vesiculitis. The treatment does not need explanation.

6. Constitutional conditions may determine the affection in some instances. These causes may be particularly active in individuals who have been the subjects of previous prostatic or urethral disease. We have all met people, usually anemic or poorly nourished, who have a tendency to catarrhal inflammations of all the mucous membranes. In such individuals a gonorrhea may persist in spite of all local treatment, and a cure will result only after the administration of tonics, the most valuable of which is iron, or after a recreation of several months. Gouty or rheumatic subjects are unusually prone to recurrence of the discharge on slight provocation. Phosphaturia, oxaluria and hyperacidity of the urine may occasionally be the cause of a morning drop, and certain individuals, who are high livers and heavy drinkers, and who are accustomed to eat and drink much late at night, will often present a discharge in the morning.

In closing I should like to emphasize the following points: 1, Gleet is ordinarily a symptom of some local or constitutional affection. 2, In the large proportion of cases, we have to do with chronic urethritis or prostatic disease. 3, In most cases the cause can be easily found, and the condition cured. 4, In general the most important factors in the successful treatment of these cases are endoscopy, gradual dilation of the urethra to its fullest capacity, instillations into the deep urethra, the treatment of any prostatic trouble, intravesical irrigations, and the regulation of the habits and constitutional condition of the patient. 5, Overtreatment is often the cause of keeping up a gleet, therefore, after several months of well-directed treatment, stop all local applications, and you may find that the discharge will stop. 6, There will be a small percentage of cases, which will resist every kind of treatment, although they will become fewer and fewer as our methods become more accurate and scientific.

310 Osborn Bldg., Cleveland, O.

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Trend of American Research

The meeting every third year of the Congress of American Physicians and Surgeons, with its large number of affiliated societies, is always of great interest as indicating the lines along which we are conducting research in this country. On the one hand are the societies which are more or less purely clinical in character, and on the other the societies which are, at least in large part, devoted to laboratory and bedside research. As might be expected, one of the subjects most widely discussed at this meeting was that of opsonins. Recently described in England and taken up with some enthusiasm in this country it was possible to bring out a large list of the results obtained in some of the large laboratories such as the Rockefeller Institute, the New York Board of Health, the University of Chicago and the Johns Hopkins Medical School. Without going into detail, it appears that the observers in these laboratories have come to the conclusion that, although the introduction of this subject has done much to stimulate the progress of vaccination, not all that has been claimed can be accepted. The complexity of the methods, the variations in the normal as well as in the abnormal, and the

consequent difficulty of interpreting the results of other workers, lead to the belief that the value of the opsonic index as an indication in treatment is questionable. Many of those who had been working on the subject appeared to think that the clinical manifestations after the vaccinations were as valuable in giving information as to the further course of the treatment as the index is claimed to be. It is clear that much more must be done on the subject before anyone is able to speak ex cathedra.

Immunity aside from the opsonic index held a large part of the attention. Much care has been given to attempts at interpretation of the peculiar results obtained at times in the preparation and administration of the antitoxic and antibacterial sera. Constant efforts are in evidence to establish immunity against substances other than the ordinary run of bacterial poisons, and in a laboratory way at least this has been successful in the case of the poison of poison ivy. Whether this can be reduced to a practical basis is still a question. In the scientific societies the description of single detached cases is now a rarity instead of the rule and the subjects which come under consideration are rather those of general pathology, or at least concern groups of allied conditions with questionable relationships.

The Control of Tuberculosis

Elsewhere in this number we publish the communication of the Academy of Medicine of Cleveland to its members, calling their attention to the fact that tuberculosis is included among those diseases which must be reported to the Health Office and it urges them to aid as much as possible in this respect. It is highly important that the Health Office know of these cases since the patient is very apt to be lost sight of by the attending physician if his services are dispensed with or if the patient moves to some other part of town. In such instances the Health Office can still maintain some oversight of the patient and do much to lessen the spread of the disease to others.

Tuberculosis offers one of the most inviting fields for the employment of prophylactic measures, and thanks to the active campaign of education that has been carried on, especially in recent years, the mortality has been materially reduced in a number of cities.

The value of popular education in this respect cannot be overestimated, as upon the coöperation of the people depends

the success of the movement to limit the spread of tuberculous disease. A most satisfactory pamphlet for this purpose is an essay by S. A. Knopf, of New York, which was awarded the prize offered by the International Congress for the Study of the Best Way to Combat Tuberculosis as a Disease of the Masses. A revision of this publication together with a new supplement has just appeared and can be obtained through the well known Journal *"Charities and the Commons,"* of New York, for 25 cents. Many of the profession in Cleveland have had the pleasure of hearing Dr Knopf and all of them must be familiar with his important work in the Anti-Tuberculosis crusade. The information contained in this essay is so expressed as to be perfectly intelligible to a layman and it would be a wise move to place it in the hands of those who are in any way connected with a case of tuberculosis. Explicit directions are given for the prevention of the spread of the infecting bacilli and while the danger and seriousness of the disease are emphasized, the tone of the article is so hopeful that much good will be accomplished both by cheering up those afflicted by the disease and also by lessening the unreasonable dread of infection on the part of the healthy, a circumstance which has led at times to the cruel neglect or ostracism of the patient.

The Typhoid Situation

If we may believe the published reports as to the number of cases of typhoid fever which have developed in Cleveland during the past three weeks, our boasted freedom from this disease as a result of our new intake is fast becoming a phantom myth.

While not decrying the advantages to be derived from an intake far out in the lake as against an intake close to the shore, THE CLEVELAND MEDICAL JOURNAL has put itself on record more than once as demanding a filtration plant, in order to secure a pure water supply.

Of the value, however, of a pure water supply, and of its influence upon the mortality, demonstrable proof is fortunately not lacking. Again and again, the JOURNAL has published material bearing upon this important point, and has gone on record as insisting upon the necessity of a filtration plant as the only method of securing absolutely pure water. It is interesting here to record the wonderful change which has come over the city of Harrisburg,

Pa., during the past five years, as a direct result of the administration of a business mayor, who believed in a pure water supply, clean streets, public parks and breathing spaces for the city's poor. Harrisburg as a civic municipality has read a lesson of wonderful triumph, to Harrisburg as a city housing the state government. The record of the municipal government, when compared with the story of the Capitol of the State, is one of the brightest spots in American civic history. One of the last cities to adopt a filtration plant, as a method of rendering the city free from typhoid infection, the result achieved in Harrisburg is truly phenomenal.

We are glad to be able to utilize this reason, as demonstrated in the history of Harrisburg, to emphasize again the importance of a filtration system as a means of freeing any municipality from, to our shame be it said, a distinctly preventable disease.

Ohio State Medical Association

The program of the Ear, Nose and Throat Section of the Ohio State Medical Association, which is to be found in this number of the JOURNAL, contains subjects of considerable interest not only to specialists in these particular lines, but to general practitioners as well; especially is this true of the symposium on Acute Inflammation of the Ear in Which Pain Is a Prominent Symptom, a subject with which the profession as a whole is bound to be interested.

The attractive situation of Cedar Point, especially at the end of August, when the meeting is to be held, and the value of the papers to be read, not only in this particular Section, but in the others as well, should induce an extra large attendance on the part of the profession of Ohio. Every practitioner should make an effort to be present at the meeting.

Meeting of the Auxiliary Legislative Committee

This committee of the Ohio State Medical Association held a very satisfactory meeting on May 22, about 75 counties were represented, which speaks volumes for the surprising interest taken in the important field of work with which this committee has to deal. Among other business the following resolution was unanimously adopted:

The Auxiliary Legislative Committee of the Ohio State Medical Association, meeting as such, has taken cognizance of

Senator Foraker's defense of himself as published in the newspapers of this date, against charges that have been made against him by members of the medical profession of the state. In this connection this committee, while realizing that the alleged defense of Senator Foraker is widely at variance with the facts, refrains from a specific reply to the same, First, because, as a committee it has no right to promulgate any view that may by anticipation commit the association that created it, and, Second, because it believes and recommends that specifications under the general charge, that Senator Foraker has been unfaithful to the interests of the people as represented by and through the medical profession, ought not to be officially promulgated until they can receive a larger share of public attention than would be possible in the midst of the present practically universal protest against his record as a United States Senator. We do, however, feel that at the proper time such charges and specifications ought to be made public, and that Senator Foraker ought then to have a full and fair opportunity to reply to them.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Puerperal Toxemia: William H. Wells, in the *Therapeutic Gazette* for April, believes that the exact causes of the toxemia of pregnancy are as yet obscure. Its treatment is based upon efforts to increase elimination, first of all by the bowels. Purgation should be started and continued until the bowels are absolutely clean, and a good flow of that natural intestinal antiseptic, the bile, is started. For this purpose, calomel given in doses of one-fourth grain every hour until 10 doses are taken, and often combined with one-fourth to one-half drop of croton oil, and followed by the free use of salines, gives in his experience the best results. If there is vomiting, lavage of the stomach may be practiced with good effect, the stomach being washed out with sterile water with bicarbonate of soda, one dram to the quart. Unload the lower bowel by washing out the colon, first by the usual "triplex enema," then by lavage of normal salt solution. The lavage should be repeated three or four times a day until the solution comes out clear. Following the enteroclysis, intestinal peristalsis should be stimulated by such drugs as nux vomica, cascara, and possibly aloes, while a mild impression by calomel may be kept up for some time after the attack is over. Strict attention should be given to the bowels until the end of pregnancy. Excretion through the skin should be stimulated in mild cases of toxemia by simple warm baths, proper clothing and exercise. In more severe cases, the hot pack will be necessary. To quiet the high tensioned circulation, bromide or chloral in suitable doses may be used, or the tincture of veratrum viride in doses of 15 or 20 minims is better. When the nervous tension is high a hypodermic injection of one-quarter grain of morphin does good and may be repeated once. It quiets the restlessness until the eliminatives have time to work. To increase the flow of urine and favor excretion,

about two quarts of water should be taken in the 24 hours, sweet spirits of niter, citrate of sodium or lithium, acetate of potassium and salicylate of sodium are all of use. In many cases the toxemia will respond to treatment, and the interruption of the pregnancy will be unnecessary. The earlier treatment is started, the better the prognosis. In the same Journal, John Cooke Hirst states, concerning puerperal eclampsia, that the place for an eclamptic is in a hospital, treatment in a private house adding considerably to the danger. He gives as a routine method of treatment the following: first avert the convulsion if possible with chloroform, and prevent injury to the tongue during convulsions by a mouth gag of some kind; second, give 15 minims of tincture veratrum viride hypodermically; third, wash out the stomach, and through the tube pour in two ounces of castor oil with four drops of croton oil, or place on back of tongue four drops of croton oil and 10 drops of sweet oil; fourth, hot vapor bath or hot pack for 30 minutes every four hours; fifth, hypodermoclysis of one pint of salt solution under breast every eight hours; sixth, if convulsions recur repeat veratrum viride in five minim doses every hour and if after three hours pulse is still bounding and patient cyanosed, perform venesection; seventh, under ordinary circumstances let labor alone; should a patient recover from eclampsia during the middle trimester or later, labor should be induced in the eighth month of pregnancy.

Cardiac Disease: Robert H. Babcock, in the *American Journal of the Medical Sciences* for May, considers the treatment of cardiac degeneration apart from valvular disease. In those cases showing inadequacy, the management is essentially the same as in waning heart power from any cause. In the second group of cases, in which inadequacy has not yet supervened, the treatment should be conservative, that is, designed to prevent the development of incompetence either through acute strain or through gradual increase of the hypertension already existing. In the first class of cases the primary and indispensable requirement is rest. The degree of rest necessary, and its duration, depends largely on the degree of inadequacy. He believes, however, that with the first appearance of myocardial incompetence rest should be emphatically insisted on. As regards the Nauheim baths, probably no class of cardiopaths obtain as much benefit from this balneologic treatment as do persons suffering from myocardial incompetence apart from valvular disease; he, however, emphasizes the point that this mode of therapy should not be deferred until cardiac incompetence has become advanced, and the sooner it is begun after the appearance of symptoms, the greater the prospect of improvement. The use of medicinal agents is governed by the rules that apply to cases of decompensated valvular disease. The use of vasodilators can rarely be omitted, especially when the arteries are stiff, and he insists that they should never be neglected when digitalis is being administered in a case showing pronounced hypertension with myocardial incompetence. Digitalis and its congeners, while probably indispensable at some time in these cases, are to be handled with care and judgment, and require careful watching. He has frequently been pleased with the effects of strophanthus in these cases. He sometimes employs aconite, being convinced of its utility in certain cases, as those of great

hypertrophy with dilatation, but when the heart chambers are greatly dilated and inadequate, he believes it not beneficial, and perhaps positively harmful. Whenever the portal system is much engorged cathartics are indispensable. He believes few agents are of as positive value as morphin when properly given. In a small dose, one-tenth to one-eighth grain, it is a heart stimulant and wards off dyspnea. It often too exerts a satisfactory hypnotic influence and brings the much needed repose and refreshment. When administered in a small daily dose, morphin becomes a positive tonic to the inadequate heart and contributes powerfully to the restoration of potential strength and prolongs life when recovery is impossible. In the majority of cases a dose larger than one-eighth grain is not necessary and he invariably follows it next morning with a cathartic containing sodium. He has used one-eighth grain of morphin hypodermically every evening for weeks without the necessity of increasing the dose. He has recently resorted to the hypodermic use of 1-12 to one-sixth grain of heroin for the relief of nocturnal dyspnea, and has seen it followed by almost miraculous relief when such had not been obtained by morphin. He has never observed the same results from morphin or opium by the mouth as by subcutaneous injection.

Blood-pressure: In the *Journal A. M. A.* for April 13, Arthur R. Elliott treats of the therapeutic control of the blood-pressure in arteriosclerosis and Bright's disease. He believes that before proceeding with the exhibition of vascular drugs, the heart and circulation should be examined with the utmost care. Because the blood-pressure is high, it does not necessarily follow that vascular relaxants are indicated; it may be that cardiac tonics are more urgently needed. It is well to accent the point that because the blood-pressure is high it does not necessarily follow that it must be reduced by drugs to insure either the patient's safety or comfort. Active vasodilators (nitrites) may occasionally be necessary to meet emergencies such as stenocardia, angina pectoris, apoplexy prodromes, etc., under such circumstances they are perfectly justifiable and may be given with a freedom not at other times permissible. Blood-pressure may be reduced temporarily by vasodilator drugs, but it is very difficult to produce a permanent lowering except in the presence of a weak heart. It follows, therefore, that a material fall in blood-pressure which is more than temporary and due directly to vasodilators, especially if accompanied by quickened pulse rhythm and not marked by improvement in the patient's sense of well being, is apt to be unfavorable, being ominous of a weak heart. A sustained high blood-pressure (over 200 millimeters), if accompanied by symptoms of a disquieting character, may render a course of vasodilator medication advisable. The drug chosen should be slowly and cautiously introduced, closely watching its effects on blood-pressure, pulse rate, and the subjective state of the patient. The sudden employment of full doses of an active vasodilator is to be condemned, as it may produce serious consequences to the patient's heart and nervous system. A fall of 10 or 15% is, as a rule, all that is necessary or judicious to accomplish by drugs. The benefit derived from vasodilator medication can not be properly gauged by the blood-pressure record. The patient's subjective comfort, and more es-

pecially the pulse rate, form a better index of the effect produced. The employment of vasodilators in the late stages of Bright's disease with cardiac dilatation, dropsy, etc., is practically useless.

Functional Heart Disease: In the *International Clinics* (Volume 1, Seventeenth Series), James J. Walsh summarizes the treatment of functional heart disease. The principal cause for regular irregularity of the heart is toxic, and very probably the most common of these heart disturbing causes is tobacco. The remedy for tobacco heart, after of course the stoppage of tobacco, is strychnin in some form. Personally, however, he prefers nux vomica in some form to the alkaloid. He gives it in the form of tincture, and increases the dose until the physiologic effects of the drug became manifest. The coffee heart is not so common as the tobacco heart, and is seen much more frequently in women than in men. The drug treatment of the coffee heart consists mainly in the use of the bromids. A sufficient quantity of the drug should be given, and at least 15 grains (one gram) three times a day given to lighter patients, and 20 grains (1.3 gram) to heavier patients. He prefers a mixture of the bromids, such as the elixir of the bromids of the National Formulary. It must not be forgotten that the effect of the bromids can be noticeably increased by counseling abstinence from table salt during the course of the treatment. After the regularly irregular heart due to some toxic influence, the most common form of functional heart trouble is palpitation. It occurs particularly in very nervous persons, who are likely to dwell much on their feelings, and they complain most of its occurrence shortly after meals. Not infrequently this form of heart disturbance is associated with flatulency and gaseous distention of the stomach. The first indication for treatment here is the relief of the stomach trouble, and he believes the most effective remedy is the old-fashioned one of rhubarb and soda, and he has found Squibb's preparation especially effective. In most of these cases, too, it is important to secure the muscular action of the stomach and this is best accomplished by means of nux vomica, in liberal doses, which will also act as a stimulant to the irritated heart.

Pneumonia: Leonard Weber, in the *Medical World* for May 4, puts his faith in the treatment of pneumonia in quinin, digitalis, and the cold wet compress applied around the affected side from sternum to spine and frequently changed; eventually heart excitants as hypodermics of camphorated oil and stimulants; in so doing he has been but seldom disappointed as to the outcome of the disease. As soon as the diagnosis is fairly well established, a daily evening dose of seven and one-half or 15 grains of quinin muriate is given in one or divided doses, then the cold wet compress is snugly applied covered with oil silk and flannel and frequently changed. This relieves the pleuritic stitch and dyspnea, and generally avoids the necessity for morphin. Delirium and insomnia he finds best relieved by five grains or more of Dover's powder, and occasional enemas of tepid water; a good large room and a plentiful supply of fresh air, day and night, are essential for the welfare of the patient. At the first sign of cardiac weakness quinin is discontinued and a freshly made infusion of English digitalis leaves (one-half dram to six ounces) one-half ounce every two or three hours administered until cardiac

action has improved. Cloetta's soluble digitoxin by mouth or hypodermically is reliable and prompt in its effect. For quickly stimulating a failing heart, he prefers hypodermics of camphorated oil in one-half dram doses every half hour. In the average case of pneumonia, the danger lies in the acute and severe intoxication of the system by the toxins, and he believes that quinin in fairly large doses, once in 24 hours, counteracts such toxins and diminishes the severity of the infection. Grippe pneumonia, however, is different, and when resolution finally occurs convalescence is slow. He knows of nothing which could be called a remedy here, careful nursing and judicious symptomatic treatment are our main reliance.

Buttermilk Feeding: Howard Childs Carpenter, in the *Journal A. M. A.* for May 11, states that the use of buttermilk as an infant food has not been tried to any great extent in America, although it has been used extensively in Europe, particularly in Holland. One reason for this hesitancy to take up buttermilk as a food for sick infants has been the uncleanness of much of the buttermilk on the market. The casein of sweet milk is in the form of calcium casein but this is changed in buttermilk to casein lactate, and buttermilk contains a higher proportion of albumin than sweet milk, buttermilk from cream having a higher percentage of soluble albumin than buttermilk made from milk, the latter having a higher percentage of casein. In the 12 cases reported, plain buttermilk was not given but a routine mixture of buttermilk one quart, wheat flour three and three-quarters teaspoonfuls, and granulated sugar 15 teaspoonfuls. A farina boiler, that is a double boiler, is the best receptacle in which to prepare the food. First, carefully mix the flour and sugar with a few spoonfuls of the buttermilk until a smooth paste results. All lumps should be completely smoothed out. The balance of the buttermilk is then added. This mixture is now heated to the boiling point (212 F.), but must not be boiled or it will curdle; it is also essential that the milk be constantly stirred during the entire process or it will curdle. Before taking out the milk for each feeding, the mixture must be carefully stirred, as on standing it separates and the flour falls to the bottom of the vessel; no water is added to the mixture. He believes as the result of his experience in which 12 cases, seriously ill when put on the buttermilk, had an average gain of eight ounces a week, that fresh buttermilk is a most excellent temporary food for infants suffering from intestinal indigestion, enteritis and marasmus. He observed no unpleasant effects from its use, infants almost invariably taking it well. He emphasizes the fact that success in its use is not so much due to the absence of fat, as to the great ease with which the proteid of buttermilk is digested. He has observed several cases unable to digest 0.75 per cent of calcium casein, who digested perfectly the two to three per cent of casein lactate in the buttermilk.

Opium and Alcohol: In the *Journal of Inebriety* for Spring 1907, Winfield S. Hall states, concerning the influence of narcotics on body temperature, that doses of opiates or of alcohol sufficient to produce the full physiologic action are followed by a fall of bodily temperature. In the case of the opiate this fall of temperature can be ascribed solely to decreased metabolism. In the case of alcohol, however,

two things are at work. First, the most direct effect of alcohol is the narcotic action upon the vasoconstrictor centers, or perhaps upon the vasoconstrictor nerves direct, leading to a marked dilatation of arteries, particularly of the cutaneous branches. This flush of the surface features and glow of surface warmth results in a rapid radiation of body heat. This leads naturally to a fall of temperature. This fall of temperature is accentuated by the fact that at the same time that the heat is being rapidly radiated from the surface it is being more slowly liberated in the muscles and glands. This accounts fully for the fact that mountain climbers in higher altitudes, and travellers in higher latitudes, cannot be induced to partake of even small doses of alcohol or small portions of alcoholic drinks. They know very well from the recorded experiences of former travellers that such indulgence in alcohol would probably be fatal. What the traveller needs when he is to be subjected to such an ordeal of his energy and heat producing tissues is not something to slow tissue action and something to disburse body heat, but the exact reverse of this drug action. So we find a man taking sugar which represents the most easily assimilable and readily metabolized food and which is, next to fats, the food of highest heat and energy producing coefficient for its weight.

Arsenic and Zinc Phosphid: In the *American Journal of Clinical Medicine*, for May, W. F. Waugh and W. J. Abbott advise in the treatment of neuroses to commence with a thorough cleansing of the bowel with calomel one-sixth grain every half-hour for six doses if the stools are light-colored and offensive, followed by enough effervescent saline laxative to produce copious watery stools, aided if necessary by colonic flushings. If the stools are dark and offensive, podophyllotoxin 1-12 grain every half-hour is given instead of calomel. As to the action of arsenic they assert that the special effect of arsenic is probably the production of fatty degeneration. During convalescence from acute infectious diseases such as pneumonia or rheumatism it seems most probable that arsenic will favor the process by which the debris of these diseases is melted down and carried out of the system, instead of being allowed to remain as a clog to the vital functions and a menace to the future health. Whenever a similar indication arises in any malady, the use of arsenic is justifiable; beyond this, it does not seem applicable except when required to combat certain infections, such as that of malaria, and of an as yet undiscovered cause of pernicious anemia. Give small frequent doses till the eyelids itch, then keep just below this amount for a month. The remarkable effects following the use of zinc phosphid as a remedy for zoster, induced the presentation of the following proposition, that when a centric nervous degeneration is indicated by local cutaneous manifestations, zinc phosphid, by improving the nutrition of the diseased centers, will act as a prompt and effective remedy for the disease. Recognizing the tremendous metabolic power of the drug, and the possibility of harm from its continuous administration, they advise giving one-sixth grain four times a day for one week out of each month, using neurolecithin the remainder of the month, this agent also seeming to have the power of improving nutrition in undeveloped or degenerated nervous tissues. Whether these agents will aid muscular as well as nervous degenerations remains to be determined.

Academy of Medicine of Cleveland

The forty-eighth regular meeting of the Academy was held at 8 P. M., Friday, May 17, 1907, in the Assembly Room, Cleveland Medical Library.

Charles Wehr, M. D., recounted a personal experience with a severe bite from a poisonous tropical spider.

J. M. Moore, M. D., reported an instance of traumatic rupture of the sphincter ani from a fall upon the pavement.

Program: (1) Fatty Tumors of the Omentum, W. E. Lower, M. D. (2) Apnoea, Chas. F. Hoover, M. D.

THE OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION

The twenty-ninth regular meeting of the Section was held Friday, May 24, 1907, at 8 P. M., at the Cleveland Medical Library. Program: (1) Demonstration of the Sweet Localizer, W. C. Hill, M. D.; (2) A New Method of Localizing Foreign Bodies in the Eye with the X-Ray, with Demonstration of Apparatus, W. I. LeFevre, M. D.; Presentation of Cases.

CLINICAL AND PATHOLOGICAL SECTION

The forty-second regular meeting was held at 8 P. M., Friday, May 3, 1907, at the Cleveland Medical Library. Program: (1) The Treatment of Gleet, C. G. Foote, M. D.; (2) Abdominal Section during Pregnancy for Ovarian Tumor (Dermoid) with Twisted Pedicle; Report of a Case, Hunter Robb, M. D.; (3) The Serum Treatment of Epidemic Cerebro-Spinal Meningitis, L. W. Ladd, M. D.; (4) Report of a Case of Gangrene of Both Legs following Pneumonia, H. J. Lee, M. D.

St. Alexis Hospital Alumni Association

The fifty-second regular monthly meeting of the St. Alexis Hospital Alumni Association was held at The Hollenden, on Thursday, May 2, 1907, at 8 P. M. Program: (1) Rheumatism Case Reports, B. Peskind, M. D.; (2) Flat-foot; a Mechanical Problem Solved by an Ideal Plate, Simply Constructed and Allowing Natural Motion to the Foot, J. E. Tuckerman, M. D.

Lakeside Hospital Medical Society

The Lakeside Hospital Medical Society held its regular meeting Wednesday, May 29, 1907. Program:

1. The Value of a Cytologic Determination of the Cerebrospinal Fluid in Cases of Tuberculosis and Syphilis with Illustrative Examples, Dr Hoover.
2. Exhibition of a case of Syringomyelia, Dr Hoover.
3. A Case of Arsenical Neuritis following the Ingestion of the Drug with Suicidal Intent, Dr Vincent.
4. Two Interesting Cases of Fracture of the Skull, Dr Allen.
5. Gonococcus Vulvo-vaginitis as an Epidemic in Children's Hospitals, Dr Cushing.
6. The Comparative Advantages of Catgut and Silver Wire Sutures for Closing the Fascia after Abdominal Incisions, Dr Robb.

7. Report of Recent Outbreak of Scarlet Fever at Lakeside Hospital, Dr Warner.

8. Report of a Case of Generalized Carcinoma in a woman at Twenty-Three, Dr Robb and Dr Russ.

9. Demonstration of Knobbed Tubercle Bacilli from a Case of Disseminated Miliary Tuberculosis, Dr Russ.

Ohio State Medical Association —August 28, 29, 30, 1907

PROGRAM ON OPHTHALMOLOGY

1. Corneal Infections—T. F. Bliss, Springfield, Ohio.

2. The Treatment of Purulent Ophthalmia—H. B. Harris, Dayton, Ohio.

3. A Review of the Oculist's Records for Ten Years at the Ohio Institution for the Blind—J. E. Brown, Columbus, Ohio.

4. A Method of Extracting the Capsule Left After the Absorption of Traumatic and Other Cataracts—D. W. Greene, Dayton, Ohio.

5. Obstructions of the Lachrymal Canal, their Pathology and Treatment—W. L. Carroll, Youngstown, Ohio.

6. Trichloracetic Acid in the Treatment of Diseases of the Nose, Throat, Ear and Eye—E. H. Porter, Tiffin, Ohio.

7. Anisometropia—William E. Bruner, Cleveland, Ohio.

8. Refraction, What to Prescribe After Static Findings—J. E. Cogan, Cleveland, Ohio.

9. Reports of Cases and New Instruments Shown.

Social Session in the Evening.

The Interdependence of Diseases of the Eye, Ear, Nose and Throat—John E. Weeks, New York City.

PROGRAM FOR THE EAR, NOSE AND THROAT SECTION

1. Symposium for the general profession on Acute Inflammation of the Ear, in which Pain is the Prominent Symptom.

   The Importance of the Early Diagnosis of Acute Infections of the Middle Ear—J. M. Ingersoll, Cleveland, Ohio.

   The Prophylaxis and Early Treatment of Otitis Media (acute)—George C. Jameson, Oberlin, Ohio.

   The Best Treatment of Earache Without Operation—Walter E. Murphy, Cincinnati, Ohio.

   The Treatment of Pain in the Ear Without Operating, from Stand-point of a Specialist—Chas. Lukins, Toledo, Ohio.

   The Surgical Treatment of Earache from Stand-point of a Specialist—Wade Thrasher, Cincinnati, Ohio.

   The Indications and Technique for Incising the Drumhead—O. B. Monosmith, Lorain, Ohio.

2. Tuberculous Laryngitis—A. B. Thrasher, Cincinnati, Ohio.

3. The Faucial Tonsil—S. H. Large, Cleveland, Ohio.

4. The Diseased Adult Tonsil, its Relation to Other Diseases—A. W. Grosvenor, Sydney, Ohio.

5. Purulent Hyperplastic and Atrophic Nasal Catarrh, Different Stages (of One and the Same Disease or Condition)—John North, Toledo, Ohio.

6. Plastic Operations on the Anterior Nares—Royce D. Fry, Cleveland, Ohio.

7. The Improvised Operating Room in Ear, Nose and Throat Practice—Derrick T. Vail, Cincinnati, Ohio.

8. Reports of Cases and New Instruments Shown.

Book Reviews

The Practitioner's Medical Dictionary. An illustrated Dictionary of Medicine and Allied Subjects, including all the words and phrases generally used in Medicine, with their proper pronunciation, derivation and definition. By George M. Gould, A. M., M. D., author of "An Illustrated Dictionary of Medicine, Biology and Allied Sciences," "The Student's Medical Dictionary," "30,000 Medical Words Pronounced and Defined," "Biographic Clinics," "The Meaning and Method of Life," "Borderland Studies," etc.; Editor of *American Medicine*. With 388 illustrations. Octavo; xvi + 1043 pages. Flexible leather, gilt edges, rounded corners, $5.00; with thumb index, $6.00, net. P. Blakiston's Son & Co., Publishers, 1012 Walnut St., Philadelphia.

This volume was brought out by the author in the endeavor to provide a dictionary smaller than the large illustrated one previously published, which should yet contain all that is necessary for the practitioner. The volume is bound in soft leather and is a convenient size. The typography is excellent and the sub-heads under the various titles are conspicuous. A marked feature is the number of eponymic diseases, which adds to the ease of reference. There are some terms to which it seems a pity to give the authority of the dictionary, such as "Grippotoxin" and some others, but on the whole the selection covers words which appear likely to live. The author is not wholly consistent in the use of the diphthong, giving the preference sometimes to one form and sometimes to the other, leading to occasional confusion where the names of species are only differentiated by one letter. The illustrations are not numerous but are well selected and the tables presented are valuable. Dosage is given both in apothecaries and in the metric system, and the new Basle anatomic nomenclature is adhered to as far as possible. The convenience of the form, the excellence of the typography and arrangement, and the care with which the contents have been selected, make the work one of great value for the practitioner.

Biographic Clinics, Volumes IV and V. Essays concerning the influence of visual function, pathologic and physiologic, upon the health of patients, by George M. Gould, M. D., Editor of *American Medicine*, Author of "An Illustrated Dictionary of Medicine," "The Practitioner's Medical Dictionary," etc., "Borderland Studies," "The Meaning and the Method of Life," etc. Philadelphia. P. Blakiston's Son & Company, 1012 Walnut Street, 1907.

The general medical profession has a better idea today of the importance of eye strain than it had five years ago when the first of these Biographic Clinics appeared, and Dr Gould deserves no small share of credit for his work in disseminating this knowledge. He has kept at it so persistently that many who first scoffed at his ideas are now daily witnessing the value of his teachings. Abuse and ridicule have been heaped upon him by some and probably the majority of us would, if placed in his position, have been no less vigorous or even virulent than he in replying to these bitter attacks. He is an enthusiast no doubt, possibly even an extremist upon the influence of eye strain upon the general health. He is possibly apt to attach even more importance to this subject, important though it is, than rightfully belongs to it, and shows at times a tendency, at least in his writings, to ignore or belittle the importance of other soures of ill health and the value of other specialties than ophthalmology. While

I do not wish to enter into the controversy which has arisen between the Doctor and some of his opponents I do feel that much praise is due him for the good he has accomplished. His plea for more careful and better refraction work has been needed. It is a pity however that the discussion has been so bitter on both sides.

We have had the privilege upon two previous occasions of reviewing the preceding volumes in the series of Biographic Clinics, which were written to show the influence of the visual function, pathologic and physiologic, upon the health of patients, and of speaking favorably of the work he has accomplished by them in bringing more prominently before the profession the importance of eye strain and careful refraction work. The aim of these two new volumes is the same. With the exception of one or two chapters all their contents have previously appeared elsewhere. In volume four he takes up the life histories of some additional literary men and composers in a manner similar to that adopted in the previous volumes and shows the importance of eye strain in the lives of Balzac, whom he terms the hero of "overwork," Tchaikovsky, Floubert and Berlioz and of excessive myopia upon the life of Lafcadia Hearn. He also gives the clinical histories of a number of patients who have suffered marked and in some cases very unusual symptoms resulting from eye strain. Some of them are very suggestive and furnish food for reflection as to whether similar cases are not being over-looked among our own patients. There are chapters of a general nature containing nothing different from what he has written in his previous books upon the general subject of eye strain; a chapter upon the etiology of astigmatism; on the eye strain origin of epilepsy; one written by Dr H. A. Wilson, Professor of Orthopedic Surgery in Jefferson Medical College, upon the ocular factors in the etiology of spinal curvature; upon the relation of eye strain to diseases of the digestive organs; one upon the ocular origin of migraine; upon the relation of eye strain to suicide and upon incurable eye strain.

This series constitutes a valuable contribution to medical literature and can be most heartily commended to physicians in general practice for their careful perusal and also to any oculists who possibly may not be already familiar with these volumes.

Wellcome's Photographic Exposure Record and Diary. Three editions, United States, for the United States; Southern Hemisphere and Tropical edition, for Tropics and South Hemisphere; Northern Hemisphere edition for Canada, Europe and all countries north of the Tropic of Cancer, except United States of America. Burroughs Wellcome & Co., 45 Lafayette Street, New York City. Price of the N. S. edition, 50 cents.

Of great interest, more especially to the amateur photographer in the profession, this photographic record and diary published by Burroughs Wellcome & Co., should meet with a hearty reception from the American amateur photographer and should prove a really serviceable guide to the tyro as well as to the advanced amateur.

Burroughs Wellcome & Co. products are so well known to the profession throughout the world, that there can be no doubt that their photographic tabloids will win the same popular favor accorded their medical preparations. This little volume includes more valuable information within a small compass than in any similar work we have seen. There are a

large number of pages especially ruled and set aside for the record of photographic exposures, a host of valuable tables of interest to the photographer and a very satisfactory exposure table.

Manual of Clinical Chemistry, by A. E. Austin, A. B., M. D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tufts College, Boston. D. C. Heath & Co., Publishers, 1907, Boston.

We were greatly pleased when we first received the little volume and have perused it very carefully with much interest.

It is practical, reliable, and up-to-date. The laboratory tests are well explained, and their import demonstrated, this is particularly so in the section on urine and urinary diagnosis. The chapter on gastric contents and that on feces are well handled. The work is entertainingly written and will prove a source of great comfort to the busy doctor. Our students have already derived much instruction from it, and we give it our hearty commendation for a work of its scope.

Thornton's Pocket Medical Formulary. New (8th) edition, revised to accord with the new U. S. Pharmacopeia. Containing about 2,000 prescriptions with indications for their use. In one leather bound volume. Price, $1.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York 1907.

The present edition has been thoroughly revised and brought up to date so that it conforms to the recent changes in the U. S. Pharmacopeia, by which the strengths of some of the powerful preparations have been materially altered. The work is already widely known and to those unacquainted with it and especially to the recent graduates it would prove very useful in suggesting valuable combinations of drugs and palatable preparations.

Transactions of the American Dermatological Association at its Twenty-Ninth Annual Meeting.

Through the courtesy of the American Dermatological Association, we have received the annual transactions of the Society for the years 1904-1905. This annual volume contains a large number of interesting scientific papers upon dermatologic subjects; especially to be noted is that paper by Dr Hyde upon the disease known as Egg-Shell Nail, and the studies by Dr Engman and Mook on Epidermolysis Bullosa. A most interesting case is reported by Dr Fordyce on Undetermined Tropical Ulceration, Involving the Nose, Pharynx and Larynx. The President's address was by W. T. Corlett, of Cleveland. This volume has been sent to the Cleveland Medical Library.

Obstetrics for Nurses. By Joseph B. DeLee, M. D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. Second revised edition. 12mo of 510 pages, fully illustrated. Philadelphia and London. W. B. Saunders Company, 1906. Cloth, $2.50 net.

Though entitled Obstetrics for Nurses, this volume of Dr DeLee's should prove extremely valuable to medical students and junior practitioners, as a work supplementary to the regular text-books devoted to obstetrics. The author takes up and treats in great detail the care during labor, during the puerperium and the care of the child, the directions being such that every step in the methods of procedure is carefully indi-

cated and in the treatment of obstetric operations the methods of procedure are carefully set forth, the particular mode being that which has proved itself most efficient to the author and really represents the generally accepted form of today.

The chapter devoted to obstetric complications is a very valuable one, as is that considering the complications which may occur during labor. In all obstetric work much of the success in any given instance must depend upon the character of the nursing and in this volume the directions for every ordinary routine of procedure, as well as for the emergencies that may arise, are clearly set forth, from the mere matter of preparing the room and table for obstetric operations to the treatment on the part of the nurse in such unfortunate complications as eclampsia and postpartum hemorrhage. As intimated above, the work is even more complete than is actually necessary from the nursing standpoint.

Throughout the illustrations are numerous and very satisfactory, being selected with special care for the purpose of illustrating the text. The paper and type are unusually satisfactory and the inclusion of a list of recipes, together with a glossary and a complete index, add much to the value of the volume. We heartily commend it to the nurse for whom it was primarily written, as well as to the junior students and practitioners.

Transactions of the College of Physicians of Philadelphia. Third series. Volume 28, 1906.

We beg to acknowledge the receipt of the Transactions for the year 1906 of the College of Physicians of Philadelphia, a volume which contains annually a number of most interesting scientific papers, as well as a number of historic sketches. One of the most interesting studies in this number is that by Worden on the subject of Gastroptosis, with special reference to the value of bismuth skiagraphs. Spiller and Frazier have an interesting article on Cerebral Decompression. This volume has been sent to The Cleveland Medical Library.

Pathology, General and Special, a Manual for Students and Practitioners, by John Stenhouse, M. A., B. Sc., Edin., M. B.. Tor., formerly Demonstrator of Pathology, University of Toronto, Toronto, Canada; and John Ferguson, M. A., M. D., Tor., Senior Physician, Western Hospital; formerly Senior Demonstrator of Anatomy, University of Toronto, Toronto, Can., Series edited by Victor Cox Pedersen, A. M., M. D., Lecturer in Surgery at the New York Polyclinic Medical School and Hospital; Gentio-Urinary Surgeon to the Out-Patient Departments of the New York and the Hudson Street Hospitals; Anesthetist to the Roosevelt Hospital. Illustrated with 16 engravings and a colored plate. Lea Brothers & Co., Philadelphia and New York.

This is an excellent book. In spite of its small size a great amount of matter has been incorporated in its pages. A feature of value is the Latin or Greek derivation of the medical terms given in parenthesis after each word as it appears, thereby making the memorizing and proper use of the terms much easier. Part I consists of General Pathology, taking up first teratology, then constructive and destructive processes and inflammation. The chapters on Tumors and Parasites are concise but full. Infectious diseases and toxemias are well given but the chapter on Immunity is too short and not as clear as it should be. Then follows a short but excellent chapter on Postmortem Examinations and Methods of Mak-

ing Microscopic Preparations. The directions are so clear that any physician not familiar with postmortem work could perform a complete autopsy.

Part II deals with Special Pathology, the different systems being taken up in order. The book is handily arranged and contains a very full index making reference to any subject easy. The work is a valuable one either as a review of the subject in preparing for an examination or as a book of reference for those who want clear and concise statements of the latest facts in pathology.

American Practice of Surgery, a complete system of the science and art of surgery by representative surgeons of the United States and Canada. Editors, Joseph D. Bryant, M. D., Albert H. Buck, M. D., of New York City. Complete in eight volumes. Profusely illustrated. Volume Two. New York, William Wood and Company, 1907.

The second volume of this extensive system fully conforms to the excellent standard established by the first volume recently reviewed in these pages.

Part VI, Diseases Which Belong in Varying Degrees to the Domain of Surgery, is contributed by James Farquharson Leys, of the United States Navy. Leprosy is described at very considerable length, as is also Plague, both diseases that have acquired increased importance in the eyes of American surgeons owing to their frequent occurrence in our new dependencies, a number of very good plates serve to elucidate the text dealing with these subjects. Glanders, Anthrax, Actinomycosis, Mycetoma, Rhinopharyngitis Mutilans, and Scurvy, are also discussed fully especially as regards the diagnosis and surgical treatment.

Part VII, General Survey of Tuberculosis and Syphilis. Virgil P. Gibney, of New York, deals with Tuberculosis in a general way and so briefly that there must have been an understanding that the subject is to be discussed in far more detail in the chapters dealing with regional surgery. Syphilis is considered by Edward L. Keyes, of New York, at somewhat greater length, who strongly endorses the hypodermic use of mercury as the most rapid means of producing results in the treatment of syphilitic lesions.

Part VIII, Surgical Diseases of Various Widely Distributed Structures of the Body. August F. Jonas, of Omaha, contributes the chapter on Abscess, while that on Ulcer and Ulceration is by William M. Mastin, of Mobile, Ala. Alfred C. Wood, of Philadelphia, contributes a lengthy chapter on Gangrene and Gangrenous Diseases. It is a question whether these three subdivisions might not have been better included in a single article by one author, in which case a certain amount of unnecessary repetition, especially as regards the etiology and pathologic processes, might have been avoided. It would also seem advisable to have inserted notes referring the reader to other chapters, which contain probably even a fuller discussion of the same subject. In this connection the pathologic processes found in the above three conditions have been already fully discussed in Volume I in the several chapters of Part I, dealing with Surgical Pathology. Surgery of Diseases of the Skin is written by Douglass W. Montgomery, of San Francisco, this subject is very fully treated and very satisfactorily illustrated. Surgical Diseases and Wounds of Muscles, Tendons and their Sheaths, Bursae, Fasciae, and Connective Tissue, by

J. Clark Stewart, of Minneapolis, and Surgical Diseases and Wounds of Nerves, by DeForest Willard, of Philadelphia, are both well done and thoroughly illustrated in a graphic manner. Surgical Diseases of the Lymphatics, by Chas. N. Dowd, of New York, deals principally with Tuberculous Adenitis of the Neck. The explanatory letters in figure 176 have been omitted by an oversight.

Part IX, Surgical Diseases Caused by Intense Heat and Intense Cold, and by the Electric Current. Benjamin T. Tilton, of New York, deals briefly with Burns and the Effects of Electric Currents and Lightning, while Congelation, or Frost-Bite, is discussed by Paul Monroe Pilcher, of New York.

Part X, Simple and Complicated Wounds, Including Gunshot Wounds. Capt. Carl R. Darnall, of the United States Army, contributes the chapter on Wounds of the Soft Parts by Cutting and Piercing Instruments. The treatment of the various sorts of wounds, clean or infected, accidental or operative, etc., have been well described. Gunshot Wounds is discussed at considerable length by Major William C. Borden, of the United States Army. Particular attention is paid to the wounds caused by the modern high velocity projectiles, abundant examples of which have been furnished by the recent Anglo-Boer, Spanish-American and Russo-Japanese wars.

Criticism of any given chapter in a work of this sort is apt to be unfair to the writer of it as the reviewer is unaware of the scope allotted to the writer and in all probability a briefly considered subject may be found considerably amplified in some subsequent volume of the same system.

Minor and Operative Surgery, including Bandaging, by Henry R. Wharton, M. D., Professor of Clinical Surgery in the Woman's Medical College of Pennsylvania; Surgeon to the Presbyterian Hospital, and the Children's Hospital; Consulting Surgeon to St. Christopher's Hospital; The Bryn Mawr Hospital, and Girard College; Fellow of the American Surgical Association. Sixth edition, thoroughly enlarged and revised. 632 illustration; 650 pages. Lea Bros. & Co., Philadelphia and New York. 1905.

This is one of the most complete works of its kind and the present edition has been brought thoroughly up-to-date. The fact that it is already in its sixth edition is a sufficient indication of its popularity and of the demand that exists for it. Minor surgical operations and methods are thoroughly discussed; there is a well-illustrated chapter on bandaging; the methods of sterilization and preparation of dressings, and a brief review of surgical bacteriology are given; the care and treatment of fractures and dislocations are also considered. The methods of amputation, excision and resection are well discussed. In addition to minor surgery a sufficient amount of major operative work is included to give the reader a fairly good idea of the usual methods of procedure. The numerous illustrations serve to explain themselves and effect a great saving in the space required for the written description. As regards major surgery this volume is not expected to take the place of more extensive treatises upon operative surgery but will serve amply for the instruction of students studying for examinations or for the use of the practitioner in an emergency. The work can be heartily recommended as thoroughly up-to-date and satisfactory.

Books Received

Medical Jurisprudence, Forensic Medicine and Toxicology, by R. W. Witthaus, A. M., M. D., Professor of Chemistry, Physics, and Toxicology in Cornell University, and Tracy C. Becker, A. B., LL. B., Counsellor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo, with the collaboration of August Becker, Esq.; A. L. Becker, Esq.; Chas. A. Boston, Esq.; Hon. Goodwin Brown; W. N. Bullard, M. D.; J. C. Cameron, M. D.; J. Clifton Edgar, M. D.; Jas. Ewing, M. D.; E. D. Fisher, M. D.; J. C. Johnson, M. D.; D. S. Lamb, M. B.; H. P. Loomis, M. D.; W. B. Outten, M. D.; Roswell Park, M. D.; J. Parmenter, M. D.; Irving C. Rosse, M. D.; E. V. Stoddard, M. D.; George Woolsey, M. D.; J. H. Woodward, M. D. Second edition, Volume Two. William Wood & Company, New York. 1907.

Practitioner's Handbook of Materia Medica and Therapeutics, Based Upon Established Physiological Actions and The Indications in Small Doses to which is added Some Pharmaceutical Data and The Most Important Therapeutic Developments of Sectarian Medicine as Explained Along Rational Lines, by Thos. S. Blair, M. D., Member American Medical Association, Pennsylvania State Medical Society, Harrisburg Academy of Medicine, Member Visiting Staff of Harrisburg City Hospital, etc. The Medical Council, 4105 Walnut Street, Philadelphia, Pa.

A Treatise on the Practice of Medicine. For Practitioners and Students. By Arthur R. Edwards, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine in the Northwestern University Medical School, Chicago. Octavo, 1328 pages, with 101 engravings and 19 plates. Cloth, $5.50, net; leather, $6.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Correspondence

May 9th, 1907.

To the CLEVELAND MEDICAL JOURNAL:

The Academy of Medicine wishes to call the attention of its members to the recent action of the Board of Health, requesting that all physicians comply with the law regarding the registration at the Health Office of cases of tuberculosis. We construe this registration as applying only to cases of pulmonary tuberculosis in which the diagnosis has been confirmed by microscopical evidence of the presence of the tubercle bacilli.

The proper control and prevention of this disease depends to a considerable extent upon such registration, and your cooperation in the matter is of importance. You will notice that all reports are to be considered confidential and for the use of the Department only.

It is hoped that you will grant the Department your earnest assistance in this matter.

Very sincerely yours,

CLYDE E. FORD, *Secretary.*

TO THE EDITOR:

Meeting of the Board of Medical Examiners for the State of Texas

The last meeting of the Board of Medical Examiners for the State of Texas (regular) for examination will be held in Austin, Texas, June 25, 26 and 27, 1907. This examination will be held in accordance with the old medical law of Texas and will be the last meeting of this board for examination, as the new medical law of Texas, *the one board bill,* becomes effective on the 13 day of July, and under the provisions of this law applicants will only be permitted to appear for examination who are graduates from medical colleges of not less than four terms of five months each. For further information concerning this examination address the secretary.

S. R. BURROUGHS, M. D., President, Buffalo, Texas.

T. T. JACKSON, M. D., Secretary, San Antonio, Texas, Hicks Building.

Medical News

C. H. Cushing and wife, of Elyria, are at present in Europe.

George Gill, formerly of Ridgeville, has moved his family to Elyria.

Walter G. Stern, of this city, recently spent a week in Washington.

D. W. Peppard and family, of Mansfield, sailed for Europe on June 1.

C. R. Coffeen, of Piqua, has gone to San Diego, Cal., for a few months.

John G. Spenzer and wife, of this city, are in Europe for a two months' stay.

Charles B. Parker and wife, of this city, have returned from their southern trip.

George H. Thomas, of Rapids, suffered from a severe attack of the grippe recently.

I. H. Treece, of Findlay, has gone to Butte, Mont., where he will locate permanently.

D. C. T. Watkins, of South Sharon, Pa., expects to take a trip across the waters this summer.

O. S. Wood has gone to Logan, where he will establish an office for the practice of medicine.

William Hoover and wife, of Lima, have returned after spending four months in Albuquerque, N. M.

L. S. Porter, of Port Clinton, who has been at Pine Bluff, N. C., for the winter, lately returned home.

A. H. Beam, of Hillsboro, who has been in New York taking a post-graduate course, is at home again.

I. J. Ransbottom, of Celina, has gone to Panama, where he will be a physician under the government service.

A. Per Lee Pease, of Massillon, is at home again after a long trip to the tropics extending from December 13.

Arthur Hauer, of Bucyrus, is in New York City taking a post-graduate course in the New York Eye and Ear Institute.

P. C. Ramsey and wife, who left Alliance about a year ago and located in Fulton, Tenn., have returned to Alliance again.

W. T. Norris and wife, of East Liverpool, will spend a month in Florida in hopes of benefiting the doctor's health.

Dr Fauster, of Archbold, is at present at Ann Arbor taking a post-graduate course, and will soon locate in Paulding.

Frederick A. Stafford, wife and little daughter, of Toledo, are at home again after a visit in Arizona and California.

I. N. Zeis, of Carey, has gone to New York, where he will take a post-graduate course at the Medical School and Hospital.

W. T. Dodd, formerly of Bellefontaine, has been elected professor of clinical pathology and director of the laboratories in the Indiana Medical College, of Indianapolis.

The June number of the Annals of Surgery promises to be an extremely valuable and interesting one, it is a special edition resembling the one issued in December, 1904, and will excel this latter in the colored illustrations and equal it in the quality of the text. The price of the special edition will be one dollar.

The thirty-eighth regular meeting of the Lake County Medical Society was held at 8 P. M., on Monday, May 6, 1907, at the Parmly Hotel, Painesville, Ohio. Program: (1) Reports and Presentation of Cases. (2) Miscellaneous Business. (3) "The Causes and Treatment of Uterine Hemorrhage," Marcus Rosenwasser, of Cleveland, Ohio.

H. C. Thomas, who for years has been the head of H. C. Thomas & Co., dispensing opticians, in the Colonial Arcade, has, with J. E. Rogers and A. C. Dodd, purchased the stock and prescriptions of The Whittlesey Optical Co., and together with his own business they have merged the two into The Rogers-Thomas-Dodd Optical Co. The firm will do nothing but manufacturing and dispensing, and carry a large line of optical goods. Mr. Thomas, who is an expert in his vocation, will have complete charge of the prescription department, and THE JOURNAL wishes him every success in his new venture.

The Cleveland Medical Journal

Vol VI July, 1907 No 7

Some Surgical Lesions of the Central Nervous System

BY CHARLES H. FRAZIER, M. D., Philadelphia.

Professor of Clinical Surgery, University of Pennsylvania, Surgeon to the University Hospital, etc.

THE MENINGES

Curiously enough with all the time and thought that has been devoted to the development of the surgery of intracranial lesions, meningitis has been to all intents and purposes neglected. So much so that the disease has been and is still regarded by the profession, generally, as absolutely hopeless, insofar as surgical therapy is concerned. Of all the serous membranes and of all the cavities none has been so neglected as the meninges and the meningeal spaces. Not very long since surgeons were accustomed to look upon suppurative and tuberculous peritonitis as offering no hope of recovery and no indications for surgical treatment. The favorable results which in more recent years have been obtained by a resort to surgical measures makes one wonder whether by more active treatment even better results could not be obtained in similar lesions of the meninges. Although drainage of the peritoneal cavity is often unsatisfactory, apparently inadequate, and of short duration, this mode of treatment in conjunction with other important measures has proven most effectual in cases that once were looked upon as hopelessly ill. Tuberculous peritonitis has been benefited by simply opening the abdominal cavity, evacuating its contents and immediately closing. The success obtained in the treatment of infectious lesions of the pleural and joint cavities by drainage is an every day experience, but I selected the peritoneal cavity for comparison because it

Read before the Academy of Medicine of Cleveland, April 19, 1907

presents some conditions which are in a measure analogous to those in the cranial cavity.

A review of the literature upon the subject of suppurative meningitis impresses one with the fact that a great majority of the contributions have been made by otologists, very few by surgeons. So many cases of meningitis are secondary to sinus or mastoid disease, that the majority fall into the hands of the specialist; therefore, the surgeon has not had as many opportunities for observation, and, perhaps for this reason, has not been reminded so forcibly of his deficiencies and shortcomings in this field. Seldom if ever is a case of meningitis as a complication of some infectious disease referred to the surgeon. His chief experience with this condition comes from cases in which the infection is secondary to penetrating wounds, scalp wounds, and fractures, particularly of the base of the skull. In 1902, Gussenbauer expressed the opinion that the treatment of meningitis would be based on surgical principles, although at the time v. Bergmann, who predicted a dark future for the surgery of brain tumors, was equally skeptical as to the surgery of meningitis. Hinsberg writes, "The opinion once so prevalent that diffuse suppurative meningitis is a contraindication for operation, is no longer tenable. Occasionally lumbar puncture will be followed by improvement, but one ought not to delay operation too long. For purposes of diagnosis, lumbar puncture is indispensable, but for treatment it is unsatisfactory because it has to be repeated often and because the point of drainage is far distant from the point of infection."

Sokolowsy (Arch. f. Ohrenheilkunde, Vol. 63, p. 238) said, "It has not been very long since diffuse suppurative meningitis was considered a *noli me tangere* for the surgeon's knife, but since lumbar puncture has facilitated the diagnosis, this view is coming to be abandoned." From these few quotations it is evident that the possibilities of surgical therapy are at least being considered, although one is able to find but few scattered observations in which those views have been put into actual practice. Thus in the past seven years in Czerney's clinic only one case of suppurative meningitis was operated upon. In a recent article Hinsberg (Zeitschrift f. Ohrenheilkunde, Vol. 38) was able to find but 10 cases, which had recovered, and but five improved after drainage of the subarachnoid space.

The basic principle in the treatment of diffuse suppurative meningitis must be drainage. If we admit the principle let us

then inquire into the nature of the obstacles and difficulties which for so long a time have made surgeons hesitate to apply it in these cases. In order fully to understand them one must be familiar with the anatomic relations. In the first place there are three spaces which must be dealt with, the subdural, the subarachnoid and the ventricles; the two former have practically no communication one with the other and the communication between the subarachnoid space and the ventricles is frequently cut off by the inflammatory process. If the subdural space alone were involved the problem would be comparatively simple as there are no real difficulties encountered in an attempt either to irrigate or drain it. When we come to deal with the so-called subarachnoid space we are confronted with the crux of the problem and this is especially true since in the majority of cases the inflammatory process involves the pia and arachnoid (in leptomeningitis) and sometimes the brain itself (meningoencephalitis). Not uncommonly the ventricles are also involved and the communication between the ventricles and subarachnoid space may be cut off. In addition to the involvement of the cortex and ventricles the spinal meninges may become affected, since with each cardiac systole, according to Mott, the contaminated fluid is driven from the cranium into the spinal canal.

Why should it be more difficult to drain the subarachnoid space? In recalling the structure of the arachnoid we are struck by the fact that in a great part the subarachnoid space is potential rather than real since "it is occupied everywhere by a spongy tissue consisting of trabaculae of delicate connective tissue, which pass from the pia mater to the arachnoid and in the meshes of which the subarachnoid fluid is contained" (Gray's Anatomy). While this is true of the greater portion of the subarachnoid space there are certain variations which may have a very practical bearing upon the question of drainage. I refer to the so-called subarachnoid cisternae (cisternae subarachnoidalis). In certain regions the arachnoid and pia are so far apart as to constitute a veritable space in which a considerable amount of fluid may collect. Of these spaces, to which the term cisternae has been applied, the most important are the following: the largest, the cisterna magna, is formed by the arachnoid bridging across the space at the back and under portion of the medulla and cerebellum; the second largest is the cisterna basalis, which is the space formed where the arachnoid stretches across between the two temporal lobes at the base of the skull; and a third cisterna

which occupies the site of the fissure of Sylvius. All these spaces communicate with one another. In these various cysternae in normal conditions a certain amount of fluid will be found; under abnormal conditions the spaces may be more or less distended with cerebrospinal fluid, blood or pus.

In the following respects an analogy may be drawn between peritonitis and meningitis: in both we are dealing with a serous membrane, in both the disturbances of function in the contained viscera, the bowel in the one case and the brain in the other, are serious complications, in both continuous drainage is attended with well known difficulties; in one particular they are quite different in that the peritoneal cavity is in direct communication with large lymph spaces while there are no lymphatics properly speaking in the subarachnoid space. The cerebrospinal fluid is a secretion as the synovial fluid and if present in excessive quantities can only make its escape through the pacchyonian bodies into the sinuses or into the pial veins. The subarachnoid space has no direct communication with the lymphatic system except through the lymphatic spaces in the cranial nerves, which possess sheaths of arachnoid up to the point at which they emerge from the skull. In the abdominal cavity there is a well established current in the direction of the lymph spaces in the diaphragm; and by putting the patient in the Fowler position we have a means of counteracting the effect of this current. In the cranial cavity there are no such conditions to be taken advantage of. The flow of cerebrospinal fluid in the subarachnoid space is toward the venous system because the pressure of the cerebrospinal fluid exceeds that of the blood. Therefore when an inflammatory exudate accumulates in the subarachnoid space more or less of it will be carried directly into the general circulation and the greater the degree of intracranial tension the greater the amount absorbed.

With this brief allusion to but a few of the anatomic and pathologic features we turn to the treatment. When meningitis is secondary to a local infective process, as of the temporal bone or the sinuses accessory to the nose, the indications for treatment are clear enough; when, however, there are signs of a diffuse suppurative meningitits of whatever origin, what shall be the method of procedure? In the past treatment has consisted either in purely palliative measures, or in repeated lumbar puncture, or more recently in the establishment of openings in the skull and meninges for direct drainage. For otogenous meningitis Alexander (Deutsche med. Woch.) recommends two openings, one in

the middle fossa at the site of infection and the other in the posterior fossa. Kümmel (Arch. f. klin. Chir., Bd. 77, p. 930) in a desperate case cured his patient by establishing drainage openings on either side in the occipital region, and by lumbar puncture. In two cases Friedrich (Verhandlungen der Deut. Otol. Gesellschaft 1904), after exposing the seat of the primary focus, performed a laminectomy for drainage, but with fatal results. If the question of drainage was to be settled on an anatomic basis, the so-called cisternae would seem to offer the key to the situation. To drain the Sylvian "lakes," openings should be made over the Sylvian fissure; through these openings the cisternae in the middle fossa may be drained also. The most important, because the largest, is the cisterna beneath the cerebellar hemisphere; to drain this the openings should be made on either side of the median line in the suboccipital region. Lumbar puncture should be resorted to at the earlist possible moment for diagnostic purposes in order that the radical treatment may be resorted to before the disease is too far advanced. With the adoption of more direct and more radical methods of drainage we may hope so to influence the course of the disease that many cases now regarded as hopeless may recover.

CEREBROSPINAL PRESSURE

Following these remarks upon the subarachnoid spaces and cerebrospinal fluid I turn for a moment to the pressure of the cerebrospinal fluid. For a number of years much attention has been paid to the blood pressure within the cranial cavity, under abnormal conditions, the result of hemorrhage, contusion, tumors and the like; these matters have been treated at great length in that classic work of Kocher. As a method of diagnosis and as a means of suggesting therapeutic measures the blood pressure apparatus has become as essential to the well equipped clinic as it has been to the physiologic laboratory. Since the introduction of Quincke's lumbar puncture, opportunities have been offered for making comparative observations of the pressure of the cerebrospinal fluid. Unfortunately there is always a source of error in the possible escape of cerebrospinal fluid at the site of puncture, in the possible blocking of the needle with shreds of tissue or masses of cells, as well as in the uncertainty as to whether the needle is in the subdural or subarachnoid space. The manometer ordinarily used consists in a U shaped tube filled with a column of water, to which through a rubber tube is at-

tached the needle. In my own work I have used mercury instead of water, because mercury gives more delicate readings. Between the spinal needle and the manometer is a T shaped tube which serves as an outlet for the cerebrospinal fluid and avoids the necessity of detaching the tube from the needle when it is intended to withdraw some of the fluid. By clamping the outlet at any time after the fluid has begun to flow and taking a reading we avoid the danger of withdrawing too much fluid and reducing the pressure below the point of safety. The pressure of the cerebrospinal fluid according to Kocher is influenced rather by the pressure in the veins than in the arteries; that is to say an increase of arterial pressure is not so likely to influence the cerebrospinal pressure as anything which disturbs the venous circulation of the brain. Venous congestion, the result of intracranial tension, may increase blood pressure, and these two associated conditions in turn raise the pressure of cerebrospinal fluid. Thus in a severe cerebral contusion associated with edema and engorgement of the pial veins the blood pressure varied from 165 to 180 mm. Hg. and the arachnoid pressure was 19.2 mm. Hg. (250 mm. of water).

The possibility of favorably influencing such cases as these when the circulation of the brain is suffering from intense edema and when the blood pressure is increased to compensate for the increased tension is one which naturally suggests itself. There is normally about 120-150 cc. of cerebrospinal fluid (Mott). Could enough fluid be withdrawn to relieve somewhat the tension and thereby favor the cerebral circulation? In these cases there is, as it were, a vicious circle. The increased intracranial pressure causes congestion of the venous system, this in turn interferes with the discharge of the cerebrospinal fluid, and these two circumstances combined increase the blood pressure. At first sight it would seem as though drainage of the arachnoid space would alleviate matters. In the case above quoted this procedure was tried for a short time; lumbar puncture was practiced with the patient lying unconscious on his side, and at intervals fluid was withdrawn until the pressure was reduced to a safe minimum. The effect on the patient's general condition as well as on the blood pressure was nil. From my own observations I have found that when both the blood and spinal pressure are high, we may lower spinal pressure without influencing blood pressure, and in cases, in which the spinal pressure is very high, the blood pressure may be unaffected. In a case of brain tumor under my observation the blood pressure was normal although the spinal pressure was

531 mm. of water (Hg. 27 mm.). In a case of suppurative meningitis secondary to frontal sinus disease, the spinal pressure, as one would expect, was high, but the blood pressure was unaffected. Thus it would seem that the state of pressure of the fluid in the arachnoid space has no constant relation to arterial pressure.

THE HYPOPHYSIS

That few operations have been performed upon the pituitary body may be explained upon anatomic, physiologic and pathologic bases. Anatomically because of its inaccessibility; hemmed in by such important structures as the cavernous sinus, the optic tracts and chiasm, and the internal carotid artery, attempts at exposure are attended not only with difficulty but considerable risk. Physiologically because there is still some uncertainty as to how essential this small body is for the maintenance and prolongation of life. To review the literature of experimental observations is as confusing as wandering in a maze, but you come out with the impression that in spite of conflicting testimony, you agree with those who regard the hypophysis as a vital organ and essential to the preservation of health. In the experimental laboratory, practically all the animals died within a few days or a few weeks if the hypophysis was entirely removed. There were certain marked exceptions however. Those that recognize in the hypophysis an important organ have ascribed to it various functions; some regard it as a hemolytic organ, some as an organ regulating the blood pressure, and many others as an organ elaborating some internal secretion; the products of this secretion are supposed by some to affect particularly the nervous system, by some the red blood corpuscles, by others to neutralize substances deleterious to the organism.

Many attempts have been made to determine the function of the gland by studying its relation to acromegaly. Tamburni, Hutchinson and others (Centralblatt f. Nervenheilkunde u. Psychiatrie 1894) recognize two lesions of the hypophysis as causing two different types of acromegaly: the first a hypertrophy with hyperfunction, which provokes the characteristic features of acromegaly, such as the tremendous development of the skeleton; the second a malignant degeneration of the hypophysis with arrest of glandular function terminating in arrest of development, cachexia and death. Another school attributes acromegaly to diminished glandular activity and upon this basis hopes to benefit

patients by organo-therapy; finally a third group, composed of Strumpfel and others, regard acromegaly as an endogenous, constitutional anomaly in which the enlargement of the hypophysis is but a co-ordinate condition. That there are undoubted cases of hypophyseal tumor with no symptoms of acromegaly enables some observers to cling to the idea that the hypophysis is a rudimentary organ. From our present knowledge of the physiologic action of the gland it is reasonable to assume that it cannot altogether be dispensed with.

There are but two possible indications for operation, one for the removal of new growths, the other in the treatment of acromegaly.

The first suggestion to remove the hypophysis in a case of acromegaly was made by Caton and Paul in 1893. A decompressive operation was performed with the idea that when the patient's condition improved sufficiently to warrant it an attempt would be made directly upon the hypophysis. The effect of this first operation was most satisfactory in that the pain was almost entirely relieved but the patient's condition did not improve sufficiently to justify a radical operation.

If in the future this operation should become an established procedure in the treatment of acromegaly the operation will consist probably in a partial rather than a complete excision. If acromegaly is due to hypersecretion of the gland, partial excision may be sufficient to arrest the progress of the disease and to relieve pressure symptoms. The same principles which apply to operations upon the thyroid in the treatment of hyperthyroidism may be applicable to the treatment of acromegaly. If partial excision is applicable to one condition it may be to the other.

My experience in the surgery of the hypophysis has been acquired only in the experimental laboratory. Following the suggestion of Dr Sweet, of the Laboratory of Experimental Surgery, I have removed the hypophysis from dogs by a method, which though perhaps not feasible in the human subject, is comparatively easy of execution in the lower animals. The immediate approach to the gland is made by a preliminary median pharyngotomy, dividing the tissues at the root of the tongue and soft palate. At the midpoint of an imaginary line drawn between the tips of the two pterygoid processes, a trephine of small calibre (¼-⅜ inch) is applied and when the button of bone is removed the hypophysis will be found lying at the bottom of the trephine opening. With a pair of forceps the hypophysis is removed without any difficulty as it lies quite loose and unattached in the sella

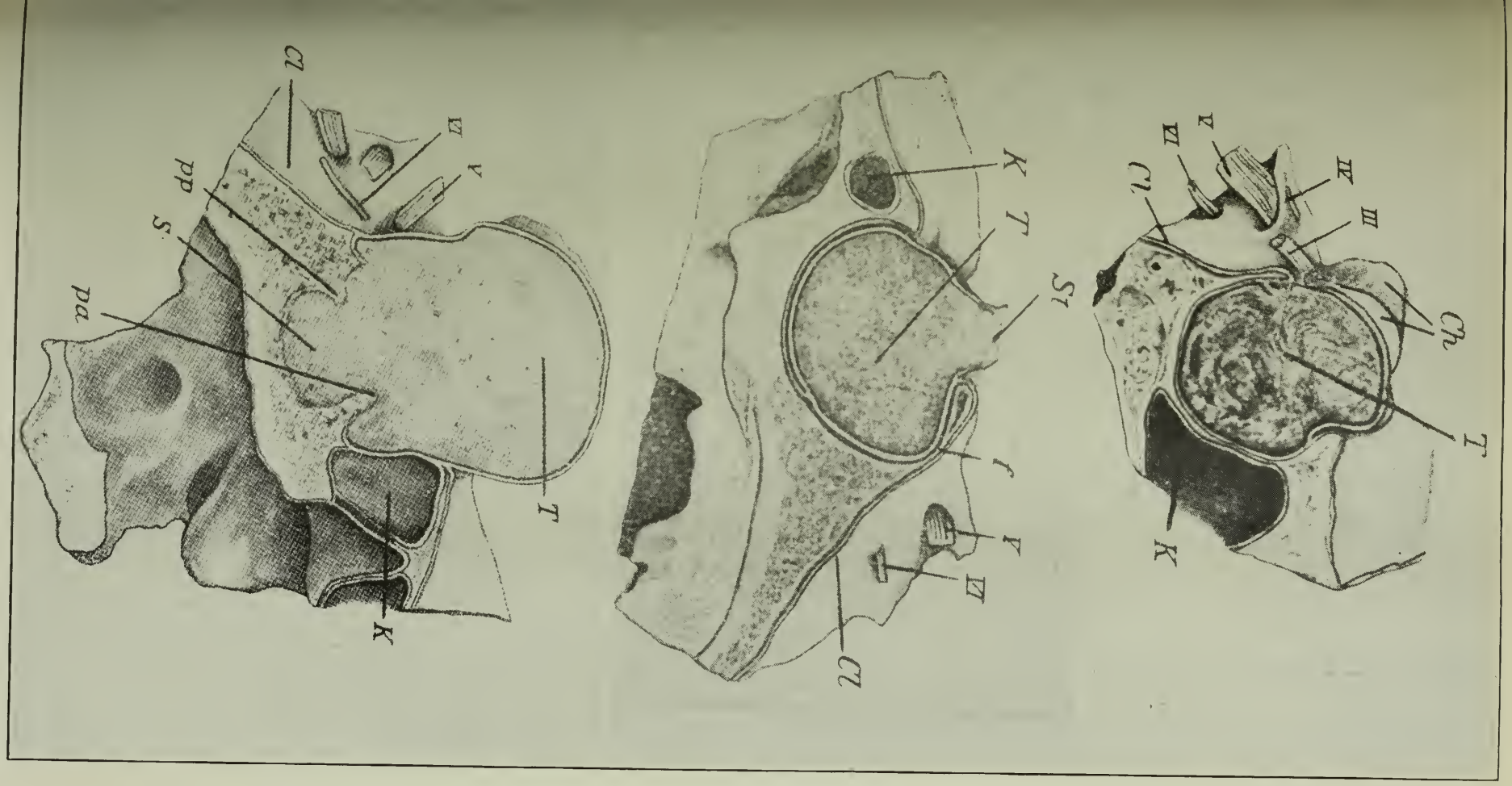

FIGURE III.

Tumor of the hypophysis, adenoma, showing comparatively little change in the size of the sella turcica. The tumor is quite accessible, in that a greater portion of it has extended beyond the confines of the sella turcica. The outlet to the sella turcica has been widened by the anterior clinoidal process being pushed backwards. (v. Schloffer.)

pa—anterior clinoidal process.
pp—posterior clinoidal process. S.—Sella Turcica.

FIGURE I.

Tumor of the hypophysis, which is contained, however, almost entirely within the sella turcica, and is therefore quite inaccessible. The cavity of the sella turcica has been expanded downwards and the approach has not been widened as in illustrations II. and III. (v. Schloffer.)

FIGURE II.

Tumor of the hypophysis, which in its development has increased the size of the cavity in which it is contained. The entrance to the sella turcica has been broadened so that the tumor is quite accessible.

Ch—optic chiasm.
T—tumor. (v. Schloffer.)

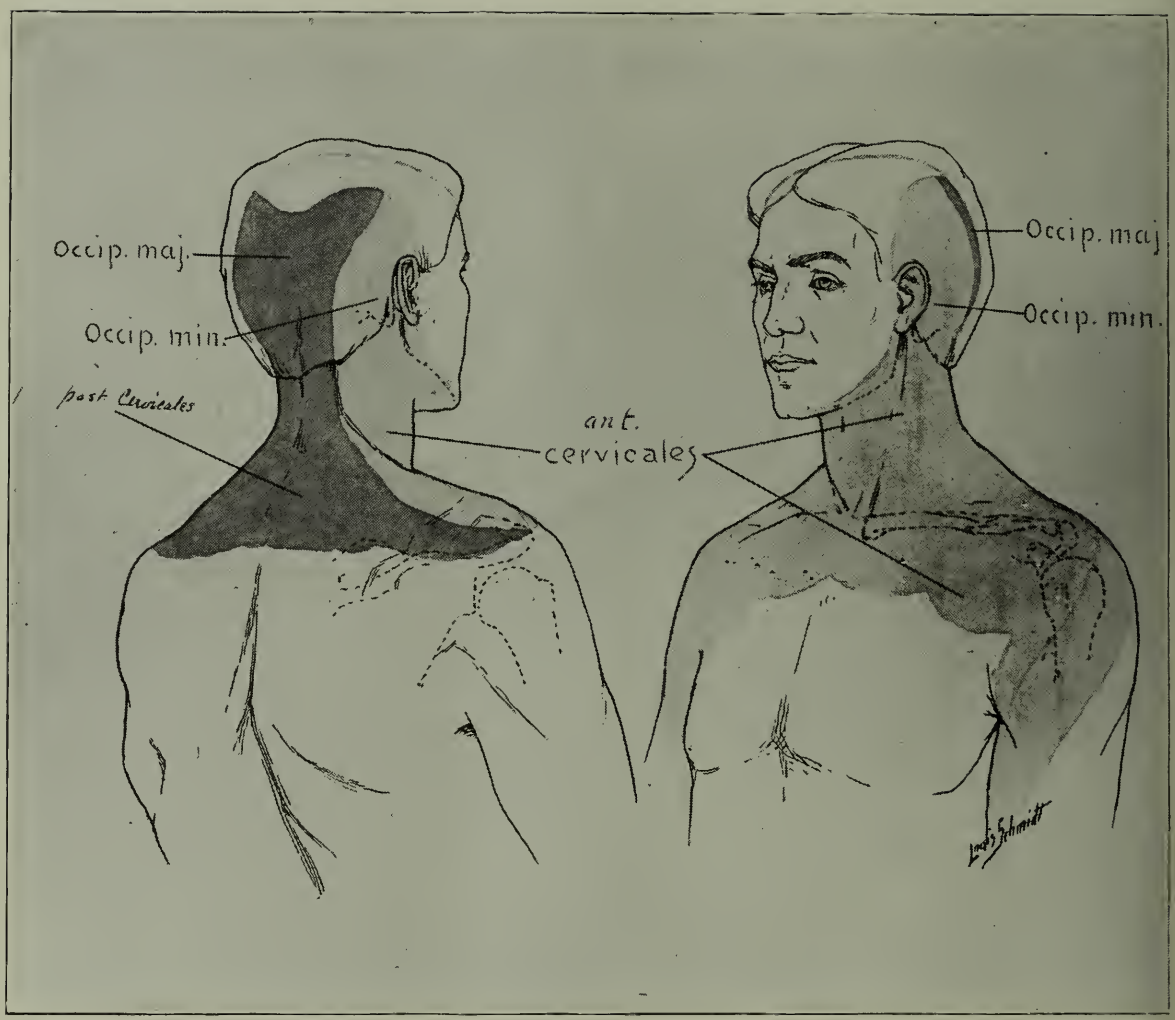

FIGURE IV. CASE OF OCCIPITAL NEURALGIA.

Showing distribution of posterior and anterior division of first four cervical nerves.
The light area (anterior division) the region of hyperesthesia.
The dark area region of referred pain.

turcica. An absolutely bloodless field is obtained by operating with the dog in the vertical position.

The exposure of the hypophysis in the human subject will always be attended with certain technical difficulties, chiefly in avoiding the important structures surrounding it. But the actual removal of the hypophysis or tumors of the hypophysis will be more or less difficult in individual cases according to the size and shape of the sella turcica. In examining a number of anatomic specimens Schloffer (*Brun's Beiträge zur Klin. Chir.*, 1906 Bd. I), found that there were certain structural changes, consequent upon the increase in the size of the hypophysis, which would facilitate the operation. In some cases the hypophysis remains confined to the sella turcica; as the hypophysis increased in size the sella turcica became larger to accommodate the tumor, but the *entrance to the cavity was unaffected* (Fig. 1.) This condition is the most unfavorable for operative intervention. In others the tumors grew upward towards the base of the brain and in so doing widened the entrance to the sella, the latter in some instances increasing in size (Fig. 2), in others remaining stationary (Fig. 3). These alterations in structure would facilitate both the exposure and removal of the gland. According to Schiller these changes in the shape and size of the sella turcica may be detected with the Röntgen ray so that it is possible to determine beforehand whether the case is a favorable or unfavorable one for operative intervention.

As to the technic of the operation, suffice it to say that surgeons, far from being indifferent or inactive, have been striving for many years to elaborate upon the cadaver the procedure most fitted for the living subject. Horsley has gone a step farther and practiced the operation a number of times on the living subject. He has performed 10 operations upon the pituitary body and three of these were for the removal of tumors. In some he approached the tumor through the middle, in some through the anterior fossa. By the temporal route he has been able to inspect the crura cerebri, the circle of Willis, the internal carotid artery, the second and third nerves, and the lateral region of the cerebellum and the medulla oblongata.

I touch upon this subject with the hope that I may stimulate some interest among surgeons in this unfrequented field. When we consider how the surgery of the ganglion of Gasser has been mastered and how short a distance separates the ganglion and hypophysis, the difficulties in exposing the latter should not be considered insurmountable.

CRANIAL AND SPINAL NERVES

There has been an attempt, I gather from some recent contributions, to persuade the medical public that the intracranial operation is no longer necessary for the radical cure of trifacial neuralgia, that peripheral operations are quite as effective. Those not practised in intracranial procedures would welcome the substitution of the peripheral for the intracranial operation, because it is much easier of execution and entails less risk and therefore less responsiblity on the part of the surgeon. I cannot pass this subject over without such a protest as might come from any one, who, either from experience or study, has been able to trace the life history of any considerable number of cases. As Starr (*Medical Record,* February 23, 1907) has well said, "Much needless suffering to a very unfortunate class of patients may be caused by the acceptance of such statements, as are made by those advocating the peripheral operation as the radical procedure." He has seen so many patients who have been operated upon in vain by various kinds of peripheral operations and recently by osmic acid injections into the nerve branches, and who have finally come to the radical operations after months of suffering, that he does not hesitate to recommend the operation of excision of the ganglion, provided he can select the surgeon to do it. Recurrence of pain is not always due to regeneration of the divided nerve, since in some cases pain recurs before the nerve has had time to regenerate. The plugging of a bony canal from which the nerve has been removed with some impenetrable substance will undoubtedly prevent regeneration of that particular nerve. C. J. Mayo in a recent article recommends that screws be introduced for this purpose, but even this is not a safeguard against recurrence of pain. The peripheral operation unquestionably has a place in the treatment of trifacial neuralgia and should be given a trial in a great many cases, especially in those of the minor type, but there remain many cases, as in those of the major type or with recurrent attacks, in which the intracranial operation alone will insure permanent relief. Whether the procedure consist in the removal of the entire ganglion; in the removal of the anterior half or more, with division of the second and third divisions leaving the first intact when not involved; in Abbe's operation; or in the division of the sensory root as recommended by Spiller, is a matter of individual preference on the part of the operator. As for the latter procedure, whether or not it is regarded as easier of execution than removal of the entire ganglion, as a physiologic experi-

ment the results may be offered in substantiation of the statement that regeneration does not take place in the central as it does in the peripheral nervous system. The first operation of this character I performed in 1901; since that time there has not been a suggestion of return of pain or sensation of any kind in the distribution of the trifacial nerve.

That there is still an entire misconception of the danger of the operation is apparent from the frequency with which the mortality of 10, 15 or 20 years ago is persistently quoted. Thus only last year Ricketts (*Buffalo Medical Journal,* April, 1906) gives as a sufficient cause for the discontinuance of the Hartley-Krause operation the fact that it has given a mortality of 25—30 percent. In the hands of experienced operators it has been reduced below five percent, and no doubt the future will yield still better results. Sir Victor Horsley, who has had the largest experience, has operated upon 120 patients with but six deaths. If a peripheral operation is clearly indicated, preference should be given to the avulsion method of Thiersch; it removes not only the peripheral segment even to the finest twigs but also a considerable portion of the central segment and is further effective in that forcible avulsion, as proven by Van Gehucten, will be followed by an ascending degeneration of the central segment up to and sometimes including the ganglion and bulbospinal root. The osmic acid method is not immediate in its effects and is uncertain in its results.

In my series of ganglion operations there was one in which the operation was performed solely as a palliative procedure inasmuch as there was no hope of the patient's ultimate recovery. The patient had a tumor at the base of the brain and because of its inaccessibility the question of its removal was not considered; he suffered agonies however from pain in the distribution of the trifacial nerve. It differed somewhat from the pain of tic douloureux in that it was not so paroxysmal. The situation was laid before the patient and he was quite willing to accept the risk of an operation upon the ganglion with the prospects of being relieved of pain, fully realizing that the operation would not lengthen his days. The ganglion was removed and the patient lived the days that remained to him in comparative comfort. The propriety of operating for the relief of pain especially in inoperable malignant lesions about the head and face is one which has not been given much consideration. For example in carcinoma of the tongue there is almost invariably intense suffering. With

sleepless nights and constant suffering by day the condition becomes a pitiable one. Morphin though taken in large doses soon loses its effect. Why should we not offer to that patient the relief which might be accorded by excising the sensory nerve supply of the affected region?

Our knowledge of nerve regeneration and the technic of nerve suture and anastomosis in the peripheral nerves has been applied to advantage in lesions of the brachial plexus. In the treatment of birth palsy Clark and Taylor have removed sections of the nerves involved and resutured the proximal and distal ends. Their results are most encouraging. In a case of inoperable carcinoma of the breast with intense pain in the arm from infiltration of the brachial plexus the posterior roots have been divided within the spinal canal.

While operations upon the last four cervical nerves, from which the brachial plexus is derived, are not uncommon it is comparatively seldom that the surgeon has to deal with the first four cervical nerves. There are, however, two affections for the relief of which operations may be undertaken which involve one or more branches of these nerves. I refer to spasmodic torticollis and occipital neuralgia.

As to spasmodic torticollis the objection will be raised that the disease is not of peripheral but of central origin and that operations upon the spinal nerves are irrational. Spasmodic torticollis in all probability is a disease, in which the lesion, whatever it may be, involves centres presiding over certain movements and therefore involving groups of muscles. Granting all this, there is no central operation, so far as I am aware, which affords relief, and experience teaches us that excision of the peripheral nerves may be followed by recovery or very decided improvement. At least this has been my experience. I have operated upon three patients with spasmodic torticollis; in two of these the movements persisted but were less frequent and much less violent, while in the third the movements ceased altogether. The muscles involved in spasmodic torticollis are not only the trapezius and sternocleidomastoid but the splenius capitis, the two recti, and the two oblique. The nerve supply of these muscles includes the spinal accessory, the anterior division of the second and third cervical nerves, and the posterior division of the first, second and third cervical nerves. An operation to be radical, therefore, must remove all these nerves as near as possible to their point of exit from the spinal canal. The operation is not an easy one, at least

by comparison with other procedures; it is more difficult for example than the extirpation of the Gasserian ganglion, chiefly because we are dealing with a number of nerves, instead of one, and if any be overlooked the result will be disappointing. There is an anastomotic relation between the spinal accessory nerve and the anterior division of the second and third cervical nerves. This relation is either not generally known or perhaps frequently forgotten and accounts for the recurrence of function in the sternocleidomastoid and trapezius when only that portion of the spinal accessory nerve, anterior to the muscle, is removed. The impulses are supplied in part by an anastomotic twig from the cervical plexus.

Occipital neuralgia is a very much less common affection than trifacial neuralgia but may be none the less severe. The clinical expression of the disease is similar as to the character and manifestations of pain, but the association of *motor phenomena* is due to the fact that in occipital neuralgia we are dealing with nerves of mixed function. These movements, which involve chiefly the muscles supplied by the cervical plexus, are spasmodic in type and synchronous with the outbreaks of pain. The pain may be referred only to the region supplied by the posterior divisions of the first four cervical nerves, namely the occipital region, or it may be referred to the distribution of the so-called cervical plexus, which supplies the skin over the cervical, clavicular, acromial and scapular regions. In the two cases of occipital neuralgia which I have seen there were two distinct sensory manifestations: there were sharp shooting, darting pains referred chiefly to the course of the occipital nerves, major and minor (both from the posterior divisions of the cervical nerves) and an area of hyperesthesia in the distribution of the anterior divisions. (Fig. 4.) Stroking of the skin in the hyperesthetic area was very apt to provoke a paroxysm of pain in the occipital region.

The radical treatment of occipital neuralgia is not unlike that which I have already referred to as appropriate to spasmodic torticollis. The posterior divisions of the first, second and third nerves should be divided as close as possible to their exit from the vertebral canal and in the case of the second cervical this includes the ganglion, since the ganglion of this nerve, unlike those of the other spinal nerves, is situated outside the spinal column. This involves an exposure of the suboccipital triangle, which is formed by the deepest of the five layers of muscles in that region. But one must go still farther and remove in the same way the anterior divisions, which compose the cervical plexus, taking the precau-

tion to avoid injuring those branches of the third and sometimes of the second cervical nerve which unite to form the phrenic nerve. Owing to their relations to the phrenic nerve and to their close proximity to the spinal cord, the Thiersch method of avulsion is contraindicated. In two operations I have injected these nerves with osmic acid and in a third I excised them. As the field of operation is one in which the surgeon is rarely called upon to work he should familiarize himself with the anatomic relations by observations on the cadaver. Otherwise he may find the recognition of each of the many nerves he proposes to resect more difficult than he anticipated. The intimate anastomosis between the cervical nerves will interfere seriously with the anticipated results should any one be overlooked.

Many opportunities are afforded for suture and anastomosis in the peripheral nerves. Primary and secondary suture has been practiced for many years to repair wounds; more recently various anastomoses have been resorted to with indifferent success in the treatment of infantile palsy. Spiller recommended the reconstruction of the nervous distribution of the upper extremity in cases of aggravated athetosis. In a case already reported I transferred the nerve supplying the flexor to those supplying the extensor muscles of the upper extremity and *vice versa* with the hope of establishing a better balance between the two antagonistic muscular groups. I have only had an opportunity to perform this operation once and the results in this case were disappointing. It may be said that the test was scarcely a fair one, inasmuch as the patient left the hospital soon after the operation and would not return for a course of massage, electricity, and regulated exercises, which are so essential a feature of the treatment after operations of this character.

For the treatment of certain trophic lesions we should resort more frequently than we do to neurectasis or nerve stretching. In trophic ulcers of the lower extremity, in the so-called painful and erethistic type of ulcer, this minor operative procedure I have found most satisfactory. In symmetric gangrene of the hands, Reynaud's disease, de Bovis cured two cases by stretching the cubital and median nerves at the wrist. The most satisfactory experience which I have had with nerve stretching concerned a patient of Dr Spiller's suffering from erythromelalgia. In this case the pain, which was most intense, was referred to the big toe; the toe was amputated but the pain continued. The wound failed to heal, its edges underwent necrosis, and the last condition

seemed worse than the first. Subsequently the nerves supplying the affected region were stretched; the pain subsided, the nutrition of the tissue was so improved that the amputation wound underwent repair, and the flushing of the skin, so characteristic of the disease, almost entirely disappeared. The patient returned to work and when last seen, more than a year after the operation, there had been no recurrence.

(Concluded in next number.)

Lipomata of the Omentum—With Report of Case

By WILLIAM E. LOWER, M. D.,

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If we are to judge from the paucity of literature on the subject of fatty tumors of the omentum, it would seem that they are exceedingly rare. Recently such a case came under my observation through the courtesy of Dr N. C. Yarian, of this city, with whom I performed the operation.

In a rather careful review of the literature, I have succeeded in finding only five cases recorded in which lipomata of the omentum were found. In only one of these was the diagnosis correct and the operation successful. This case was reported in 1887 by Dr W. A. Meredith, of London. In two cases fatty tumors of the omentum were found at postmortem examinations. One of these was reported in 1868 by Dr J. Cooper Forster, of London, who had made an exploratory operation, his diagnosis being tumor.

Dr Warren, of Harvard, has briefly recorded the other case in which he found a number of fatty tumors of the omentum in postmortem examination.

Dr Homans, of Boston, has reported two cases in which fatty tumors were removed by abdominal section. They were very large and their location was very similar to the one removed at postmortem by Dr Forster. However, we are left to conjecture whether or not they were lipomata of the omentum. At least they may be added as quite probable cases of lipomata.

Dr Edebohls, of New York, has found two fatty tumors of the omentum. In both cases he had made the diagnosis of fibromata.

The details of these five cases of true lipomata are interesting

Read before the Academy of Medicine of Cleveland, May 17, 1907

and I have added the two probable cases, since they so closely resemble those in which true lipomata were found and also this one case of Dr Yarian and myself.

W. A. Meredith, *Trans. Clin. Soc. London, XX, 1887,* reports a large omental lipoma successfully removed by abdominal section.

His attention was first called to the patient in October, 1884. She was suffering from a large abdominal tumor, supposed to be ovarian, and its removal was undertaken. However, it was found to be solid, consisting of fat. Dr. Meredith declined further interference. The patient recovered after an extremely tedious convalescence. The tumor increased slowly but steadily and two years later, in January, the patient re-entered the hospital. She gave the following history: a widow, 62 years old, and the mother of seven children, the youngest being 24 years old. She had never been strong, but had never been seriously ill before her present illness. No family history of tumor, cancer or phthisis. The menopause occurred at the age of 52. About 4½ years previously the patient noticed some abdominal swelling which steadily increased from that time. Since the operation in 1884 she had been more or less bedridden, owing to the increasing difficulty in locomotion from the size and weight of the tumor. She was a feeble old woman of spare habit but was fairly well nourished. Her thoracic organs were healthy. The urine was normal in quantity and appearance, of acid reaction, free from albumin, sp. gr. 1.020. Tongue clean, appetite indifferent. Bowels regular. Some trouble from flatulence.

The tumor was uniformly dull on percussion and quite elastic to the touch, almost conveying a sense of fluctuation. The entire mass readily swayed from side to side as the patient lay on her back, but could not be pushed upward to any extent. Vaginal examination showed the uterus atrophied and quite free from the tumor which could not be felt in the pelvis.

The diagnosis of omental lipoma was based upon the apparent mobility of the tumor and further upon the absence of any intestinal resonance in front of the mass.

An operation was performed, the tumor was removed and weighed 15½ pounds, it consisted of dense lobules of fat with a scanty amount of fibrocellular tissue. On examining its connections, the base of the emptied sac was found to be continuous with the covering of an elongated mass of fat seated higher up in the omentum immediately below the transverse colon. Patient's condition did not render further enucleation advisable. No other growths were detected but the liver was felt to be considerably enlarged. The patient made a good recovery.

J. Cooper Forster, *Path. Soc. of London, XIX, 1868,* reports a fatty tumor of the abdomen weighing 55 pounds.

The patient was a widow 63 years old, and had no children. Examination showed an exceedingly tense condition of the abdomen and the patient suffering from urgent dyspnoea.

A diagnosis of "tumor" was made.

At operation the mass was found to be very solid. The trocar was withdrawn but no fluid escaped. The canula removed a quantity of serum. Believing the mass to be possibly an ovarian growth with a small quantity of ascitic fluid between it and the abdominal wall, Dr Forster closed the wound.

The patient died 16 days later from apnoea. A postmortem examination was made by a student. The tumor weighed 55 pounds and it appeared most probable that it was omental fat.

Dr Warren, of Harvard, *Surg. Obs. on Tumors, A, 567, p. 583,* reports a lipoma of the omentum.

The patient was a man, out of health for months, an indulgent eater, whose last attack began with vomiting and pain in the bowels which continued three days and proved fatal. A postmortem examination showed that the omentum contained a number of fatty tumors, one of which pressed upon the caput coli and caused total obstruction of the bowel, which was the cause of the fatal termination.

John Homans, *Boston Medical & Surg. Journal, 1883, p. 241,* reports two cases of removal of immense fatty tumors by abdominal section.

His first case was that of a porter, a German, 39 years old, who had worked at heavy lifting. He had suffered from dyspnea, and had an abdominal swelling which increased in size slowly. The other organs were healthy.

A diagnosis was made of a tumor of unknown character in the abdomen without much adhesion, apparently a large myxoma or lipoma or colloid goitre.

At operation the growth appeared to be an ordinary fatty tumor, slightly adherent to the liver, and covered with a delicate, smooth envelop like the peritoneum, which had a central attachment. The tumor was replaced, fearing that some abdominal organs, particularly the intestines or a kidney, might be included in the mass. The wound was closed and the patient left the hospital in a month and completely recovered.

Dr Homans operated a year later and removed two tumors weighing 57 pounds. A third was found but not removed. The patient died in a few hours.

Dr Homan's second case was that of a woman, 62 years old, who had had several children. The family history showed cancer of the rectum and liver. At the operation a tumor was found which appeared to be an immense lipoma weighing 35 pounds. The patient never rallied. Analysis showed the tumor to be a pure lipoma.

It will be seen that these two tumors and the one reported by Dr Cooper Forster were crossed by the ascending colon and it would seem impossible to remove such tumors without disturbing the vascular connections to such a degree as to cause gangrene.

Dr Edebohls, *N. Y. Obstetrical Soc. Journal, Nov. 1, 1891, p. 56,* reports two cases.

The first showed lipomata of the omentum simulating uterine fibromata. The patient, a girl, aged 19, was operated upon for the cure of persistent uterine hemorrhage, and recovered. Six years later vesical disturbance began to develop and became unbearable. Examination showed clustered about and firmly sessile upon the body of the uterus, three distinct tumors of firm consistence and fairly rounded, measuring from five to 10 cm. in diameter. Their contour and hardness led to a diagnosis of uterine fibromata.

A celiotomy was performed. The lower margin of the omentum was firmly adherent to and embraced the uterus and had undergone hypertrophy. The tumors were fatty, of unusual density, the largest being 10 cm. in diameter. The adhesions were very firm. With the exception of an extensive necrosis of fatty tissue of the very thick abdominal walls, the patient made an uneventful recovery.

The second case showed a lipoma of the omentum simulating an intraligamentary fibroma.

The patient, a married woman, 30 years old, and the mother of eight children, had had no previous history of illness. Two days after her last confinement she was seized with pains in the left half of the pelvis which persisted a month before Dr Edebohls first saw her.

A tumor, measuring 10 x 8 cm., was found in the left groin, occupying the region of the left broad ligament and crowding the uterus to the right. It was as hard as a fibroma on bimanual palpation. Exploratory puncture proved the tumor to be solid and the existence of serous pelvic peritonitis. After subsidence of the pelvic peritonitis, the tumor could be drawn away from the side of the uterus. The extreme hardness of the tumor seemed to admit of no other diagnosis than fibroma, which from its location was regarded as intraligamentary. On abdominal section a month later, the lower end of the omentum was found thickened and forming an extremely hard and unyielding tumor 10 x 6 cm., in which the tube and ovary were completely wrapped. The tumor, left tube and ovary were removed.

In these cases in which Dr Edebohls removed lipomata of the omentum, the tumors were mistaken for fibromata. In the first case, the omental tumor was associated with bilateral salpingo-oöphoritis. In each instance the free border of the omentum had become attached by adhesive inflammation to the pelvic viscera, the nutritive supply thus being increased.

While thickening of the omentum is a common occurrence, well formed, firm lipomata are believed by Dr Edebohls to be somewhat infrequent.

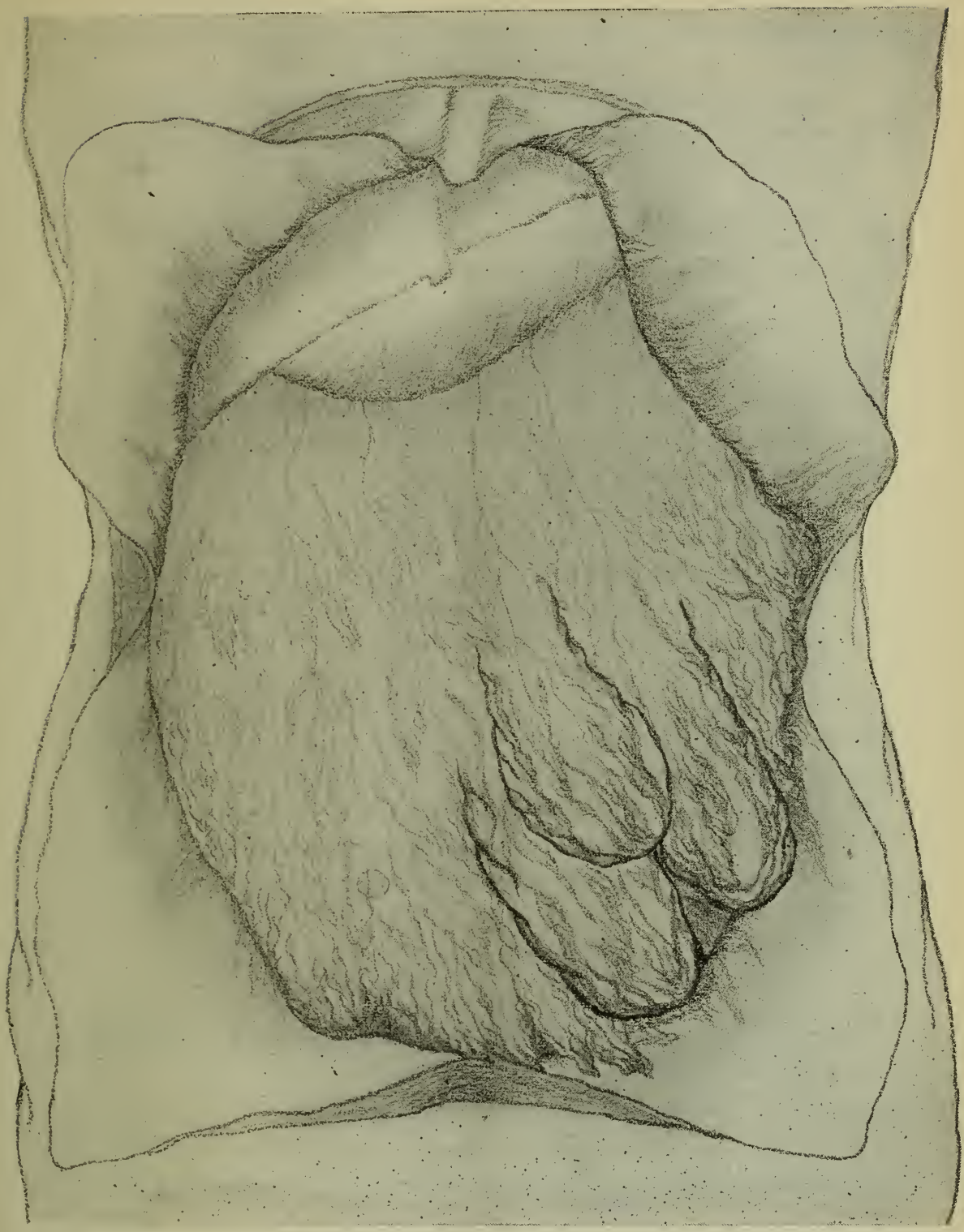
The case I wish to report was that of a man, aged 32, single, American, occupation laborer. His complaint was pain and a dragging sensation in the left inguinal region, also the presence of a tumor which he could feel.

Family History.—Father dead; mother living and well; four brothers and two sisters living and well.

Personal History.—Had none of the diseases of childhood but had some inflammation of the bowels when quite young. Always considered himself in good health. When a child he was struck on the left side with the limb of a tree, but had never noticed any trouble since that time.

Present Illness.—For about a year he has had a pulling and dragging sensation in the lower abdomen and especially on the left side. Lately he has had some nausea. He always feels better and easier when lying down. For several weeks he has been more or less "sick at the stomach," as he describes it. Walking would cause pain and often dizziness.

Physical Examination.—Well developed man with slightly corpulent abdomen. Heart and lungs normal. Palpation revealed



Illustrating three fatty tumors of the omentum in the left inguinal region.

a distinct mass in the left inguinal region, somewhat movable, but on account of the thickness of the abdominal wall no distinct outline could be determined. A definite diagnosis did not seem possible and exploration was advised. Dr Yarian thought inas-

much as the tumor was a movable one it might possibly be the kidney.

Operation.—Jan. 17, 1907. Vertical incision through the left rectus. Upon opening the peritoneum the mass palpated was found to be a tumor of the omentum about the size of a large lemon. On either side and slightly lower were two other tumors, also of the omentum as shown in cut. The tumors were brought out, and sewed off with plain catgut. The rest of the omentum, while somewhat fat, was absolutely free from any other tumors. Upon incision of the tumors they were found to consist entirely of fat. Recovery was uneventful and all the symptoms have subsided. The patient is feeling well and has returned to work.

It will be noted that in only one of these cases was the correct diagnosis made before operation. There have not been enough cases to work out the symptomatology and diagnosis of such tumors. They would have to be differentiated from other tumors of the omentum of which there are a considerable number; as, for example, tuberculosis of the omentum, malignant tumors of the omentum and torsion of the omentum. It would be easy to understand how they would be painless, movable, and non-adherent, only causing disturbances when they become large enough to cause a dragging sensation or mechanical interference with the function of some of the viscera. I could draw no deductions from the few cases which are recorded, and only present this to show another form of the many tumors that may occur within the abdomen, and that must be borne in mind when making a diagnosis.

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The Comparative Advantages of Catgut and Silver-Wire Sutures for Closing the Fascia After Abdominal Incisions

By HUNTER ROBB, M. D.,

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The ideal suture material should be smooth, pliable but not brittle, not too costly, easy to obtain on short notice, and above all readily rendered completely sterile. Catgut would be an almost ideal material but when we sterilize it short of rendering it brittle

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Abstract of a paper read before the American Gynecological Society at Washington, D. C., May 7, 8, 9, 1907

(and consequently useless), some few of the inner strands may not be absolutely aseptic. And in fact, not a few cases of suppuration and even death have been directly traceable to the use of catgut ligatures. The cumol method probably gives the best results, but for the past few years I have had excellent results with the ordinary and chromicized catgut as prepared by Van Horn, of New York, especially when the smaller sizes were used.

When, however, the larger sizes of chromicized catgut are employed the sutures are not always absorbed, but frequently gradually work their way to the surface of the wound and are then discharged. Moreover, as I have said, they are not always sterile. Bacteriologic tests made in my service have shown that the knots and ends of catgut sutures, even when the wound has healed by first intention, teem with bacteria, and I feel sure that chromicized catgut is responsible for many of the skin infections encountered. Again, in one case of phlebitis following an amputation of the cervix in which chromicized catgut was used I was inclined to attribute this complication to the suture material. And here a word as to what is meant by an "infected wound." I believe that our statistics in this matter are often unreliable, because the slight infections are often not mentioned. In my clinic a more or less persistent rise of temperature, no matter how slight, is regarded as *prima facie* evidence of wound infection and the case will generally turn out to be such. If the skin edges of the incision are slightly separated, even when macroscopically no secretion is present, we record these as instances of "slight separation of the incision."

Personally I now prefer to use for the skin and peritoneum small sizes of sterilized catgut, but for the fascia I believe that silver-wire offers advantages over the larger sizes of plain or chromicized* catgut. These results have been deduced from recent experience and largely also from an analysis of two series of 100 cases each in which silver-wire and chromicized catgut respectively were used in bringing together the deep fascia. This analysis shows that the relative incidence of infection in the deep fascia occurring after the use of catgut and silver-wire respectively was as three to one. Moreover, we noted that when suppuration did occur it was always larger in amount and extent in the catgut cases than in the infections met with after the use of silver-wire. The main objection against the use of silver-wire

*Since March, 1907, we have been boiling the glass tubes that contain the catgut for five minutes before the operation. We feel that this has given us an additional security from sepsis.

for closing the fascia is, that one leaves in the wound a substance that may annoy the patient by sticking into the surrounding tissues. This trouble, however, can be readily averted if the suture is properly applied and the ends are turned over with a pair of thin-jawed hemostatic forceps, so that they form a ball-like end to the suture. As a matter of fact this annoyance had to be remedied in only four out of 400 of our silver-wire sutures. Removal under cocain is always easy and painless.

So far as the occurrence of hernia is concerned, *a priori* this accident should be less likely to occur after the use of silver-wire, as this material undoubtedly approximates the tissues for a greater length of time and moreover, as has been said, in our experience has given rise to suppuration less often. As a matter of fact, hernia was not noted in a single case in either series, but I would hasten to say that separation of the fascia and muscle often does not take place within the first few weeks after operation, and yet sometimes if these patients are examined some months or a year afterwards a smaller or larger protrusion will sometimes be apparent. I have not infrequently noted such an occurrence in patients who have been operated upon by other men, and I have no doubt that others have met with the same thing in some of my cases. Consequently, so far as hernia is concerned, I do not believe that we can judge of the relative value of the suture material except in cases examined at an interval of six months or a year after operation.

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An Unusual Case of Prostatectomy

Posner (*Berliner klinische Wochenschrift, June 10, 1907*) says that the longest period of catheter life that has been relieved by a prostatic operation is a case lasting 28 years in which Freudenberg performed the Bottini operation. Freyer, Legueu, and Young have reported instances of 24, 18 and 14 years respectively. In view of these observations and of a case of his own, he urges resort to operative measures even in cases of the longest standing. His own patient had not voided urine spontaneously for 18 years, and had had one vesical calculus removed by litholapaxy. The suprapubic operation was done and a second calculus removed. The prostate was enucleated and weighed 112 g. Recovery was uncomplicated and six weeks later the patient was able to urinate spontaneously at intervals of two or three hours without any residual urine.—*Medical Record.*

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Serum Anaphylaxis

Certain peculiar features relating to the administration of immunizing substances, especially those containing horse serum, have been ably discussed in a recent paper by Gay and Southard in the *Journal of Medical Research.* Several independent observers noted that when small doses of horse serum were given to experimental guinea pigs, and a second fairly large dose after an interval of two weeks, death within an hour will almost invariably follow. Inasmuch as horse serum in itself is apparently harmless and large doses of it can be administered without any symptoms, it became evident that there was some unknown quantity with which they were dealing. When one considers that diphtheria antitoxin is prepared from horse serum and that there will always be a small amount of the serum in connection with the antitoxin, the importance of accurate knowledge as to what is taking place is obvious. The authors worked up the matter in a very careful and scientific way, and their conclusions are of a great deal of interest. They suggest that the susceptibility to intoxication by horse serum is due to the non-neutralization and non-elimination of a factor for which they suggest the

name "anaphylactin." This substance is apparently in itself not harmful, but the actual intoxication is caused by substances in the second dose, which are eliminated by the normal body but which in the case of the treated animal are too readily assimilated. A definite period of incubation seems to be necessary. For this reason the authors divide the periods into the *anaphylactic* phase, in which there are no reactions and no symptoms, and the *toxic* phase, characterized by marked clinical symptoms, and by more or less extensive hemorrhages into the tissues. These hemorrhages are most frequent in the digestive tract and in the heart. The immediate cause of the hemorrhages is demonstrated to be a marked fatty degeneration of the endothelium lining the blood vessels. According to the authors the anaphylactin puts the fat in the cells into such a condition that on the introduction of the second dose of serum the particles flow together in such a way as to weaken the cell wall and allow the blood to burst its way through.

If large initial doses instead of small are given the period of incubation is longer, otherwise the course of the disease is the same. Furthermore the blood of animals which have been treated with large doses of the serum, even if they themselves, owing to the period of incubation not being completed, are not sensitive, contains material with which other guinea pigs may be sensitized. That there is no actual increase of the substance is shown by the fact that the sensitization cannot be transferred beyond the second animal, as it then becomes too dilute. Even animals which had at a previous time been injected by other workers in other laboratories and which were submitted for experiment were found to exhibit the same phenomenon. Whether the same holds true in the case of human beings is not as yet demonstrated, but it certainly seems possible that the injection of a large dose of diphtheria antitoxin, containing a sufficient amount of horse serum, at a suitable interval after some previous small immunizing dose might have quite serious effects.

The Vindication of Dr Simmons

The recent meeting of the American Medical Association, at Atlantic City, in many ways surpassed any previous meeting of the Association, not alone from the standpoint of attendance, but chiefly from the character of the papers presented and the character of the discussions which were elicited.

There is probably no more truthful evidence of the growth of

scientific medicine throughout the country than the records of the American Medical Association, and as the spirit of scientific research has made itself felt as the great power for the future safety of the profession, so has the larger spirit of fraternalism come into active existence as a common bond between widely scattered communities. The records of two such meetings as that of last year in Washington, and that of this year in Atlantic City, are evidences enough of the broad spirit which exists from the Atlantic to the Pacific.

Personally, apart from the character of the scientific meeting at Atlantic City last month, nothing delighted us so much as the vindication in the House of Delegates of the Secretary-Editor of the Association. To Dr Simmons, as much as to any one man throughout the country, we are indebted for most, if not all, of the progress that has been made toward unification and organization during the past eight years. By virtue of the position which he has occupied, he has on different occasions been exposed to hostile and venomous criticisms, absolutely unjust and entirely uncalled for, the methods of the Association and its personal management having been repeatedly attacked in a spirit of malicious antagonism.

In view of these facts, the open discussion before the House of Delegates, at the recent Atlantic City meeting, was a triumphant vindication, not only for the Secretary-Editor himself, but for the management of the Association, as these attacks upon the Secretary involved as well, by implication, the Board of Trustees. Throughout all these wretched attacks upon the methods and the man at the helm, Dr Simmons has borne himself with the courage of his convictions and with the dignity of a true gentleman and has, by so doing, won the sympathy and loyal support of all rightminded members of the Association. We must express our unfeigned delight at the outcome of this discussion before the House of Delegates and congratulate again the American Medical Association in having such a man as Dr Simmons as Secretary of the Association and as editor of the *Journal*.

"The Alcohol Manifesto"

The members of the medical profession in Cleveland have recently received a communication from the Liquor Dealers' Association, drawing attention to a letter which appeared in the London *Lancet* and which endorses the use of alcohol. The

Journal A. M. A., of June 22, 1907, comments on this editorially and so well shows the need for care in making such statements that we quote the article in full.

"A storm in a teacup recently was raised in England by the appearance in the London *Lancet* of an open letter favoring the use of alcohol. The manifesto was signed by sixteen British physicians, many of whom stand so high in the profession as to make the letter at once worthy of notice. A flood of letters immediately appeared in the lay and medical press of Great Britain discussing the sentiments expressed *pro* and *con*. A counter manifesto was issued,[1] signed by men equally eminent and among whom were Sir Frederick Treves and Sir James Barr. These men emphatically dissented from the opinions expressed in the original document. The inner history of this first document, according to our London correspondent, indicates that it was prepared by a man in no way connected with the medical profession. Further, it appears that the letter presented to the signers was materially different from that given the *Lancet* to publish, and a number of signers are said to have retracted their endorsement. It is noteworthy that when the manifesto appeared the British government was getting ready to introduce a new licensing bill which was worrying the liquor interests. For these reasons it seems a fair deduction that the physicians who signed it and the medical journal that published it were the unwitting dupes of the liquor interests. No sooner had the letter appeared than it was universally copied in the lay press and was also distributed in pamphlet form in numerous saloons throughout the British Isles. The manifesto proved such a splendid argument for the liquor interests on the other side of the Atlantic that it is now being used on this side. The National Wholesale Liquor Dealers' Association of America has made a photographic reproduction of the original manifesto and is scattering it broadcast, especially among physicians. We do not blame the liquor men for making use of this testimonial for their cause, although we feel sure that the eminent men who signed the document would feel chagrined if they knew to what base use it is being put. This further emphasizes the need of caution in making dogmatic assertions on questions that are still open.

Recent Work on Goiter, or Glandular Hyperplasia of the Thyroid

In the last issue of the *Journal of Infectious Diseases* there is an interesting article on that condition of the thyroid which is prevalent in and about Cleveland and in fact along the Great Lakes. A recent paper in this JOURNAL, by Marine, dealt in a

1. The Journal, May 25, 1907, 1793.

general way with this subject and the present one is a further progress along the same lines. The previous paper indicated the author's belief that the constant condition of glandular hyperplasia was in the nature of a reaction to a deficiency and that this was a deficiency in iodin. In confirmation of this he has taken a small dog with the typical condition and after removal of a portion of the gland for examination treated the animal with iodin. At intervals in the treatment portions of the remaining gland were removed for check, and at the end of the treatment when the animal had been practically restored to health he was sacrificed, and a careful final examination made.

It is well known that removal of portions of even a normal gland lead to a condition of hyperplasia closely simulating that noted in the dog before treatment, so that when the reverse took place, associated with marked improvement in the general health of the animal, one could not attribute it to the surgical procedures. Parallel examinations of the iodin content of the various exsected portions were made, and it was found, as had been expected, that the iodin was evidently stored up in the gland in large amount. Histologically the microscopic picture changed as had been predicted in the former paper, from the hyperactive condition typical of these enlarged thyroids to the condition considered by the author as that of *rest,* or colloid adenoma, so-called. The conclusions in part are that the thyroid gland acts as a storage reservoir for iodin, by means of its thyroglobulin, and that accordingly where there is an actual thyroid tumor of the simple type. the administration of iodin is sufficient. On the other hand, where there is a distinct absence of glandular structure, it is necessary to supply both the iodin and the thyroglobulin, in other words to feed with the dried gland. Furthermore, that in examining into the etiologic factors in goiter, especially with regard to food or water supply, one must look rather for a lack of something than for the presence of some abnormality. It must be considered as at least possible, however, that there might be in the water some additional salt which formed so stable a compound with the iodin that the latter could not be utilized. Further work is promised on the same subject and the care taken to use all necessary checks on the work makes the author's statements well worth attention.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Ichthyol:

W. M. Gregory, of Berea, Ohio, writes as follows: As many of the uses of ichthyol do not seem to be generally known to the profession, a brief account of them may be of interest. I have been using it for about 10 years in my own practice, but first discovered its usefulness some time before that, while in charge of the college dispensary. We had a large jar of ointment which was being used with most excellent results in the treatment of burns. It produced results so much better than anything I had ever seen used for this purpose that I took pains to get the formula, which, if I remember it correctly, was ichthyol, alum and boric acid, with a petrolatum base. Ichthyol comes as near being a specific for erysipelas as any drug can, in fact I have never yet seen a case that it would not cure. It is most conveniently applied in the form of an ointment containing one or two drams to the ounce of vaseline. It should be applied thickly over the affected area, and well beyond it on the parts not yet affected.

In acute rheumatism it is very helpful in the form of an ointment containing one dram of ichthyol and one dram of salicylic acid to the ounce of lanolin, thickly applied to the painful joints and covered with absorbent cotton. I have found the ichthyol ointment curative in all that class of sores and skin lesions that old time practitioners used to class as "scrofulous sores," also in many cases of eczema with a red and angry-looking eruption indicating a considerable degree of inflammation. In many cases of swollen and indurated cervical lymphatics the ichthyol ointment will promptly reduce them to their normal dimensions. For many inflammatory conditions in the female pelvis with a great amount of pain and congestion, I have found a 10% solution of ichthyol in glycerin applied to the cervix on tampons to be exceedingly helpful. In cases of sore and cracked nipples which cause many women so much suffering just after the beginning of lactation, the ichthyol ointment has proved the most healing application as yet discovered. Of course it must be carefully removed before each nursing, and applied again afterwards. It has seemed to me that ichthyol is a true alterative, and that much of its success is due to its extraordinary ability to penetrate the skin.

Adrenalin:

In the *Therapeutic Gazette* for May, Henry Guy Carleton reports as to the external use of adrenalin in neuralgia, neuritis and reflex or referred pain. The usual application was an ointment containing one to 1000 of adrenalin, and two or three minims was the amount generally employed. The only absolute failures noted were of neuralgias from toxic conditions, as intestinal toxemia, malaria, diabetic and saturnine poison; also some arising from traumatic or inflammatory lesion of a branch of the same nerve (*e. g.* a supraorbital neuralgia arising from a violent iritis; also neuralgias and neuritis arising from degenerative conditions). The unvarying successes were in functional neuralgia and neuritis. In some cases recurrences were noted in from seven hours to 10 days, but these yielded again to treat-

ment; the interval between attacks became longer and the attacks less violent till they ceased altogether. The specific action of adrenalin in functional neuralgia and neuritis is so unvarying, that its failure to relieve may be accepted as diagnostic of reflex neuralgia or a referred pain indicating the presence of some perhaps yet unknown morbid condition. Reflex neuralgias of great severity are commonly relieved for periods varying from a few hours to several months. The most common of these are derived from eyestrain and dental caries. "Transferred" pains are easily relieved by this treatment, and the pains of gout, articular and muscular rheumatism, myalgia, and of at least some traumata, are relieved almost entirely by adrenalin applied externally. He calls attention to, (1) The quantity of adrenalin necessary to relieve neuralgia or neuritis (including affections of the deeper nerves, like the sciatic) is too small to cause the slightest ischemia, or variation of blood-pressure; (2) There is a decided regeneration of the nerve and its branches, after treatment, rendering it less liable to recurrence of an attack though predisposing conditions continue or return. He has records of nearly 100 cases in which one application of adrenalin ointment has caused a previously frequently, recurrent, facial neuralgia, functional or reflex, to cease troubling for periods of from one month to six, and recurrences, reflex from perhaps the same lesion, came in some other nerve than the one afflicted before. The quantity of one to 1000 ointment of adrenalin to be used in any affection of a peripheral nerve should not exceed from one to two minims (0.06 cc. to .12 cc.) by inunctions, except in case of the sciatic nerve when two or three minims may be used. Larger quantities often produce ischemia, which might prove injurious in some cases, notably when application on or near the spine is necessary. Administration by mouth or hypodermically is of little use in neural cases; he has often proved this. The usual time for relief is three minutes; apparent delay is sometimes caused by mnemonic persistence of the impression, as can be easily proven.

The Suprarenals: In the *Journal A. M. A.* for May 18, Joseph L. Miller states that the value of the suprarenal gland as a topical application to the mucous membranes, especially of the nose and throat, is well established. Recently it has been employed extensively in a variety of different conditions, those deserving special mention being cardiac insufficiency, hemorrhage, bronchial asthma, and in the treatment of various exudates and transudates in the body cavities. He takes adrenalin as the representative of the gland, although preparations of the active principle under other trade names are upon the market. The action of adrenalin in general, stimulates that of electrical excitation of the sympathetic nerves. So exact is this selective action that it is assumed that an organ contains sympathetic fibres if it contracts under the influence of adrenalin, as plain muscle without sympathetic fibres is not affected. It is now generally conceded that its action is a peripheral one affecting the neuromuscular function. Its most important action is on the cardiovascular system, the effect produced being the same as would follow an electrical excitation of the sympathetics. According to Schafer, the

coronary vessels are not constricted by adrenalin, on account of the absence of vasoconstrictor fibres. Brodie and Dixon believe sympathetic fibres absent in the lesser circulation in the lungs and maintain that these organs are not constricted by adrenalin. This very important point from a therapeutic standpoint has been disputed by Plummer, and must still be considered as in doubt. Large amounts may be given by the mouth without any demonstrable effect on the cardiovascular system. It is evident that the only indication for adrenalin by the mouth would be for its local effect in hemorrhage from the esophagus or stomach. Given in this way it is valueless in intestinal hemorrhage on account of its ready decomposition in the stomach. A cardiovascular effect can only constantly be expected after subcutaneous, intramuscular, or intravenous use of this drug. The special dangers from the use of adrenalin are, rupture of an artery from the sudden increase in pressure, glycosuria and arterial degeneration. It should be employed with great care in all cases of suspected arterial degeneration.

Arterial Hypertension: In the *American Journal of the Medical Sciences,* Theodore C. Janeway considers the two aspects of hypertension as a compensatory effort, and at the same time a disturbing factor in the circulation, and suggests three lines of treatment: preventive, adjuvant and emergent. Preventive measures must be directed mainly toward limiting or ameliorating the primary disease. and hence its effects on the circulation, and are comprised in the general hygienic and dietetic treatment of chronic nephritis. More definite measures from the standpoint of the blood-pressure are the avoidance of all markedly hypertensive influences such as excessive or unusual physical or mental work, straining at stool and the excessive use of tobacco. The adjuvant treatment of hypertension is beginning to receive the attention it deserves. Formerly the discovery of high blood-pressure was too frequently the signal for the attempt to reduce it at any price. The failure of vasodilators to reduce the general level of pressure in such cases has usually led to loss of faith in drugs, rather than to an appreciation of the struggle of the organism to maintain its life in spite of the physician. We now view with alarm any fall in pressure not the result of preventive treatment and the accompaniment of other evidence of improvement. As a rule such a fall marks the evidence of cardiac insufficiency and calls for digitalis, our mainstay in combating asystole. Not even in mitral insufficiency do more brilliant results follow digitalis therapy than in the failing heart secondary to hypertension; and an increasing blood-pressure, though not invariable, usually presages a winning fight. The indications for digitalis, and its congeners, are the same with hypertension as without, and no blood-pressure reading should make us hesitate to administer it. Emergent treatment includes all the means used to forestall or cut short those dramatic moments which may come without warning to any victim of hypertension when life suddenly hangs in the balance. Here the vasodilators find their proper place and rational use, and are as indispensable as digitalis, when the indications are for adjuvant treatment. Nitroglycerin and the other nitrites are the most efficient for the relief of the

anginal seizures, which often follow exertion when the arterial pressure is high and their action sometimes seems magical. In acute uremia, venesection fulfills the double purpose of relief of hypertension, through reduction of blood volume, and removal of circulating toxic substances. Dangerous nasal hemorrhages, an occasional accident, may often be checked by nitroglycerin in full doses. Attacks of edema of the lungs always of great danger, and most agonizing to the patient, call at least for the simultaneous use of rapid heart-muscle stimulants, and of vasodilators to reduce to a minimum the demands on the left ventricle. In a certain number of patients in whom severe abdominal pain or intense headache was a prominent symptom, he has been struck by the beneficial effect of morphin both on the general condition and the blood-pressure. He emphasizes the point that the height of the blood-pressure gives no indications for treatment except along preventive lines. Hypertension is no more to be attacked therapeutically than is a heart-murmur. Only failure of the circulation on sudden threatening of danger give us the signal to interfere.

Novaspirin: In *Merck's Archives* for May (*Berlin Klin. Woch.*), Kurt Witthauser, of Halle, reports on a modification of aspirin, which he calls novaspirin, and which he claims is an improvement on the former product. It is a disalicylic acid ester of methylen citron acid, containing 62% of salicylic acid. It is a white crystalline powder with a weak acid taste: it is practically insoluble in water and is borne by the stomach without irritation. He reports five cases supporting its therapeutic efficacy and believes that (1) novaspirin has less action on the stomach than aspirin, (2) it acts more slowly than aspirin, and must be given in larger doses, (3) its antipyretic action is good, and its diaphoretic and analgesic actions are less than aspirin, and (4) it is particularly available in influenza.

Typhoid Fever: In the *Medical Record* for March 30, W. Gilman Thompson stated that in late years he has not seen a case presenting gurgling and tenderness in the right iliac fossa, in cases of typhoid fever. It is a striking fact that these symptoms have practically gone out of date, probably owing to better methods of feeding. The more he sees of typhoid the more convinced he is that a great deal of latitude can be allowed in treating the different types of the disease, and he believes there is a high toleration of the system for this disease. Of late years he has treated typhoid fever more liberally in regard to diet, giving a milk diet as long as it agrees, but when the tongue becomes coated, and there is a distaste for milk, he gives liberally of beef and orange juice, etc. The great danger from meteorism is from stretching the gut, and so causing perforation, as when the gut is distended with gas, the lesions cannot heal. There is nothing he believes in the name "intestinal antiseptics," but there is something in intestinal antifermentation. He gives salol and creosote in coated pills which do not dissolve in the stomach, but are dissolved in the intestine only, and aid in keeping down meteorism. When the stools are foul and offensive, with diarrhea

and a tendency to tympanites, there should be proper attention to the regulation of the diet, and cleansing the lower part of the bowel. He believes in giving turpentine internally, as well as externally, and tympanites is more to be dreaded than hemorrhage. It is better to feed typhoid patients early in convalescence with some solid food, so that if a relapse occurs the patient is then better able to bear the disease again than if he had been kept on an exclusive diet. He has never seen a relapse due to the giving of food, and 10% of typhoid patients will have relapses no matter what the diet may be.

Diphtheria: I. Friesner, in *New York Medical Journal* for May 11, calls attention to unrecognized diphtheria in children. Of all the types of diphtheria, none is more frequently overlooked than the so-called catarrhal form involving the nose. It is then for this very reason most fraught with danger not only to the patient himself, but also to those with whom he comes in contact. It is far more common than one would be led to suspect. In general the well-being of the patient, the slight rise in temperature, the absence of acceleration or disturbance of the pulse rate, or of respiration, are extremely deceptive, and most frequently lead to the diagnosis of a slight cold in the head. There are practically no symptoms aside from those of an ordinary cold. It is not always the case that the glands are enlarged, and it is not a little to be wondered at, that in spite of the fact that the mucous membrane of the nose is so abundantly supplied with lymphatic channels, enlargement of the cervical glands during nasal diphtheria is frequently absent, and rarely early. There is as a rule a discharge of glairy mucus, which may become later yellow or even greenish yellow, and sneezing appears to be not so common as in an ordinary coryza, the patients complaining chiefly of the discharge and the persistent redness of nose and lip. He reports two cases in which a culture proved positive, and the use of antitoxin was followed by recovery. He urges that the so-called "cold in the head" of children be not too lightly passed by; that carefully examining the nose be considered quite as important as examining the throat, and that especially where the discharge is unilateral or persists, the possibility of a mild type of nasal diphtheria be borne in mind, and proper precautions taken. The editor of this department has seen a number of cases similar to those of Dr Friesner. In one although the culture report was negative, and the child continued pale and weak, the administration of antitoxin was followed by an almost immediate improvement, and recovery.

Quinin: In *American Medicine* for May, Hardee Johnston believes that quinin has a direct inhibitive action on the pneumococcus itself, and so has some specific action in pneumonia. He asserts that there is no doubt that quinin will effect a reduction of temperature in pneumonia, and yet we know that the drug is no true antipyretic. One fact must not be lost sight of in administering quinin in pneumonia, that is the danger of a reinfection from the consolidated lung area which we cannot reach. To counteract this danger, it becomes

necessary that the quinin be given continually throughout the attack. He states that while the use of quinin in pneumonia is not at all new, it has usually been given not for any specific action but for its antipyretic action. His experience in the use of the drug in pneumonia extends over nine years, and while the number of cases is small, the uniform results may count for something, he having lost but one case. He has treated between 50 and 60 cases and has given quinin in from 0.2 to 0.3 grams (3 to 5 grain) doses, repeated every two hours until 0.8 to 1.3 grams (12 to 20 grains) are taken, the amount given varying with the mildness or severity of the symptoms. He has occasionally combined with it a minimum dose of actenalid, but the quinin he has kept up steadily throughout the entire attack irrespective of anything else that may be given and he has never seen any untoward action, or other than the best results. He believes in its specific action, but supplements it with symptomatic treatment when necessary.

Cardiac Dilatation: In the *Central States Medical Monitor* for May, Chas. R. Sowder states that we should have three considerations in mind in the treatment of dilatation aside from the immediate relief of distressing symptoms. First, to arrest and retard the degenerative process; second, to lessen the mechanical work of the heart; third, to raise the tone of the cardiac muscle. The urgent symptoms to be met, those of threatening failure shown by dyspnea, weak, rapid and irregular pulse, are best relieved by digitalis, strychnin and caffein in sufficient doses. In many cases 10 to 15 days of absolute rest will work wonderful changes for good. Following the rest in bed, exercise should be gradually resumed, and all sudden strain on the heart carefully avoided. For the heart itself digitalis serves us better than any other drug and a standardized tincture should always be used. He summarizes: first, absolute physical rest in bed for a time followed by a life free from worry or excitement, moderate exercise, good, easily-digested, nourishing food and strict attention to the eliminative organs. Second, digitalis and strychnin with iron for anemia; if possible, the relief of the cause.

Prescribing: In the *Critic and Guide* for May, A. L. Benedict summarizes concerning 500 prescriptions and suggests certain factors in the personal equation that tend to reduce the armamentarium. They are stated as general rules. (1) Use active principles whenever satisfactorily available, as strychnin to represent nux vomica and ignatia. (2) In general, one salt of an alkaloid can be selected for universal use, one of a group of related hypnotics, one of a group of somewhat similar saline cathartics, one of a group of related alkaloids, one salt of a metallic base, or at lest a very few when the base itself is the chief element in the therapeutic effect. (3) Hundreds of herbs are merely astringent, or have effects that are scarcely demonstrable. While many of these are no longer official, a great many that are official can be dispensed with by the physician. (4) A prescription should not contain more than two or three ingredients, excepting vehicles, and no drug should be prescribed unless there is a clear reason, pharmacologic

or empiric, for its use. (5) As a rule drugs should not be used as placebos, nor to influence the non-material symptoms, or if there is danger of toxic action even of moderate severity, as griping nausea, etc., if essentially the same therapeutic effect can be obtained otherwise. (6) A new drug, such as a synthetic proprietary representing a minor change of an established one, should not be used unless it has some distinct advantages. If, on the other hand, this advantage is marked and generally applicable, the newer drug should replace the old one. (7) Just as the best surgeons commonly operate with a few comparatively simple instruments, avoiding specially prepared and complicated devices, so the best therapeutists rely usually on a few well-tested drugs.

Academy of Medicine of Cleveland

The forty-ninth regular meeting of the Academy was held at 8 P. M., Friday, June 21, 1907, in the Auditorium at the Cleveland Medical Library. Program: (1) Vaginal Caesarean Section with Report of a Case, F. S. Clark, M. D.; (2) (a) Torsion of Omentum, Exhibition of Specimen; (b) Therapeutic Uterine Curettage, R. E. Skeel, M. D.; (3) Appendicitis in Children with Reference to the Diagnosis, A. F. House, M. D.

CLINICAL AND PATHOLOGICAL SECTION

In order to avoid conflicting with the Annual Meeting of the American Medical Association, the forty-third regular meeting was held one week earlier than usual, at 8 P. M., Friday, May 31, 1907, at the Cleveland Medical Libary. Program: (1) Some Recent Experiences in Practice, H. H. Powell, M. D.; (2) Gastric Ulcer; Report of Cases, M. J. Lichty, M. D.; (3) Presentation of a Case of Athetosis; Report of a Case in which Epileptiform Convulsions could be produced by Peripheral Stimulation, C. J. Aldrich, M. D.

St. Alexis Hospital Alumni Association

The fifty-third regular monthly meeting of the St. Alexis Hospital Alumni Association was held at the Hollenden Hotel, on Thursday, June 6, 1907, 8 P. M. Program: Rheumatism, B. Peskind, M. D.; Brain Abscess—Complicating Typhoid Fever, C. E. Wood, M. D.

Lakeside Hospital Medical Society

The eighteenth regular meeting of the society was held on Wednesday evening, June 26, 1907. Programme:

1. A Case of Multiple Retroperitoneal Cysts. Dr Lewis.
2. A Case of Urinary Infiltration. Dr Cox.
3. A Case of Diabetes with Ascites and Hemorrhagic Sugar-containing Fluid in both Chests. Dr Stone.
4. A Resume of a Series of Cases of Cerebrospinal Meningitis. Dr Eisenbrey.
5. Report of a Case of Diaphragmatic Hernia Simulating a Pneumothorax. Dr Peterka and Dr Russ.
6. Unusual Distribution of Ringworm with Exhibition of Specimens. Dr Ladd.
8. Demonstration of X-ray Photographs. Dr Hill.
7. A Resume of Pathological Gynecology. Dr C. D. Williams.

Book Reviews

An Epitome of Diseases of the Nose and Throat. By J. B. Ferguson, M. D., of the New York Post-Graduate Medical School. 12mo, 243 pages, with 114 engravings. Cloth, $1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907. (Lea's Series of Medical Epitomes. Edited by Victor C. Pedersen, M. D., New York.)

This work is concisely and entertainingly written and gives in a short space a fairly complete account of the diagnosis and treatment of the various diseases of the nose and throat. It is a volume which will be found to be of much use by students as well as by practitioners and contains much useful knowledge which is not often found except in books of a larger size.

Dorland's American Illustrated Medical Dictionary. A new and complete dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry and kindred branches; with over 100 new and elaborate tables and many handsome illustrations. Fourth Revised Edition. By W. A. Newman Dorland, M. D., Large octavo, over 850 pages, with 2000 new terms. Philadelphia and London. W. B. Saunders Company, 1906. Flexible leather, $4.50 net; indexed, $5.00 net.

This, the fourth and last, edition of Dorland's well known dictionary is a most satisfactory volume of reference for general use.

The lexicon includes all the words in common usage and an occasional slip in the etymology does not impair its use in the slightest as a work of reference for students and physicians. The tables and plates included are excellent and add immensely to the value of the work. This edition includes a large number of new tables, which have not previously been published and which will be keenly appreciated by every one who has recourse to this volume.

The writer regrets keenly, though he appreciates that his view is one of the minority, to note the rapid introduction of the so-called phonetic spelling but he is grateful to the author for at least giving both forms in this lexicon.

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., President of the State Commission in Lunacy, New York; Clinical Professor of Neurology and Psychiatry, Columbia University. Fifth edition, revised and enlarged. Octavo volume of 937 pages, with 341 illustrations. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.00 net; Half Morocco, $6.00 net.

No other evidence than the demand of a fifth edition is needed to attest the great popularity of this volume by Church and Peterson. The first part of the work by Church is devoted to the organic pathologic conditions of the brain and cord, and though, in our judgment, the statements made might often with advantage be more full and exhaustive, there is a sufficiently complete description of the various conditions met with to be of value to the student and general practitioner.

The chapters devoted to the general examination, so important a field in neurology, are clear and concise, and those devoted to the sensory con-

ditions, to the special senses and to cerebral localization are very satisfactory. The descriptions of the diseases affecting the individual cranial nerves are brief but suggestive, though we wish that a text-book upon neurology might be written which would devote a more thorough description to the physiology of the subject than seems to be the popular custom. It is not enough to be given a definition, we so often want to know *why*, and our favorite text-books leave us in the lurch.

In Dr Peterson's review of the mental conditions, we have a satisfactory, clear and concise description of a frequently very confusing subject. We doubt if any branch of medicine is more often obscure to the general practitioner than the subject of psychiatry. We heartily endorse this work as a standard text-book for students and practitioners alike.

The press work and typography are all that the publishers' imprint implies, but we hope the day is not far distant when paper with a gloss, such as the paper in this volume has, may never be used in the makeup of any work that is meant to be frequently turned to.

The Practical Medicine Series. under the general editorial charge of Gustavus P. Head, M. D. Volume VIII, Materia Medica and Therapeutics, Preventive Medicine, Climatology and Forensic Medicine, edited by George F. Butler, Ph. G., M. D.; Henry B. Favill, A. B., M. D.; Norman Bridge, A. M., M. D.; Daniel R. Brower, A. M., M. D., LL. D.; Harold N. Moxer, M. D. Series 1906. Year Book Publishers.

The volume eight in The Practical Medicine Series is of the same handy size as the other volumes of these year books. A little more than one-half is devoted to an adequate review of the literature which has appeared during the past year on the therapeutic action of drugs, and in view of an increasing interest in this subject these abstracts merit careful attention.

In the part devoted to Preventive Medicine there are sections on tuberculosis, typhoid fever, cerebrospinal meningitis and the other infectious and contagious diseases. A few pages are devoted to the important subject of milk, with special reference to the production of a milk which may be characterized as "clean" by comparison with the ordinary municipal supply of the past, and indeed of the present time.

In Climatology the sanatorium and fresh-air treatment of tuberculosis receives attention, with descriptions, plans and drawings of tuberculosis tents and shelters.

The volume closes with a short section on Forensic Medicine and a satisfactory index.

A Text-Book of Pathology. By Alfred Stengel, M. D., Professor of Clinical Medicine, University of Pennsylvania; Physician to the Pennsylvania, University, and the Philadelphia Hospitals. Fifth edition, thoroughly revised. With 399 illustrations in the text, many of them in colors, and 7 full-page chromolithographic plates, 979 pages. Philadelphia and London. W. B. Saunders & Co. 1906. Cloth, $5.00 net; Sheep or Half Morocco, $6.50 net.

In the latest edition of the popular text-book the chapter on Inflam-

mation has undergone some revision. The chapter on Immunity has been considerably augmented and includes a clear discussion of the more recent additions to the theories of immunity.

The author's preface states that the chapter on Animal Parasites has been revised. That portion dealing with the Protozoa might well undergo further revision. Because of the increasing importance of these parasites they deserve a more scientific exposition. The description of Coccidium cuniculi is misleading from the zoologic standpoint since it refers only to the oocyst. And a discussion limited only to this end stage does not give a proper idea of the pathology of coccidiosis since it is the developing stages of the organism which produce the epithelial changes characteristic of an infection by Coccidium cuniculi.

The propriety of definitely placing Spirochaeta pallida among the Bacteria must appear doubtful to anyone familiar with the literature.

One fault, met with throughout the entire volume, is the frequency with which the article "the" is placed before specific botanic and zoologic names. "The Bacillus diphtheriae" (page 252), "The Spirochaeta Obermeieri" (page 303), "The T. Gambiense" (page 330), "The Glossina palpalis" (page 331), are examples.

Many of the poor illustrations which marred the earlier editions are still present. This is unfortunate, because they detract from the otherwise excellent appearance of the volume and add nothing to the printed descriptions. The illustrations made from photographs are well chosen and well reproduced.

The selection of the type and the general appearances of the book, from the standpoint of typography, are excellent, and the text is free of typographic errors. The legend of Plate 4 needs correction.

Despite the minor points which have been criticized above, the book admirably fulfills its purpose, "that of a text-book for students on pathology." The portions dealing with General Pathology and with the Pathologic Physiology of the various pathologic conditions make the volume particularly valuable to the student.

Text-Book of Psychiatry. A Psychological Study of Insanity for Practitioners and Students. By Dr E. Mendel, A. O. Professor in the University of Berlin. Authorized translation. Edited and enlarged by William C. Krauss, M. D., Buffalo, N. Y., President Board of Managers Buffalo State Hospital for Insane; Medical Superintendent Providence Retreat for Insane; Neurologist to Buffalo General, Erie County, German, Emergency Hospitals, etc.; member of the American Neurological Association. 311 pages. Crown octavo. Extra cloth. $2.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

This translation of Mendel's work on Psychiatry brings the subject of mental diseases, their classification and treatment before the general practitioner and senior medical student in a concise and thoroughly readable manner. The family physician rather than the specialist first sees the patient suffering from incipient mental breakdown.

The physician who early recognizes the signs of paresis and is cognizant of the possibility of a psychic equivalent for the ordinary epileptic

seizure is able by his timely counsel to spare both the patient and his friends much annoyance and chagrin.

The chapter on treatment emphasizes the necessity for early institutional care of patients suffering with suicidal tendencies, delusions of persecution or sitophobia.

The translator's notes and his additions to many of the chapters contribute greatly to the value of the work.

The practitioner who only occasionally is called upon to care for patients suffering from the psychoses will find this book especially helpful.

Aids to Dental Surgery. By Arthur S. Underwood, M. R. C. S., L. D. S., Eng., and Douglas Gabell, M. R. C. S., L. R. C. P. Lond., L. D. S., Eng. Second Edition. New York. William Wood & Company, 1907.

This little book explains in a brief and ready manner the general information about Dental Surgery, which it would be well for every medical practitioner to possess, and, therefore, it will prove very useful. It is hardly definite enough for dental students in that it does not cover the ground with sufficient minuteness for them, but as this class of work is not the special field of general medical practitioners the book will give them about all that they would require to know of the subject for their routine work.

Text-Book of the Practice of Medicine. For Sudents and Practitioners. By Hobart Amory Hare, M. D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London. Author of A Text-Book of Practical Therapeutics; A Text-Book of Practical Diagnosis, etc. In one very handsome octavo volume of 1120 pages, with 131 engravings and 11 full-page plates in colors and monochrome. Second edition, revised and enlarged. Cloth, $5.00, net; leather, $6.00, net; half morocco, $6.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

This is the second edition of Hare's Practice, and is in every respect a splendid work. It is a thoroughly practical treatise, the treatment of each subject being most complete and satisfactory. The opening chapter is devoted to typhoid fever, the subject being most adequately considered. The line of treatment advised is essentially that of the former edition. As a routine, the bowels are first moved with calomel in directed doses followed by enema or saline if needed; 12 hours later he gives five or 10 minims of the diluted hydrochloric acid in a teaspoonful of pepsin essence, and continues this regularly throughout the disease, after food. He believes absolute intestinal antisepsis cannot be produced by any known means, that its value is limited to combating intestinal fermentation and has no effect on the bacillus typhosis. He advises acetozone and zinc sulphocarbolate, as intestinal antiseptics, but personally prefers turpentine. The special complications are amply treated. Under the head of croupous pneumonia, the use of digitalis in this disease is quite thoroughly and carefully estimated. He places special stress upon the well known fact that in the presence of high fever, so generally present in this disease, digitalis loses largely its power of control over the heart; to overcome

the relaxation of the vessels in advanced pneumonia, it will frequently fail, and he is here in the habit of combining it with the same dose of belladonna tincture, to increase vascular tone; he rarely, however, employs this combination before the fifth or sixth day. The book especially excels in treatment, and is in brief one of the most valuable works upon its subject.

Surgical Diagnosis. A Manual for Students and Practitioners, by Albert A. Berg, M. D., Adjunct Attending Surgeon to the Mount Sinai Hospital, New York. Illustrated with 215 engravings and 21 plates. 543 pages. Lea Brothers & Co., New York and Philadelphia.

The author treats first of the general considerations on diagnosis, emphasizing the importance of a complete history and a most searching examination aided with the various instruments that serve to assist our ordinary senses, these are enumerated and briefly described. The clinical significance of general symptoms such as pain, fever, rigidity, etc., etc., are then discussed. A chapter on surgical infections and their various manifestations concludes part one. The remaining parts take up the various regions of the body, giving the different pathologic conditions of a surgical nature occurring in them, a concise clinical picture of each disease, including its causes, onset and course, and in certain cases the accompanying pathologic changes is given. A considerable number of illustrations add to the value of the work. The book is especially designed for general practitioners and students and is a very convenient size for reference.

Studies in the Psychology of Sex—Erotic Symbolism, the Mechanism of Detumescence, the Psychic State of Pregnancy. By Havelock Ellis. 6⅜ x 8⅞ inches. Pages x-285. Extra Cloth, $2.00, net. Sold only by Subscription to Physicians, Lawyers and Scientists. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

In this volume, the fourth of a series dealing with the psychology of sex, the author discusses erotic symbolism, the mechanism of detumescence and the psychic state in pregnancy. These various subdivisions of the subject are taken up in exhaustive detail and are abundantly illustrated by brief case reports. The book shows a thorough grasp of the subject by the author and the numerous references indicate the wide range of his reading in preparing the text.

Books Received

A combination of the English and French Obstetric Locks for the Prevention of Dangerous Compression of the Fetal Head by Forceps, by A. Ernest Gallant, M. D., New York City.

The Overtreatment of Syphilis, by George Henry Fox, A. M., M. D., New York.

Illinois State Board of Health Bulletin.

Diet as a Therapeutic Measure in Diseases of the Skin, by George Henry Fox, A. M., M. D., New York.

Clinical Diagnosis of Arterial Sclerosis, by Judson Daland, M. D., Philadelphia.

Monthly Bulletin New York State Department of Health.

The Essentials of Chemical Physiology, for the use of students, by

W. D. Halliburton, M. D., LL. D., F. R. S., Fellow of the Royal College of Physicians, Professor of Physiology in King's College, London; Author of "Text-book of Chemical Physiology and Pathology." Sixth edition. Longmans, Green & Co., New York, Bombay and Calcutta. 39 Paternoster Row, London. 1907.

The Practical Medicine Series, Volume I. General Medicine, edited by Frank Billings, M. S., M. D., Head of Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A. M., M. D., Professor of Medicine, Chicago Clinical School. Series 1907. The Year Book Publishers. Chicago.

The Practical Medicine Series. Volume II. General Surgery, edited by John B. Murphy, A. M., M. D., LL. D., Professor of Surgery in Rush Medical College (in affiliation with the University of Chicago). Series 1907. The Year Book Publishers. Chicago.

The Practical Medicine Series. Volume III. The Eye, Ear, Nose and Throat, edited by Casey A. Wood, C. M., M. D., D. C. L., Albert H. Andrews, M. D., Gustavus P. Head, M. D. Series 1907. The Year Book Publishers. Chicago.

First Annual Report of the Saint Louis Skin and Cancer Hospital.

Selected Papers by the Staff of Massachusetts General Hospital.

Accessions to the Cleveland Medical Library

Donated by Dr H. S. Upson:

Transactions American Electro-Therapeutic Assoc., Vol. 15, 1905.

Donated by Dr C. A. Hamann:

Skoda—Percussion and Auscultation.
Zahorsky—Golden Rules of Pediatrics.
Barker—Anatomical Terminology. (B. N. A.)
5 vols. Physician's Leisure Hour Series.
Journal Medical Research, Vol. 15, No. 3.
Journal Medical Research, Vol. 16, No. 1.
Two reprints—25 numbers of journals, various.
Deutsche Zeitschrift für Chirurgie, Vols. 74-79.
Willard—Artificial Anaesthesia and Anaesthetics.
Otis—Diseases of the Male Urethra.
Wood—Nervous Syphilis.
Flint—Text-book of Human Physiology.
Thomas—Diseases of Women.
Annals of Surgery, Vol. 5.
Noyes—Diseases of the Eye.
Byford—Manual of Gynecology.
Kirke's Handbook of Physiology.
Brewer—Text-book of Surgery.
Sutton—Tumours, Innocent and Malignant.
Koenig—Lehrbuch der Allgemeinen Chirurgie.
American Medical Directory for 1906.
Four numbers of journals, various.
Cunningham—Text-Book of Anatomy.

Donated by Dr W. W. Keen:

Wm. Harvey—Prelections Anatomie Universalis. (This is a reproduction of Harvey's Original Notes.)
Hutchinson—Illustrations of Clinical Surgery.

Donated by Dr G. W. Crile:

Cathcart—Similiarity of Tumours.

Donated by Cleveland Medical Journal:

500 numbers of journals, various.
Wallian, S. S.—Rhythmotherapy.
Wathen, J. R.—Normal Histology.
Announcement College Phys. and Surg., Ontario.
Transactions Luzerne Co. Med. Soc., Vol. 14, 1906.
Yarborough, C. C.—Practical Urinalysis.
Annual Report Surg. Gen. M. H. S. & P. H., for 1906.
University of Toronto, Faculty of Med. Calendar, 1906-07.
Supplement to the 55th annual report of the Register General of Births, Deaths and Marriages in England, 1897.
Clinic for the treatment of communicable pulmonary diseases, Public Health Dept., N. Y., 1906.
Report Surgeon General of Army. 1904.
Transactions Maine Med. Assoc., Part 1, 1904.
Transactions American Dermatological Assoc., 1905.

Donated by Dr W. H. Weir:

250 Reprints, various.

Donated by Dr B. L. Millikin:

Archives of Otology, Vols. 8 to 22 bound.

Donated by Dr E. P. Carter:

McCrudden—Uric Acid.
Transactions College of Physicians, Philadelphia, 1902.
MacDonald—Abnormal Man.
Koplik—Diseases of Infancy and Childhood.
Annual Report of the Smithsonian Institution, 1903 and 1904.
Hare, H. A.—Practice of Medicine.

Donated by Surgeon General U. S. A.:

Annual Report of the Public Health and Marine Hospital Service for 1906.

Donated by Dr G. W. Crile:

Johns Hopkins Hospital Reports, Cancer of Prostate.
Fourth Pan-American Medical Congress.

Donated by Dr E. F. Cushing:

100 Pamphlets, various.

Donated by Dr J. C. Warren:

Bulletins 3 and 4, Report of research work, the division of Surgery, Harvard Medical School.

Donated by Dr Maris Gibson:

Transactions Luzerne Medical Society, Vol. 14, 1906.

Donated by C. Perry Fisher, Esq.:

An account of the Library of the College of Physicians of Philadelphia.
Annual Report of the Library Committee.
Transactions of the College of Physcians, Vol. 28, 1906.
Proceedings Philadelphia Co. Medical Society, Vols. 10, 12 to 16.
Transactions Pathological Society of Philadelphia, Vols. 6, 7, 8, 9, 16, 17.
Transactions of The College of Physicians of Philadelphia, Vols. 1 and 7 to 22 inclusive.
Quarterly Summary of the Transactions of the College of Physicians of Philadelphia, Vol. 1, 1842; Vol. 2, 1846 to 1849; Vol. 3, 1849 to 1850; Vol. 4, 1864 to 1870.

Donated by Dr W. G. Stern:

7 Reprints, various.

Donated by Dr Hunter Robb:

1800 Reprints, various.
Journal American Medical Association, Vols. 46 and 47.
New York Medical Journal, Vols. 83 and 84.
American Medicine, Vol. 11.
Cleveland Medical Journal, Vol. 5.
Ohio State Medical Journal, Vols. 1 and 2.
American Journal Medical Sciences,, Vols. 131 and 132.
Bulletin of the Lying-In Hospital, 5 numbers. (New York.)
Annals of Gynecology and Pediatry, Vols. 16, 17, 18, 19.

Donated by Dr Ed. Lauder:

Archives of Ophthalmology, Vols. 27 to 34.
Ophthalmic Record, Vols. 9 to 15.
100 Numbers of Journals, various.
75 Reprints, various.

Donated by Dr Guy Hinsdale:

Transactions American Climatological Assoc., Vol. 22, 1906.

Donated by Dr F. P. Henry, Philadelphia:

Memoir of Dr Wm. S. Forbes.

Donated by Dr F. C. Herrick:

7 Reprints.

Donated by Dr. J. J. Thomas:

2 Reprints.

Donated by Dr G. W. Moorehouse:

3 Reprints.

Doated by Dr A. R. Baker:

Reprint, Migraine. 325 Reprints, various.
Transactions American Academy Ophthalmology and Oto-Laryngology, Vol. 11, 1906.
A Perimeter (for the Museum), formerly the property of Dr Nodine.

Donated by Dr G. Hudson-Makuen:

3 Reprints.

Donated by Dr E. W. Taylor, Boston, Mass.:

Vols. 1 and 2. Department of Neurology, Harvard Medical School.

Donated by Dr R. R. Ross, Buffalo, N. Y.:

Transactions American Hospital Association, Vol. 8, 1906.

Donated by Dr D. H. Beckwith:

Transactions American Institute of Homeopathy, Vol. 66, 1906.
Transactions American Public Health Assoc., 9th Annual Meeting.

Donated by Dr W. E. Bruner:

Gould's Biographic Clinics, Vols. 4 and 5.

Donated by Dr Geo. D. Hersey:

Transactions Rhode Island Med. Society, Vol. 7, 1906.

Donated by United States Census Office:

Mortality Statistics.

Donated by Dr S. W. Kelley:

Physician's Leisure Hour Series (In the year 1800).

Donated by Dr W. Sohier Bryant:

3 Reprints.

Donated by Dr D. H. Beckwith:

The Sanitarian, Vols. 8 and 11.
Blodgett—Climatology of the United States.
Journal American Medical Association, Vols. 1 and 2.
Gall's Works, Vols. 1, 2, 5, 6.
Millard—Consumption.
Marcet—Chronic alcoholic intoxication.
Taylor—The movement cure.
Graham—Lectures on human life.
Dunglison—Elements of hygiene.
Lallemand—Spermatorrhea.
Pulford—Rheumatism, Sciatica, etc.
Pattison—On cancer.
Fox—Eczema.
Meyhoffer—Diseases of organs of respiration.
Wright—Headaches.
Weir Mitchell—Fat and Blood.
Moorman—Mineral waters of the U. S. and Canada.
Cohen—Inhalation.
Beard—Hay fever.
Cooke—Antiseptic medication.
Tanner—Diseases of infancy and childhood.

Donated by Dr D. K. White:

Hugh Munro—Surgery (1800).

Donated by Dr W. C. Phillips:

Transaction Am. Laryngol., Rhinol. and Otol. Soc., Vol. 12, 1906.

Donated by Dr A. Jacobi:

Therapeutics of Infancy and Childhood 1903.

Donated by Dr E. S. McKee, Cincinnati:

6 Reprints.

Donated by Dr Dudley P. Allen:

184 Reprints, various.

Donated by Mrs. Prentiss Baldwin:

3 cases of old instruments.

Donated by Dr Gustav C. E. Weber:

9 Portraits famous German Physicians and Surgeons. (Framed.)

Donated by Mrs I. N. Himes:

Framed Portrait of the late Dr I. N. Himes.

Through the kindness of Dr W. H. Whitslar, the Library is now receiving 4 Dental Journals regularly, viz: Dental Cosmos; The Dentists Magazine; The Dental Review, and Items of Interest.

New Journals which have been added to the files:

Journal of Physiology.
Wiener Klinische Wochenschrift.
Zeitschrift für Hygiene und Infektionskrankheiten.
Archives of Otology.
Archives of Ophthalmology.

Through the influence of Dr J. M. Ingersoll the Library is also receiving regularly the Annals of Otology, Rhinology and Laryngology and the Laryngoscope.

Examinations of the Ohio State Board of Medical Registration and Examination, June 10, 11 and 12, 1907

PRACTICE AND PATHOLOGY

1. What are the blood findings in pernicious anemia? Lymphatic leukemia? 2. What is the pathology of atrophic cirrhosis of the liver? 3. Make the differential diagnosis between ulcer and carcinoma of the stomach. 4. State the pathology and urinary findings in acute hemorrhagic nephritis. 5. Enumerate four cardinal symptoms and give the pathology of exophthalmic goiter. 6. What conditions cause tinnitus aurium? 7. Give pathology of typhoid fever. 8. What are the terminations of an inflammation? 9. What is the difference between septicemia and sapremia? Give treatment for septicemia. 10. Diagnose and give treatment for herpes zoster.

MATERIA MEDICA AND THERAPEUTICS (ECLECTIC)

1. Give the physiologic and therapeutic action of arsenic. 2. Give common name, use and specific indications for baptisia. 3. Give common name, use and specific indications for eupatorium perfoliatum. 4. What are the specific indications for gelsemium? What would be the effect of an overdose? 5. Name some diseases in which lobelia is especially useful. 6. What are the therapeutic properties of quinin, and when would you give it and in what doses? 7. Give the source and some uses of salicylic acid. 8. What is the official name and what are the specific indications for wild yam? 9. From what plant is specific phytolacca obtained and what are its indications? 10. Name four soporifics and give doses.

MATERIA MEDICA AND THERAPEUTICS (REGULAR)

1. What is diastase; for what purpose and how is it employed? 2. Give some indications for enteroclysis; state how it should be used and the precautions that should be observed? 3. State briefly the principles underlying serum therapy. 4. State in what respect the following prescription is wrong:

℞

Strychninae sulphatis ..... gr. 2
Potassii iodidi ..... dr. 2
Elixiris cascarae q. s. ad. fl..... oz. 8
M. et sig. One teaspoonful to be taken after meals.

5. What remedy for internal use will you suggest for overcoming the alkalinity of urine in cystitis; state how it should be given? 6. Outline the proper treatment for ophthalmia neonatorum. 7. What nitrites are used therapeutically; what especial indication do they fulfill; name the preparations used and manner of giving them? 8. What symptoms would an over or lethal dose of codein produce? 9. Give the physiologic action of camphor; give some indications for it; state how it should be administered. 10. Describe the effect produced by prolonged use of the bromides.

MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC)

1. Define and classify materia medica. 2. Define drug pathogenesy. 3. Define primary and secondary symptoms of drugs. 4. Define comparative materia medica and give an example. 5. What are the most important symptoms from which to select the similimu? 6. When would you prescribe opium as a palliative, and when as a curative remedy? Give symptoms calling for each. 7. Name three well-proven remedies and give six characteristic indications for each. 8. Give briefly the symptomatology of some single remedy, making your own selection. 9. Differentiate briefly three cough remedies. 10. Give the leading characteristics of apis mellifica.

CHEMISTRY

1. Name the chief abnormal constituents of urine which are of diagnostic significance. 2. Name the principal constituents of bile 3. Show by equation how nitric acid is formed by the action of sulphuric acid on potassium nitrate. 4. What is the chemical relation between animals and plants? 5. Give the properties and uses of KNO_3. 6. What elements are fluid at ordinary temperatures? 7. What is the difference between organic and inorganic bodies? 8. What is valence? 9. Explain the meaning of the following: ic, ous, hypo, per, ate and ite. 10. Give the properties and uses of HNO_3.

SURGERY

1. Define surgical anatomy and give two illustrations. 2. What is tetanus? What treament do you suggest for it? 3. What is the value of Röntgen ray in surgical diagnosis? 4. Of what value is blood examination in surgical diagnosis; give something of its scope. 5. Give cause and treatment of postoperative phlebitis. 6. Classify ulcers; give treatment for an ulcer with indolent, flabby granulations. 7. Define abscess; what is the danger when incising an abscess about the inner aspect of the elbow? 8. Classify fractures; give symptoms of fracture of base of skull. 9. Define acute synovitis and give treatment. 10. Name two surgical diseases of the ear and give the treatment of one of them.

OBSTETRICS

1. Explain briefly the means by which passage of nutritive substances from mother to fetus is effected during intrauterine life. 2. Describe the mechanism by which hemorrhage after labor is prevented. 3. Why does the head so much more frequently undergo flexion than extension during passage through the birth canal in head presentations? 4. What procedure would you follow in the latter part of the second stage of labor to prevent laceration of the perineum? 5. In what period of fetal life is the amnion developed; describe its structure and relation to the fetus? 6. Where may the anterior shoulder usually be found in an L. O. A., upon palpating the abdomen at term? 7. Describe Hegar's sign and the physiologic changes upon which it depends; what is its value and when is it available in making a diagnosis of pregnancy? 8. What signs and symptoms would suggest imminent death of the fetus during labor? 9. What causes the presenting part to rotate after it has reached the floor of the

pelvis? 10. The breech is presenting; labor has been on some hours with no advancement; examination now shows that engagement has not taken place; both thighs of the fetus are flexed upon the abdomen and the legs are extended upon the thighs; the soft parts are well dilated; what shall be done?

ANATOMY

1. Describe briefly the structures of the eyeball. 2. What is the popliteal space? 3. What structures would be severed in amputation of the thigh at its middle third? 4. What are the coverings of a femoral hernia? 5. Describe human blood. 6. Name the ductless glands. 7. What organs are contained in the right hypochondriac space? 8. Describe the prostate gland and give its anatomic relations. 9. Describe the great omentum. 10. Name the divisions of the temporal bone.

PHYSIOLOGY

1. What is the difference in structure and function between animal and vegetable cells? 2. Name the elementary tissues. Classify and describe one. 3. What is osmosis, and its varieties? 4. How are epithelial tissues classified? Describe one. 5. Describe physiology of muscle at rest and in action. 6. What is nerve reflex? 7. Describe the knee-jerk. What is its physiologic significance? 8. What is the office of the medulla? 9. What is the office of the carbohydrates as food? 10. How is fat formed and used in the body?

PHYSICAL DIAGNOSIS

1. State pathologic significance of the absence of knee jerk. 2. State pathologic significance of an exaggerated knee jerk. 3. Explain diagnostic significance of the various kinds of tremor. 4. State diagnostic significance of exaggerated resonance of the lungs. 5. Explain diagnostic meaning of decreased resonance in percussion of the chest. 6. What pathologic significance has Cheyne-Stokes breathing? 7. State diagnostic significance of increased vocal fremitus, and of absent vocal fremitus. 8. Limit the anatomic areas over which percussion and auscultation are to be performed to determine the condition of the apices of the lungs. 9. State origin and diagnostic significance of the various casts in the urine. 10. State what pathologic significance may be suggested by the specific gravity of the urine.

DISEASES OF WOMEN

1. State the symptoms of mastitis. 2. Give the differential diagnosis of carcinoma and myoma of the uterus. 3. What are the most frequent causes of salpingitis, and of sterility? 4. What is the treatment for chronic endometritis? 5. Diagnose tubal pregnancy from pysosalpinx.

DISEASES OF CHILDREN

1. Define two diseases peculiar to children, giving a few of the characteristic symptoms. 2. When would you use antitoxin in diphtheria? 3. When should the child be weaned both in health and disease? 4. Give general treatment of acute enterocolitis. 5. Name some characteristic symptoms of tuberculosis in children and give general treatment.

Medical News

Dr Zellar has moved his family to St. Paris.

Dr Strayer, of Mingo, has moved to Steubenville.

George F. Cook and wife, of Oxford, will tour Europe this summer.

T. R. Thomas, of Lima, is in Chicago taking a post-graduate course.

C. E. Bugher, of Paulding, is touring the western part of the country.

T. B. Wright, of Circleville, has returned home after a trip to Banning. Cal.

D. W. Peppard and wife, of Mansfield, expect to spend the summer abroad.

H. H. Noble, of this city, has gone east to take a post-graduate course.

Ralph Nauss, of the Panama Islands, is in Greenville visiting his parents.

A. A. Lavigne, of this city, has taken a cottage at Saranac Lake for the summer.

A. L. Smedley, of Hamilton, has returned from a six weeks trip to New Mexico.

J. D. Lower, of Coshocton, has gone to Baltimore to take a post-graduate course.

A. S. Beckwith, formerly located at Milford Center, has decided to locate at McArthur.

P. U. Onell, of Ironton, has completed a post-graduate course in Chicago and is at home again.

Peter Donnelly, of Toledo, has returned from Europe where he has visited the London Hospitals.

R. N. Lee, of Mt. Blanchard, has completed a post-graduate course at New York and is at home again.

D. H. Richardson, of Celina, has completed a post-graduate course at Cincinnati, and is at home again.

J. M. Firmin, of Findlay, is at home again after completing a post-graduate course at New York City.

Dr McTaggart, of Bryan, who was quite badly injured in an automobile accident, is recovering from his injuries.

S. B. Lightner, of Sabine, who has been ill for some time past, has gone to French Lick Springs, Ind., to recuperate.

Mrs. Harding, Librarian at the Cleveland Medical Library, left late in June for England, accompanied by her small son.

Charles F. Daniels, of Columbus, is to spend three months in Canal Dover, looking after the practice of Dr Wagner, who is traveling abroad.

A. E. Brosier, of Santoy, who has been in poor health, has just returned from Texas and New Mexico. He formerly resided at Morganville.

J. F. Dolina and wife, of Dayton, sailed from Montreal on June 26 for a summer abroad. They expect to tour the British Isles and then visit in Germany.

R. M. Hughley, of Washington C. H., a specialist, who has been visiting Wilmington the past two years, has, in conjunction with other citizens of that place, incorporated a hospital in the city.

The thirty-ninth regular meeting of the Lake County Medical Society was held at 8 P. M., on Monday, June 3, 1907, at the Parmly Hotel, Painesville: Program: (1) Reports and Presentation of Cases; (2) Miscellaneous business; (3) Address on "Pneumonia," Dr H. J. Lee, Cleveland.

A board of officers will be convened to meet at the Bureau of Public Health and Marine-Hospital Service, 3 B Street S.E., Washington, D. C., Monday, July 15, 1907, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine-Hospital Service. For further information, or for invitation to appear before the board of examiners, address Surgeon-General, Public Health and Marine-Hospital Service, Washington, D. C.

The presidency of Parke, Davis & Co., left vacant by the death of Theodore D. Buhl, has been filled by the advancement of Vice-President and Secretary Frank G. Ryan—an announcement which will be greeted with pleasure by Mr. Ryan's numerous friends throughout the country. He left the faculty of the Philadelphia College of Pharmacy in the spring of 1900 to become Chief Pharmacist of Parke, Davis & Co. At the end of three years he had made himself so valuable in the councils of the house that he was elected to membership on the Board of Directors. A year and a half later he was given the important post of secretary. Six months later still he was elevated to the vice-presidency. And now, after barely another year, he is given the very highest position within the gift of the house, and, one might say without fear of contradiction, the greatest and the most responsible position yet created in the drug trade of the country.

The ninth annual meeting of the Ohio Valley Medical Association will be held at Evansville, Ind., November 13 and 14, under the presidency of Dr Brooks F. Beebe of Cincinnati, Ohio. The two day sessions will be devoted to the scientific work of the Association and the evening session of November 13 will be a popular assembly held in one of the largest auditoriums of the city and to which the laity will be most cordially invited. At this session Dr Beebe will deliver his retiring address and Dr Curran Pope of Louisville, Ky., one of Kentucky's orators, will deliver the annual oration, his theme being "The Age in Which We Live." All members who wish to read papers at this meeting, and who have not already sent in their names and titles of papers, are urged to send same to the Secretary at their earliest convenience, for the programme will be made up early for distribution. Benj. L. W. Floyd, Sec'y, Evansville, Ind.

On the evening of June 25th the Medical Library Association departed from the usual order of entertainment and gave a musical which was deserving of a larger audience than the inclemency of the weather permitted. An interesting program was rendered on the violin by Claudia Zollars Page, the eleven year old daughter of Dr and Mrs. H. M. Page, of Warren, O. She undoubtedly has exceptional talent and has profited by splendid training which her artistic rendition proves. Her manner is very pleasing and each number on the program was enthusiastically received by the appreciative audience. Mrs. Page accompanied her daughter on the piano, which added interest to the occasion. Miss Claudia's future as an artist is already accepted. It is the opinion of the Entertainment Committee that such occasional departures from the routine of medical discussion would be exceedingly refreshing and diverting to the profession.

Deaths

R. M. Bainter, formerly of Cambridge, but who has been for the past six years at Latonia, Florida, for the benefit of his health, died there recently.

The Cleveland Medical Journal

Vol VI August, 1907 No 8

A Summary of 1000 Cases of Appendicitis with Observations on Diagnosis

BY GEORGE CRILE, M. D., Cleveland, O.

Little need be said on the diagnosis of typical, uncomplicated cases of appendicitis, as intelligent patients frequently make their own diagnosis, and parents sometimes correctly diagnose the disease in their children. It is one thing to diagnose appendicitis after the complication of peritonitis has appeared, and quite another and vastly more important one to all concerned to diagnose the disease at its beginning. There are still those who withhold a diagnosis until muscular rigidity, distension, and accelerated pulse appear, until the patient has passed from the safe to the dangerous period. Then, too, there are still those who reach an early diagnosis but pursue the fatuous course of delaying operation until it becomes obvious that the direction of the disease is towards disaster, and if the inevitable follows they moralize, and regret, and err again.

An acute abdominal pain, a rise in temperature, and tenderness over the appendix with associated referred pain are sufficient evidence to warrant incision. If, in addition, there is nausea and vomiting, rising leucocytosis, a history of previous similar attacks, and no evidence of other acute disease, the diagnosis may be considered certain. I know of no other class of surgical cases excepting crushed limbs or boils that are so seldom wrongly diagnosed as typical acute appendicitis. I will, therefore, limit my comments to the atypical cases. These may be roughly grouped as follows:

(a) *Acute infection of the appendix with minimum local but maximum systemic manifestations, early complicated by bacteriemia.* In these there are usually early and perhaps

repeated chills, high temperature, early delirium, rapid pulse, negative abdomen, blood culture positive, and usually death from bacteriemia. In some of these cases the role of the appendix is discovered only at autopsy, in others the diagnosis is reached largely by inference and exclusion. These cases seem to me to be analogous to bacteriemia arising from infection of the tonsils.

These cases not only are not benefited by operation but the natural resistence of the patient is reduced and the chance of recovery diminished. I have observed no recovery in patients having bacteriemia. The importance of correct diagnosis in these cases, then, lies in the avoidance of operation. Maximum constitutional with minimum local symptoms foreshadow a fatal termination, and vice versa.

(b) *Appendicitis appearing in the course of other diseases or local disturbances.* The greatest number in this group occur in the course of gastroenteritis. The latter usually occurs in children following some obvious gross error in diet. The vomiting, diarrhea, and intestinal pain are typical, but after several days the peritoneal, in contradistinction to the mucosal (if I may so use the word), symptoms predominate, and, as it were, the disease in the midst of the abdominal confusion has stolen in while no one was looking. I have not yet seen such a case diagnosed before the stage of peritonitis.

A smaller though somewhat analogous group—four cases—occurred after abdominal section, two following myomectomy; one, excision of ovarian tumor; and one, anchoring the kidney. In none was there a history of previous attack, and the appendix was not disturbed during the operation. Since these experiences, we have in all favorable cases of laparotomy for other purposes excised the appendix when it came within the field of operation.

Not altogether unlike the foregoing were three cases occurring in the course of the passage of right renal and ureteral calculi. These cases began definitely as renal colic, and as in the gastrointestinal and the postoperative groups, the attack began without immediate observation. One occurred in a physician who had had a number of attacks of renal colic and who identified rather promptly the alien symptoms.

Then, too, the occasional attack originating at the menstrual period may at first be readily overlooked. My tables show several such attacks.

In one instance I observed acute appendicitis develop in the course of a protracted passage of gall stones, and once in a

recurring attack of cholecystitis which was a sequel of a drained acute suppurative gall bladder.

In the course of pregnancy a number have been observed but were more readily diagnosed than the preceding.

I have seen the symptoms of acute appendicitis overshadowed by salpingitis or pyosalpinx. In these instances the appendix was deep in the pelvis.

An unusual case was that of an acute appendicitis occurring on the fourth day after a typical ruptured tubal pregnancy.

Once I observed an acute appendicitis develop in a case of cancer of the cecum.

In four instances acute appendicitis was followed so quickly by intussusception that the appendix and its symptomatology were literally swallowed. These deserve separate consideration as a probable cause of certain cases of intussusception. One case occurred in the course of typhoid. One acute case was operated upon in the prodromal stage of smallpox. I will cite the example of a patient who bore the appropriate scar and gave the history of having had the appendix removed by a good surgeon of Portland, Oregon, only to be contradicted by typical, acute symptoms. At operation the hardened, acutely inflamed appendix was found lying within the lumen of the cecum and a small scar marked the position of the base. It was obviously an instance of inversion of the appendix into the lumen. At operation the cecum was opened and the inverted appendix was found dangling free in the bowel. It was removed and the pathologic examination showed the usual picture of acute appendicitis.

These groups of cases occurring in closely associated or allied diseases make up a dual clinical picture which is not at times easy to correctly interpret. I shall later discuss the basis on which the diagnosis in these instances is reached.

(c) *Altered anatomic relations of the appendix.* The position of the appendix may vary so greatly as to render diagnosis difficult. In the two instances of left sided appendicitis I was unable to make more than a probable diagnosis. In a case in which the appendix was in the hernial sac and an acute inflammation existed, there was the greatest difficulty in reaching a diagnosis. Indeed, in this instance there would be little chance for surgical error. One sees the appendix in almost any position, as said before, even on the left side. I have seen it a number of times across the median line of the pelvis, attached to the left ovary, the left tube, the fundus of the uterus, the bladder, fre-

quently in the right tube and ovary, the gall bladder, the stomach, to the left of the median line, above the umbilicus, resting upon the liver, attached to large ovarian tumors, displaced by retroperitoneal tumors, or attached by adhesions to an enlarged spleen. When, in addition to the anatomic displacement and adhesion, the inflammation of the appendix is limited to its distal end, as so frequently occurs, it may become impossible to make a differential diagnosis. For example, I have seen instances in which it was impossible to make a differential diagnosis between cholecystitis and appendicitis, when at operation it was found that the tip of the appendix was attached to the gall bladder. The outer wall of the gall bladder itself was inflamed and all the parts edematous, the omentum helping to make up a mass, so that one had to deal here with local pain, tenderness, and a mass moving with respiration. In such a case it would be impossible to make out clearly the differential diagnosis.

Then, too, in cases of the kidney, I have seen an inflammation of the tip of the appendix cause a tender mass, made up of appendix, colon and omentum, all of which became edematous, resting upon the thickened peritoneum overlying the kidney, so that the kidney and entire mass moved as one tumor on bimanual examination. In this case one could make more readily a differential diagnosis than in the case of the gall bladder, since by using the X-ray one could exclude stone, by repeatedly examining the urine one could exclude pyelitis, and the acuteness of the symptoms would exclude tuberculosis. Septic infarction of the kidney, one could exclude fairly well on the ground of less tenderness in infarction and of the smaller mass. Malignant growths of course run a longer course. When the appendix rests upon the ureter, I have seen very misleading symptoms. For example, the pain extending down to the bladder, into the groin, into the testicle or down the thigh. Apparently the appendicitis excited the arc of reflexes characteristic of the ureter. It is very difficult to distinguish between a stone in the ureter with infection, and acute appendicitis with the appendix resting upon the ureter. Unless too urgent, the diagnosis here may be made out by catheterization of the ureters, by the X-ray, and repeated examinations of the urine. We have not failed in any of these cases to make a correct diagnosis.

Likewise, when the appendix is attached to the ovaries, tubes, or uterus and becomes inflamed, a certain group of symptoms due to the disturbance of these organs may cloud the picture

of appendicitis. However, I will discuss later the method of reaching a differential diagnosis in these instances.

(d) *Cases first seen when late complications are present.* This group of cases presents many difficulties in diagnosis. For example, during the past year I saw an instance of multiple abscesses of the liver caused by appendicitis, although the appendix itself had recovered. It was only by the history of the case, which had been almost forgotten by the patient, that a diagnosis was made. There had been abdominal pain and vomiting, general abdominal tenderness, localizing on the right side, subsiding in several days, a few days later chills, septic temperature, recurring day by day, then jaundice and enlargement of the liver. A definite diagnosis of pyelophlebitis with multiple hepatic abscesses and an unfavorable prognosis was readily made. These cases are quite analogous to the septic pneumonia following mastoid and middle ear infections. I have seen no less than four such cases. Were one to see the case at its very onset the chance for error would be very small, but seeing it after the onset of the infection of the liver, and particularly when the appendix itself had recovered, and the patient was too apathetic to give a clear history, the origin of the infection might easily be overlooked.

Precisely the same difficulty may be encountered in the cases in which a retroperitoneal lymphadenitis has been produced by acute appendicitis, the appendix in the meantime recovering. This is analogous to the adenitis in the groin following an abrasion of the toe. Unless carefully searched for, the origin of the infection might easily be overlooked.

In two instances the patient was first seen after considerable illness and the symptoms all related to the bladder. Pus was freely discharging. In each, however, there was an unmistakable history of an attack of appendicitis followed by local peritonitis and abscess, which in turn penetrated the bladder; and in one instance the tip of the appendix was discharged through the urethra.

Then, again, the cases of "walking" appendicitis—a peculiarly mild form, characterized by marked exudation, forming a large mass in the iliac fossa, the patient never having been laid up although suffering some dull pain and a certain amount of inconvenience, finally interfering with the action of the psoas muscle, causing lameness. The first consultation with a physician might be at his office, wholly on account of lameness. It is not easy to establish the lesion in some of these cases, although the

history will nearly always show evidence of earlier attacks of appendicitis.

An unsual case of the slow formation of a large mass from the local reaction to a mild infection was that of a patient who had run what his medical advisor supposed was an atypical course of typhoid. I considered it a mistaken diagnosis of typhoid and looked upon it as one of those cases of massive tumor formation following a mild infection. She was sent to the hospital and a very large mass in the right iliac fossa was exposed and explored. Exploring the mass in all directions I found no pus. I, therefore, concluded that I was entirely mistaken and regarded it as a case of inflamed carcinoma of the cecum. The patient was a widow with a large family of children, and we had arranged for the care of the children but did not in the meantime tell her of her presumably fatal disease. After about ten days there was a discharge of pus, the tumor rapidly disappeared and she has been well since. This was an instance of massive exudation without breaking down into pus until after a long period of time.

Another late complication existed in the case of a man complaining of pain in the popliteal space. There was here a large swelling, edema, and tenderness, as indeed there was along the entire thigh and groin. An incision was made in the popliteal space and a large quantity of pus discharged, then another incision was made below Poupart's ligament, and finally one in the loin just below the kidney. It was then found that it was a case of appendicitis, pus having burrowed through the sheath of the psoas muscle and dissected along the deeper plane finally pointing in the popliteal space.

Another instance of a difficult diagnosis in a late complication was that of a patient in whom the abscess had burrowed up through the diaphragm into the pleura, through the lung, penetrating a bronchus, and the pus was coughed up. After about six months' illness she recovered.

Cases of late complications entirely overshadowing the original symptoms of the disease might be multiplied.

(e) *Chronic appendicitis.* There are certain cases of chronic appendicitis that have a wholly different symptomatology from the acute. Indeed, their diagnosis is made upon a different line of evidence. We now refer to the cases in which there is no tenderness in the right iliac fossa, no repeated colicky pains, or little or no pain at any time. The principal manifestations may be only reflex disturbances of the gastrointestinal tract, such as

indigestion, coated tongue, flatulency, diarrhea, or constipation, none of which respond to medical measures. There may be an occasional sharp, darting pain in the epigastrium or even the left side, pain or feeling of heaviness in the region of the stomach after meals, sometimes a feeling of accumulation of gas in the cecum with perhaps a little peristaltic pain. These cases are difficult to diagnosticate, and, indeed, the diagnosis is scarcely possible except by the process of exclusion in addition to certain other symptoms of which I will speak later. It is my opinion that there are many more cases of chronic appendicitis causing reflex disturbances of the abdominal viscera than we have been aware of hitherto.

After having cursorily passed over the problems of the diagnosis of appendicitis by pointing out the groups of cases that may present especial difficulties, I should add the reverse picture, viz., other diseases mistaken for appendicitis. For example, a central pneumonia of the right lung may mimic appendicitis. Indeed, all but one of the symptoms of pneumonia, viz., increased respiratory rate, may at the outset be referred to the abdomen. I have seen six of these cases and fortunately escaped mistakes. The onset is sudden, consisting of acute abdominal pain which may be quite general and differ little in its location from the onset of many cases of appendicitis. The abdomen may be somewhat distended, the bowels constipated, and the entire abdomen tender, the right side more than the left. There is also rise in temperature and increased leucocytosis. This would make a reasonable picture of acute appendicitis. Then, too, sometimes in acute, fulminating appendicitis there may be changes in the respiratory rate as well. However, the important differential signs or symptoms are that the tenderness is quite diffuse and in the wall of the abdomen, elicited by picking up the skin between the thumb and finger; that there is lacking sharp muscular reflex and referred pain on pressure over the appendix; and that there is an increased respiratory rate. The local symptoms in the chest may not appear for several days. The onset of typhoid fever sometimes closely resembles an acute appendicitis, viz., the abdominal pain, right sided tenderness, and temperature, but here one has the advantage of the low leucocytosis and the history of the onset. Renal calculi, cholelithiasis, perforation of the duodenum or of the intestines elsewhere, ureteral calculus, pelvic peritonitis, all require great care, as before suggested, in the differential diagnosis, and many of these acute diseases have been mistaken for appendicitis.

In the discussion of the diagnosis of appendicitis I wish to call special attention to one group of symptoms which to me is of more value than any other and which has assisted in determining the differential diagnosis in many cases. This is the Head zone of referred pain and hyperesthesia. The more I have studied this diagnostic arc the more confidence I place in it. The appendix itself when diseased does not as a rule cause local pain, but the pain is referred to a distant portion of the abdomen. This is explained as follows: the nerve supply of the appendix has a connection with definite segments of the spinal cord. This is in close relation with the origin of the sensory nerves arising from these segments. The impulses set up by injury or disease of the appendix pass up to and spread over the centers of the sensory nerve supply, causing radiation of pain over part or all of the abdomen. When the appendix is actively inflamed hyperesthesia may be found in a zone bounded by the middle line, Poupart's ligament, and the crest of the ilium. Sometimes, in addition to this zone of hyperesthesia, there may be another zone extending toward the back on the same horizontal plane of the body. I have never observed in a supposed case of acute appendicitis this hyperesthesia and not been able to verify appendicitis at operation. Furthermore, in any case of appendicitis, be it acute, subacute, or chronic, if one carefully presses upon the appendix and asks the patient whether he feels the pain elsewhere there will in all probability be felt a pain that the patient will positively identify as the same pain from which he has been suffering. That is to say, if the patient has had a chronic pain in the upper abdomen, perhaps following meals or at irregular intervals, and has never thought of the appendix, if one presses upon the appendix and the same pain is reproduced and the patient so identifies it, the diagnosis in virtually established, and the excision of the appendix has in every instance in my experience removed all symptoms that could be reproduced by such pressure. While the hyperesthesia and referred pain when properly interpreted and carefully elicited may not be infallible, they have served in more instances than any other single symptom in controlling a diagnosis. This is especially true when one keeps in mind the Head zone of pain distribution in the gall bladder and ducts, in diseases of the kidney and ureter, and in diseases of the pelvis. All these various organs have a definite zone of reflexes and they do not overlap each other. In the differential diagnosis, in all the various groups of cases referred to above, I depend more upon the Head zone symptom than any other single one.

Vaginal Cesarean Section with Report of a Case

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Among the newer operations in obstetrics is vaginal Cesarean section. How popular it will become time only can tell, but that it can be done in certain cases with most satisfactory results experience has already shown.

Before reporting my case, some account of the operation may be of advantage. For this I shall draw largely from the writings of others and especially so from those of Duhrssen the originator of the operation.

Vaginal Cesarean section is an outgrowth from the multiple incisions of the cervix advised by Duhrssen and was first described by him in 1895. His first operation was not performed till 1896, though in the interval Acconci delivered a child by such an operation in a case of carcinoma of the cervix, at the same time removing the uterus. The operation has gradually been taken up by a few operators until a year ago Duhrssen was able to collect reports of 376 operations.

Duhrssen claims that the operation is indicated "when in case of an imperfectly dilated cervix which will not permit of dilatation by gentler means, the life of the mother or the child is brought into danger." This may be when pathologic changes in the lower uterine segment prevent dilatation, as in carcinoma, or when pains have either failed to dilate the os or have been absent altogether. In the latter conditions eclampsia is the disease most likely to require interference. Occasionally heart disease and accidental separation of a normally implanted placenta may demand rapid delivery when the os is not dilated. Rarely, perhaps, a case of placenta prævia might be an indication if the cervix is long and rigid, a condition, however, not very likely to be seen when the placenta is in the lower uterine segment. In cases in which time is not an important factor slower methods of dilatation and delivery are to be chosen, granting, of course, that the cervix is obliterated or if not entirely so that it is soft and easily dilated. My experience with many cases of eclampsia and serious cases of albuminuria in which there were no convulsions leads me to believe that time is a most important element and that the uterus should be immediately emptied in all cases of eclampsia and in such cases of albuminuria as fail to respond to vigorous

Read before the Cleveland Academy of Medicine, June 21, 1907

treatment and by such methods as the conditions indicate. In placenta prævia, however, when the hemorrhage can be controlled, time will rarely be so important that a slower method can not be more safely chosen.

Shock from operation is not referred to as being an indication for vaginal Cesarean section and yet I believe it should enter largely into our considerations. Those who have had much experience with manual dilatation of the os will agree with me that in cases in which toxemia is especially severe the patient is markedly affected by our efforts to dilate the cervix. In such cases when the heart must endure so great a strain because of the toxemia we should be careful not to add to its burdens by our efforts to relieve those already existing.

The question naturally arises what are the dangers in this operation? They have been stated as follows by Findlay, of Chicago, who advocates in its place abdominal Cesarean section, because it consumes less time, assures greater accuracy in surgical cleanliness, the abdominal incision is wholly under control, the patient can be made sterile if desired and the fetus can receive greater consideration. Few of these objections can not be overcome by a perfect technic and rarely would one, in such cases, desire to remove the ovaries or otherwise make the patient sterile. The strongest objection, however, is the following. He says, "Rupture of the uterus, in subsequent pregnancies, through the scar of a Cesarean section is not an uncommon accident, and it is apparent that since the large majority of ruptures of the uterus are in the lower segment, a scar at this point will more likely be disposed to rupture than one located in the fundus." Duhrssen answers this objection by the claim that danger of rupture following the vaginal operation is absent. He refers to 11 deliveries after vaginal Cesarean section, observed by different men, in all but one of which the labor was easy. In this one the same rigidity existed as led to the Cesarean section the first time but Bossi's dilators were used instead. These failed to overcome the rigidity and the child was delivered only after multiple incisions of the cervix.

The advocates of abdominal section in cases presenting the indications advanced for vaginal section must consider the following points:

1. Shock to the patient is much less in vaginal than abdominal section. 2. The mortality is much less. The maternal mortality of eclampsia ordinarily treated is 20 to 25%. According to

Duhrssen, Fry reports 78 cases of eclampsia treated by abdominal section with a mortality of 41%, while Veit reports one death in 33 cases of vaginal Cesarean section and Bumm one in 40 cases. Duhrssen reports two deaths in 13 cases but one of these was moribund with heart disease, dying as soon as the uterus was emptied, and the other was a tuberculous case with eclampsia, dying of tuberculous pneumonia four weeks later. Of the 376 cases of vaginal Cesarean section already refered to, 48 died, a mortality of 12.7%. The operations were not all for eclampsia but included a few cases in which the other indications given were present. It is not vaginal Cesarean section which kills the patient but the condition that makes emptying the uterus a necessity. Advocates of abdominal section may claim the same, to a certain extent, but it will be difficult to prove it to be so generally the case when we consider Fry's report and the fact that shock is so much greater than in the vaginal operation. Until further experience shall prove otherwise we must accept the evidence in favor of vaginal Cesarean section.

The operation is performed as follows: After the usual preparations of the patient have been made the cervix is grasped with a tenaculum and a long ligature of silk is tied into each side of the cervix to take the place of the tenacula. The anterior vaginal wall is separated from the cervix by a transverse incision at their point of junction. With a blunt instrument or the finger the bladder is separated from the uterus up to the junction of the upper and lower uterine segments. The anterior lip of the cervix is then incised through the anterior surface and the incision carried up through the lower segment. If the child is premature and small this will probably be sufficient. If it is large the posterior lip should also be incised. The child is delivered by forceps or version. Duhrssen says forceps if the head is engaged, otherwise always version. The placenta is removed and the incisions are sewed up with catgut. Duhrssen also says as the first step in a primipara the perineum should be incised enough to permit the introduction of a large sized hand. Other operators have opposed this. Those who have had repeated experience with the operation can deliver the child in five minutes, while sewing up the incisions requires another 20 or 30 minutes.

It has been my lot to see many cases of eclampsia, in a large percent of which it has been necessary to dilate the cervix to deliver. In several cases it has been especially noticeable that forcible dilatation caused a marked effect on the patient's heart.

For this reason as well as because many cases are very difficult to dilate some other method than manual dilatation has seemed very desirable. Bossi's dilator has never appealed to me and I have never used or owned one. For the past year or so I have seriously considered vaginal Cesarean section in those cases in which the cervix was not obliterated, especially in primipara, and when it is thick and rigid. In several I have hesitated about using it and I think today may have been over cautious, though in no case did I fail to manually dilate and deliver, saving the mother in each instance.

The case I report tonight however seemed to present all the indications for vaginal Cesarean section, which was chosen, but not till after an attempt was made to dilate manually, which proved to be time thrown away.

The patient, aged 26, was a primipara who had never had an illness after childhood when she had scarlet fever. About the second month of her pregnancy she thought she had "kidney trouble" but on consulting her physician was assured she did not. As time passed the whole body began to be dropsical, which finally became so extensive that she could get around only with great difficulty. During this time no urine was examined because of the illness of her physician, no one else being consulted. At the end of the seventh month she had two convulsions about an hour apart but only general medical treatment was adopted. Another occurred 48 hours later and the following day the case passed into the hands of Dr Burdick who sent her to St. Ann's Maternity and asked me to see her with him. At this time the urine was nearly solid albumen. The pulse was about 160 and very weak, being counted with the greatest difficulty. Shortly previous to my seeing her she had a "sinking spell" as it was called, the radial pulse being almost imperceptible. The general outlook of the case was unpromising but the indication was most positive to empty the uterus at once with the least shock to the patient. Examination showed that the cervix was long, thick and very rigid, barely admitting one finger. Preparations were made for vaginal Cesarean section but an attempt was first made to dilate. After the use of Goodell's dilators only one finger could be forced into the os and manual dilatation was abandoned. The anterior and posterior lips of the cervix were incised and with Tarnier's forceps a living child was delivered. Haste in the delivery was not attempted because of a natural fear of tearing further than I had incised. The occiput was posterior and

required rotation before delivery. Including the time wasted in attempting to dilate I was 20 minutes delivering the child. This time could be much shortened in a second operation because of a better knowledge of the technic and especially by doing away with the first delay, that is the attempt to dilate and by doing a version. The suturing of the cervix was slower than it would be in a second operation, lasting about 30 minutes including two sutures in the perineum. It may be said that the time spent was nearly as long as manual dilatation. I have done the operation enough times to feel sure that in this case it would have taken an hour and a half to manually dilate and rarely, in an average case, can it be done in less than an hour and to this must be added the time of repair of lacerations. The great gain was the saving the patient the shock of manual dilatation, which in her condition it seemed would certainly be fatal. Hemorrhage was not severe and was a good thing. The loss of blood was offset with saline solution subcutaneously.

A detailed report of the subsequent treatment of the case is not necessary, being the same as I have used with such good success in the past and advised in previous papers. Her highest temperature was 101. It was normal at the end of five days. For 48 hours the urine was nearly solid with albumen and contained many casts. This rapidly subsided after a few days treatment and today there is but little albumen and only an occasional cast. She was unconscious for several days but has made a splendid recovery.

Examination of the cervix at the end of three and a half weeks shows the general appearance to be normal, the union of the incisions being apparently perfect, and the scar being scarcely noticeable.

The baby lived for ten days in an incubator. The infant mortality is so high in eclampsia that the saving of this seven months' child was almost more than was reasonable to expect.

In conclusion I would sum up the indications for vaginal Cesarean section as follows:

1. In certain cases of eclampsia when the cervix is not obliterated and is very rigid and unyielding.

2. In cases of heart disease under the same condition when rapid delivery is demanded.

3. In all cases of separation of a normally implanted placenta.

4. It may be rarely indicated in placenta prævia when the hemorrhage is profuse and the cervix is not obliterated and is very rigid, a condition not frequent in placenta previa.

5. In the above conditions it is preferable to abdominal section because, while it is very nearly as quickly performed, it does not cause so much shock, is not so objectionable to friends of the patient and is not so likely to result in rupture of the uterus in subsequent pregnancies.

1917 East 90th St.

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Some Surgical Lesions of the Central Nervous System

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(Conclusion from July Number.)

PALLIATIVE SURGICAL PROCEDURES FOR INTRACRANIAL LESIONS

Through the contributions of recent years the profession of this country have been familiarized with the results that may be anticipated after operations designed to relieve the effects of increased intracranial pressure, whether the result of tumors or traumatism. Although the operation and its results had been known to some more than a generation ago, it was not until the present century that the operation was regarded as an established procedure. Prior to 1875 Annandale had noted the relief his patient received from opening the skull, but credit is ascribed to Horsley for the first careful description of the operation as a palliative procedure by Broca, who gave us the term "cerebral decompression," by which the operation is now generally known. My personal experience with the procedure covers a period of almost four years and includes a number of cases reported with Dr Spiller a year ago. It is not my purpose here to treat the subject at all exhaustively for to do so would necessitate much repetition, but I desire to lay stress upon a few features which seem worthy of comment and analysis.

There is danger of the palliative procedure being too often adopted when an attempt should be made to expose and remove the tumor. It is, comparatively speaking, so easy of execution

and so free from danger that it is a great temptation to those who may not be familiar with the precise methods of localization, or with the technic of cerebral operation, to make no attempt to search for and remove the growth. I am not at all in accord with those who argue that palliative operations are preferable to radical operations because the former are less dangerous in the hands of inexperienced surgeons.

Such views should they become more or less universal would give the surgical therapy of brain tumors a set back, from which it would take many years to recover. The increasing number of tumors successfully localized and successfully removed warrant our taking a more hopeful view of this field of surgery. A very favorite argument against the so-called radical operation is based on the autopsy findings. We are presented with innumerable statistics of the postmortem records of fatal cases of brain tumor and we are told that but seven percent are operable, 80% inoperable, and the remainder doubtful. No one questions the accuracy of this statement, as based upon the conditions present when the tumors had attained such proportions as to be directly responsible for the patient's death. Surgeons today are more interested in living pathology than they are in the pathology of the autopsy room and they have determined to ascertain for themselves how frequently the lesion will be found favorable for operative intervention. "Postmortem records can never teach what the careful study of the living tumor exposed in an operation can demonstrate, since in almost every case the former condition is practically what we may term inoperable." (Horsley). How much are surgeons beholden to the pathologist for their knowledge of the operability of tumors of the stomach? The development of this field of surgical endeavor has been the result rather of their own observations upon the living subject. In some respects tumors of the brain offer brighter prospects than tumors of the stomach in that a considerable proportion of the former are benign and practically all of the latter are malignant.

I realize fully that there are certain limitations: that the growth may by its size and infiltrating character be inoperable and that some tumors are so situated as to be inaccessible or as to render localization impossible. Generally speaking in every case in which the growth has been localized the operator should proceed to uncover the lesion and not until then should he exercise his discretion as to whether a radical operation should be attempted or abandoned. With the general effects of cerebral decom-

pression we are all very familiar; the relief of headache, of vomiting, of optic nuritis, the expressions of increased intracranial tension, are most gratifying to the surgeon and welcome to the patient.

On more than one occasion Horsley has called attention to a still more striking result of operation. In a few cases he has been led to believe that the tumor had undergone retrogression. In one instance he found at the operation a tumor so large that its extirpation was not deemed advisable. The patient died two and a half years later of an accidental infection, and at the postmortem examination it was found that the tumor had disappeared leaving a cicatricial and degeneration cyst. The experience of Horsley, which includes not one but three cases in which a tumor was seen at the operation, is quite unique. It is difficult to explain this phenomenon with the knowledge we now have of the life history of tumors involving other organs. I have had several cases in which the entire or almost entire disappearance of the symptoms would suggest at least that the results may have been due to the atrophy of the tumor. One of the most striking of these was a young man upon whom I operated in 1903. The symptoms pointed very strongly to a cerebellar tumor; intense agonizing headache, choked disc and optic neuritis, so much vertigo and ataxia that he could scarcely walk or even stand without support. A suboccipital craniectomy failed to reveal any tumor. Within a week of the operation the headache, vertigo and ataxia had disappeared; his vision was soon restored and when I last saw him a few months ago he was the picture of health and had resumed his occupation as a machinst. On another occasion of the same year (1903) I operated upon a somewhat similar case except that there was marked optic atrophy and no chance of restoring the patient's vision. This patient has remained free from any subjective symptoms and with the other excites our curiosity as to the probable nature of the lesion.

The first of these two cases is of further interest and I venture to speak of it to correct a misapprehension which has arisen from an earlier writing with reference to the technic of operations upon the posterior cerebral fossa. In this particular case I removed deliberately one third of one cerebellar hemisphere to facilitate exploration and in reporting the case suggested the propriety of this step as entailing less risk than the bruising or possible laceration of the structures, which would come from more or less forcible retraction of the parts necessary for exposure

of the depths of the fossa. In Victor Horsley's address before the British Medical Association speaking of the possible compensatory power of the cerebrum and cerebellum he says "It has assumed a particular importance in the present subject because of Professor Frazier's proposal to extirpate the lateral lobe of the cerebellum in preference to pushing it aside by displacement for the purpose of reaching deep seated tumors." Horsley recognizes the fact that the cerebellum may be considerably bruised during the manipulations necessary for removal of large tumors, and disapproves of extirpation as a measure of convenience. While not wishing to take exception to his criticism, in justice to myself I may say that I did not propose extirpating an entire lateral lobe, as implied in Horsley's quotation, but only a portion of it, and I have not the least doubt that even this may be justly regarded as an unnecessary mutilation. This is, however, a matter rather of personal than general import. I do, however, want to present the results in the case in evidence of the compensatory power of the cerebellum. So far as it was possible to determine neither was there any disturbance of function immediately after the operation, nor has there been any since, even though at least one third of a cerebellar hemisphere was removed. Unlike the cerebrum, which "is an assemblage of different nerve centres, in fact we might almost say organs" (Horsley), the cerebellum is a more homogenous structure. It is therefore not improbable that one part of one cerebellar hemisphere may serve as a substitute for another, so that the removal of a portion will be followed by no evident arrest or disturbance of function. Writing on the function of the cerebellum, Dana says, "Its structure is relatively simple, but its functions are elusive and in a measure *easily substituted.*"

The radical operation for tumors of the brain should be limited to those which are well encapsulated or sharply defined. When dealing with a malignant tumor of the infiltrating type no attempt should be made to remove even a portion of it since unsuccessful attempts have in my experience been followed by more rapid growth. The experience of others, evidently, is quite different. Thus Ballance writes "the partial removal of a malignant tumor of another part of the body, say the mamma, is followed by continued or even more rapid growth, but the partial removal of a malignant tumor of the brain appears in some instances to have a contrary effect. According to Ballance this happens only in some instances and I believe in the majority of

cases the behavior of a tumor of the brain after an ineffectual attempt will not be found so unlike its behavior in other organs and tissues. I operated upon a young girl several months ago. The tumor was found and from its appearance I thought at first it was enucleable, but after removing a portion of it I changed my mind and abandoned the attempt. From the day of the operation the tumor grew with amazing rapidity. The wound healed

FIGURE V. CEREBRAL DECOMPRESSION.
An unusually rapidly growing tumor forcing its way out between edges of wound. Photograph taken one month after operation.

throughout, but within two weeks the tumor had grown so rapidly that it forced the wound open. At the present time, some three months after the operation, there is a tumor mass protruding from the wound as large as a child's head. (Fig. 5. This illustration was taken not long after the operation.) The vomiting and choked disc have been relieved, but curiously enough the headache has persisted more or less. With so much relief of tension and pressure on the dura, we would rather expect the headache to

have been entirely relieved. The patient is somewhat weaker but in other respects there has been no change in her condition.

RESPIRATORY FAILURE WITH CEREBELLAR TUMORS

In operations upon patients with cranial tumors, particularly of the cerebellum, one must take into consideration a risk which may materially affect the mortality. I am referring to those sudden seizures characterized by loss of consciousness and especially by absolute arrest of the respiratory function. No preventive measures need be considered: the seizure comes on without warning and almost inevitably terminates fatally. In my limited experience I have seen four instances of this terminal phase. In one of these, fortunately, just before the patient was to be brought to the clinic, the respiration suddenly ceased and though artificial respiration was practiced the patient survived but a few moments. In the second case, a patient of Dr John H. Musser's, the symptoms were suggestive of brain tumor although the precise seat had not been determined; I was called to see her shortly after the onset of an attack, to discuss the propriety of adopting some measure to relieve intracranial tension. Having to leave the city at once, one of my colleagues was called in and tapped the lateral ventricle. This procedure apparently had no effect upon the condition and the patient died, but only after life had been sustained by artificial respiration for more than 19 hours. The third case was that of a young man from Salt Lake City, who came to the University Hospital to consult Dr Wm. G. Spiller. The symptoms pointed to a tumor of the cerebellum, but were uncertain as to the right or left hemisphere; an exploratory suboccipital craniectomy on the right side failed to disclose the lesion; eight days after the operation, from the effects of which he had fully recovered, the patient was seized with an attack of respiratory failure which proved fatal in about 12 hours. The last of the series was a young man, who presented unmistakable signs of a cerebellar tumor. Here again there was some doubt as to the side on which the tumor was situated, but immediate operation was decided upon, to save the patient's eyesight and to relieve the headache and vomiting. He was on the operating table and about a dram of ether had been given, when it was reported that the patient had stopped breathing. Curiously enough I was speaking upon this very subject to the students in my clinic when the alarm was sounded. The patient was brough to the clinic at once and artificial respiration instituted with a Fells-O'Dwyer

apparatus. For almost 12 hours life was sustained by this means, meanwhile the pulse, surface temperature and color were such as to give little cause for alarm. From the record which was taken at intervals until he died it will be seen that there were great variations in the blood pressure (Fig. 6). These were due in

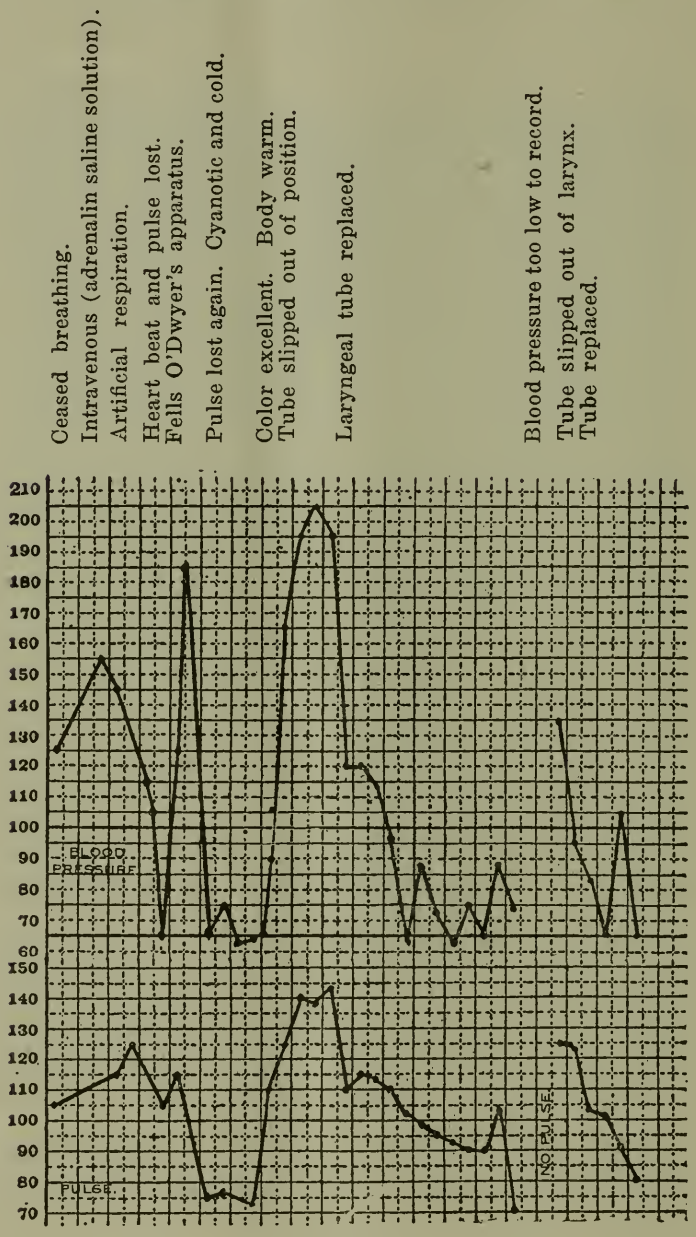

FIGURE VI.

Observations on the pulse and blood pressure covering a period of 12 hours, during which respiration was maintained entirely by Fells O'Dwyer apparatus

part to the use of saline and adrenalin solutions, but chiefly to the cyanosis; whenever the laryngeal tube became displaced, the patient became cyanosed and the blood pressure rapidly rose. As soon as the tube was readjusted the pressure would fall again.

Until we have more definite knowledge as to the precise cause

of these respiratory disturbances, the treatment will be purely hypothetical. The sudden onset is rather suggestive of hemorrhage, but hemorrhage would be likely to affect both the respiratory and cardiac centres. If due to a bulbar anemia we would rather expect to find that there had been previous signs of circulatory disturbance. This, however, is not the case; there are no premonitory symptoms, and the attack comes on without provocation at least from external causes. The respiratory function is abolished while the circulation, the pulse and blood pressure, may continue for hours apparently undisturbed.

CEREBRAL CONTUSION

The indications for cerebral decompression as applied to the relief of brain tumor are quite clear. Its usefulness, however, in certain intracranial injuries is open to question. The propriety of exploring cases of suspected fracture of the cranial vault, of epidural, or if they are recognizable, of subdural or pial hemorrhages, is no longer questioned. But are we justified in operating on those cases commonly known as cerebral contusion in which the lesion is usually quite diffuse and is represented by hyperemia, with more or less intense edema, with or without pial hemorrhages and fracture of the vault or base of the skull? As illustrating the type of case to which I refer the following will serve as an example.

A man sixty years of age in going down stairs falls and strikes the back of his head; he becomes immediately unconscious; when arriving at the hospital his temperature is 95° F., pulse 64, and respirations 20. He is still unconscious, his respirations are deep but not stertorous. He has no bleeding from the ears or nose and no subconjunctival ecchymosis. Pupils are unequal, the right being of normal size and the left contracted. All four extremities are without motion or sensation, at times they appear very slightly resistant to movement, but at others they are flaccid. There is no increase in the tendon reflexes in the upper extremities, although in the lower there is slightly increased knee-jerk and a distinct Babinski on both sides. There is incontinence of feces and urine.

The characteristic symptoms were the persistent unconsciousness, the incontinence of urine and feces and the subsequent rapid rise in temperature. The pressure of the fluid in the subarachnoid space was 250 mm. of water and the blood pressure was 180, both moderately high. There were no distinctly localizing phenomena,

except perhaps some irregularity of the pupils, but the pupillary manifestations of intracranial lesions are so irregular as to be of little value.

The operation consisted in a bilateral temporal craniectomy with the establishment of free dural openings. When the dura was opened the brain bulged considerably, the pial veins were engorged, there were evidences of small pial hemorrhages, and the brain appeared edematous. *There was very little visible pulsation either before or after the dura was opened.* The operation

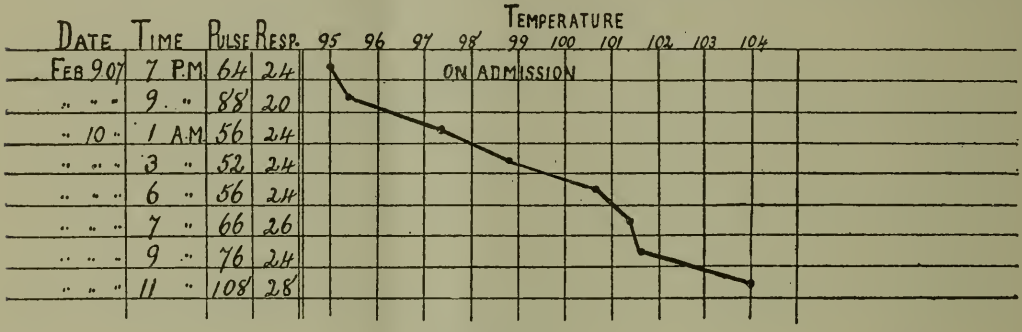

FIGURE VII.

Showing characteristic rise of temperature in fatal case of cerebral contusion.

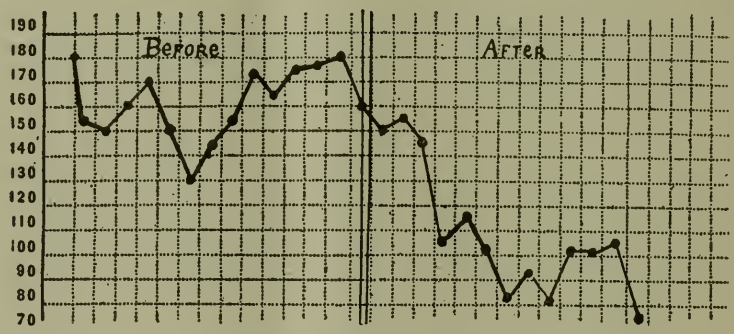

FIGURE VIII.

Blood pressure record before and after cerebral decompression for cerebral contusion.

was ineffectual to say the least, perhaps distinctly harmful, though I doubt whether the termination was influenced one way or the other. The blood pressure fell to a point below normal when the dura was opened, the pulse became more rapid, the temperature rapidly rose (Figs. 7 and 8) and the patient died.

The indication for a decompressive operation in these cases is seemingly clear. If the intracerebral pressure was the sole cause of the serious consequences of cerebral contusion the operation would afford relief in a considerable number of cases. Cannon taught us that the edema was the result of internal nutritive changes in the tissues and the impairment of cellular nutrition is the cause of the inhibition or destruction of function quite inde-

pendently of the blood pressure. If the nutritive changes in the cells are the cause rather than the consequence of the edema what can be accomplished by cerebral decompression? While the edema may not be due to any vascular disturbance, primarily it may, by increasing intracerebral pressure, eventually interfere with the cerebral circulation and in so doing further embarrass the nutrition of the cells, already disturbed. A decompressive operation may to some extent relieve the embarrassed circulation. At all events we find some cases, as for example the following, benefited by operation: thus a boy falls a distance of 30 to 40 feet and sustains a serious injury to his head. He is comatose, the reflexes are exaggerated, but there are no areas of paralysis or anesthesia, Hartwell, regarding the condition as one of beginning cerebral edema, decides to operate; he uncovers the temporal region, finds the dura dark in color, tense and without pulsation. When the dura is opened cerebrospinal fluid spurts out as though it were under pressure. The pulsation of the brain returns, the blood vessels become more prominent and the character of the blood changes from venous to arterial. In three or four hours the patient recovers consciousness. The case is regarded as one of rapidly developing cerebral edema with inevitably fatal tendencies. This is a type of the favorable cases, the one above of the unfavorable. Might not the latter have recovered without operation and might not the former have had equally good or even better chances had he been left alone? If operation is indicated in some and not in others upon what basis is the distinction made? These are some of the practical questions of this problem and further experience alone will take them out of the realm of uncertainty.

Criminal Abortion

BY R. H. GRUBE, M. D., Xenia, O.

For 70 years there has been a law in the statute books of Ohio making it a felony to produce an abortion unless it was done to preserve the woman's life. This law is as follows:— "Whoever, with intent to procure a miscarriage of any woman, prescribes, or administers to her any medicine, drug, or substance whatever, or, with like intent, uses any instrument or means whatever, unless such miscarriage is necessary to save her life

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Read before the joint meeting of the State and Auxiliary Committees on Public Policy and Legislation, at Columbus, May 22, 1907

or is advised by two physicians to be necessary for that purpose, shall, if the woman miscarries or dies, in consequence thereof, be imprisoned in the penitentiary not more than seven years nor less than one year."

This reads like a good law but court decisions have rendered it utterly impotent and it is next to impossible to obtain a conviction under it. It has been decided, first: That the woman is an accomplice in the crime and this renders her testimony useless; second the statute specifies that if the woman dies the operator is guilty of abortion and cannot be prosecuted for manslaughter, which makes it impossible to use the woman's dying declaration in the prosecution. We have had the assistance of able legal talent which was cheerfully rendered free of charge, in reconstructing this statute so as to avoid the above difficulties and render the law effective. We hope that this auxiliary committee will exert its influence to secure the passage of this amended law not because it is likely to receive opposition but because if it fails it will be from lack of interest.

The law, amended as proposed will read as follows: "Whoever, with intent to procure a miscarriage of any woman, prescribes or administers to her any medicine, drug, or substance whatever, or, with like intent, uses any instrument or means whatever, unless such miscarriage is necessary to preserve her life, or is advised, in good faith, by two physicians to be necessary for that purpose, if the woman miscarries in consequence thereof, is guilty of abortion and shall be imprisoned in the pentitentiary not more than seven years, nor less than one year; if she dies in consequence thereof, is guilty of manslaughter and shall be punished accordingly. Provided, that the provisions of Section 6804 of the Revised Statutes shall not apply to prosecution under this Section, nor shall testimony given by such woman in a prosecution under this Section be used against her in any prosecution, against her as a principal, or for aiding, abetting, or procuring the commission of such offense."

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

The Official Organ of the Cleveland Academy of Medicine

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

The Academy and the Journal

It is with a great deal of pleasure and satisfaction that the announcement is made to the readers of this JOURNAL that henceforth THE CLEVELAND MEDICAL JOURNAL will act as the official organ of the Academy of Medicine of Cleveland. For some time past it has been evident that a closer bond should exist between the two, since their interests are identical and both strive to represent the Medical Profession of this community. The plan contemplates the publication, either in full or abstract, of all papers read before the Academy or its component sections, and each member of the Academy is to receive the JOURNAL. This arrangement need not interfere with the publication in other Journals of a paper read before the Academy if the author so desires. Papers are written upon special subjects which are destined for journals devoted to such specialties, and in such instances the CLEVELAND MEDICAL JOURNAL will insert simply an abstract. The advisability of printing in full or abstracting papers is to be left in the hands of a committee representing both the Academy and the JOURNAL.

The City Hospital Investigation

The condition of affairs at the City Hospital has for years been in a most unsatisfactory condition and a thorough investigation of the evils known to exist and an attempt to rectify them will prove most welcome to the profession of Cleveland. It is very gratifying in this connection to note that no criticism has been made of the Visiting Staff, who have unselfishly devoted their time and energy to the fulfillment of the duties of their position. Medicine is an altruistic profession and the world takes it as a matter of course that physicians will do work of this sort without financial recompense, true they derive a certain amount of reputation from occupying such a position and an opportunity for clinical experience, but there is probably not a single member of the staff who could not greatly improve his worldy position by devoting the time, spent in fulfilling this obligation, to the more profitable pursuit of private practice. Perhaps this gratuitous service on the part of the profession is the best safeguard that good men will fill these positions, if a salary were paid the politicians would at once become solicitous that the men selected should be the most satisfactory obtainable, but in all probability their idea of "satisfactory" would not necessarily imply medical ability but rather political influence.

No one, more than the average medical man, is better aware of the unsatisfactory conditions at the City Hospital. In many cases patients who require hospital treatment will absolutely refuse to go to this Hospital. One has to accept with a good deal of reservation the statements of Hospital patients, especially charity cases, who nearly always demand the most, while accustomed in their daily life to the least; yet the reports of poor food, insufficient nursing, the existence of vermin, etc., are so frequent that one cannot help but believe that there is a good deal of truth to them.

There is a good deal of skepticism as to whether a City Hospital can ever be satisfactorily run on a plan which permits politics to enter into the management. There are, however, city hospitals in this country which are splendidly run and are a credit to the communities to which they belong; as an example the Boston City Hospital deserves mention. This hospital, we understand, is run by a board of trustees and politics have nothing to do with the management; then, too, the powers that be are really the visiting staff, who, of all concerned, are the most competent to

advise and the most interested in maintaining a high standard of efficiency.

What the actual results of the present investigation will be remains to be seen, but the politicians must understand that in humanitarian work of this sort they should keep their hands off and leave the control largely in the hands of the profession, which represents a class of men, the majority of whom are, we believe, stimulated by lofty motives rather than with a desire to graft and to exploit such institutions for their own personal ends. Whatever other civic measures must be held up for want of funds, the Hospital should at all times receive sufficient provision to keep it in first class condition. As an economic measure alone, it will furnish the greatest returns, especially if adequate facilities exist for the treatment of infectious diseases and the care and restoration to health of tuberculous patients.

The position of Superintendent is a most important one, demanding a high grade of executive ability in institutional management. It seems to use that this point should be considered and that the Superintendent should have had considerable experience in this line of work.

As regards the former Superintendent, Mr. Emde, it is but justice to say that, from the statements of the Staff, he has always shown a commendable spirit of liberality in supplying the medical and surgical needs of the Institution, and by a regular attendance at the Staff meetings he endeavored to keep himself fully informed as to their views and wants.

The new Superintendent of Nurses, Miss Carr, a graduate of Johns Hopkins Hospital, comes highly recommended and will take charge of the training school in the near future. No doubt a great improvement in the nursing and the instruction to the nurses will result.

The Cedar Point Meeting

The opportunity for a pleasant outing, combined with the advantage of a first rate medical meeting, will be available during this month when the Ohio State Medical Society meets at Cedar Point, August 28, 29 and 30. The program is most attractive and the chance to hear a number of prominent men should stimulate the profession to make a banner record for attendance. As a profession we are just awaking to our responsibilities which have to do most vitally with the welfare of the community and it is only

by organized effort that we can persuade the political powers that we cannot be ignored. The activity of the various committees of the State Society is most praiseworthy and it is the duty of every member who realizes his responsibility to the community to give his aid and support to the organization, which is planning and carrying out the reforms which are of such vital interest to the good of the people at large. Let everyone, therefore, who can possibly do so drop his work for a few days' rest and change of air, he may be assured that he will resume his duties with far more vim and interest for this brief respite from his daily cares.

Ohio State Pediatric Society

The program for the fifteenth annual meeting at Cedar Point, Wednesday, August 28, 1907, will be found elsewhere in this issue of the JOURNAL. The officers are to be congratulated on the makeup of the program, and the titles of the papers, and the names of the contributors assure a most instructive and interesting meeting. The meeting takes place on the first day of the meeting of the Ohio State Medical Society, so that a good attendance is expected. The opportunity of hearing Dr A. Jacobi, of New York, who will deliver an address following the banquet in the evening, should not be missed. In all probability this will be the last meeting of the Pediatric Society as a separate organization, as the majority of the members favor its becoming a section of the Ohio State Medical Society, a plan that certainly appears commendable. We most strongly urge the profession to lend their support to this Society by attending its meeting, the Society has done excellent work in the past and we are sure that those present at the meeting will be well repaid for their time.

Lay Prescriptions

A registered assistant pharmacist, a graduate of the Cleveland School of Pharmacy of this year, filled the following combination of drugs as a prescription, unsigned by a physician, upon the patient's order in an East End drug store a few days since:

Plese give me 5 cents worth.

Cloroform.
Ioadine.
Acknite.

Comment is unnecessary.

Department of Therapeutics

CONDUCTED BY J. B. McGEE. M. D.

Tuberculin: In the *American Journal of the Medical Sciences* for June, E. L. Trudeau states that in tuberculosis, the more chronic type of the disease, the better adapted to tuberculin treatment the case seemed to him, and that most cases of a chronic type, whether incipient or of long standing and advanced, provided the nutrition is good and no serious complications exist, will derive more or less benefit from tuberculin immunization. The benefit derived may be from mere temporary improvement in all the symptoms, to apparent restoration to health, with disappearance of bacilli often lasting for years. All acute cases, early cases in which the onset is acute, or advanced cases with active symptoms, should be treated by the rest and open air method only. If they progress to cure by this method it is unnecessary to use tuberculin, and indeed he has formed the impression that it is better not to use it during the periods of activity or at least until a partial arrest in the activity of the infection manifests itself. When the physician becomes satisfied that the patient is no longer making improvement while treated by the open air method, and that the case has become one of chronic phthisis, if the general nutrition is good, tuberculin injections offer a prospect of further improvement. All acute cases, cases with long continued increasing fever, cases with very extensive lesions and that are very feeble and badly nourished, cases with intestinal and other complications and patients who show pronounced and uncontrollable intolerance to tuberculin, are manifestly unsuited for treatment. That tuberculin is not the vaunted and long-looked-for specific, it was first thought to be, has been amply demonstrated by the bitter experience of the past. We have learned the dangers of tuberculin treatment and its evident limitations. He is inclined to think that the production of tuberculin immunity by the mild clinical method will favorably influence chronic tuberculosis, prolonging life and in many cases will abort a commencing infection or extinguish the smouldering fires of a chronic infection.

Calcium Chlorid: In the *British Medical Journal* for May 18, J. Douglas Cree writes as to the use of calcium salts in the treatment of certain types of pneumonia, believing that the withholding of them in certain types of cases may be quite as important as their administration in others. He reports a case of the hemorrhagic type in which calcium was given; the patient was in a serious condition, when on the fourth day the drugs and brandy which she had been taking were stopped, and she was given 20 grains of calcium chlorid in water by the mouth. This was retained and she was given 10 grains every hour for twelve hours and then every four hours. The condition next day showed considerable improvement, the greatest improvement being in the sputum, the quantity of which was reduced by about one-half. It was thicker and the bright hemorrhagic appearance had become a dull rusty tint, the disease then running the usual course to recovery. He considers that the benefit of the calcium chlorid was due to its action on the blood; serous

hemorrhage was lessened and the reduced temperature and improved blood tension were due, in his opinion, to the same cause. Beyond these effects, the calcium salt had no influence upon the course of the pneumonia itself, which ran on to its natural termination. He believes that at present our treatment of pneumonia must remain symptomatic. In its symptomatic treatment, calcium is a valuable drug in the hemorrhagic type of cases; but in the dry type he would fear to use it, as death is here more often from toxemia, and he would prefer citrate of sodium or potassium, owing to their power of increasing the alkalinity as well as the fluidity of the blood. In the type of cases in which heart failure is feared, unless there is a special call for calcium, he considers other drugs of more value.

Acid Carbolic: Geo. N. Acker, in the *Archives of Pediatrics* for May, reports a case of carbolic acid poisoning following an injection of a solution of the acid into the bowel. The injection was used for seat worms, the father having read in a family medical work that an injection of a mild solution of the acid was of aid in this disease. In another case the acid was used by mistake for boric which had been ordered. Recovery followed in both cases and in both the toxic action followed quickly, absorption being prompt. In the discussion, a similar case was reported, the poisoning following an injection of a solution of the acid for tape worm. The editor of this department saw a case in which toxic symptoms followed the use of a solution of mercuric chlorid into the rectum for the relief of seat worms. The remedy was advised in a popular household medical work and quite an amount of a one to 2,000 solution was retained. The child, 10 years of age, was cold, with a weak pulse and severe tenesmus, but no salivation. Recovery followed.

Headache: The *Therapeutic Gazette* for May emphasizes the fact as essential for the successful care of patients suffering from headache, that it is purely a symptom and never a disease and the administration of the very large number of pain-relieving drugs, which are of little value in the majority of cases, should be replaced as soon as possible by other measures intended to remove the underlying cause of the attack. Headaches of the migrain type depend in the majority of instances upon some form of autointoxication. In some instances this is gouty or lithemic in its nature when, of course, the salicylates are advantageous; in others it depends upon the absorption of toxic materials from the intestines and upon hepatic inactivity, not only in the secretion of bile but in the carrying out of that most important function of the liver, the destruction of poisons which may be absorbed from the alimentary canal; such cases usually require some intestinal antiseptic, such as the sulphocarbolate of sodium or guaiacol, the hurrying of digestion by the use of pancreatin or takadiastase, and the use of small doses of calomel or podophyllin to stimulate hepatic and duodenal secretion. In many cases the attack is best arrested by the administration of a brisk saline purge followed by the use of one of the coal-tar products, associated with the bromids and caffein, or if the circulation is excited or the arterial tension high, by substituting gelsemium for the caffein.

Occasionally neuralgic or migrain headaches are dependent upon carious teeth or nasal disease; in this connection, violent pain in the face and forehead coming on in the course of influenza and acute colds should always be considered as being possibly due to infection of an antrum, relief being obtained only when the involved antrum is properly drained. The headaches due to eyestrain are to be relieved by proper glasses, while in arteriosclerotic cases the use of the iodids and nitroglycerin to diminish tension is essential.

Pilocarpin: In the *Medical Record* for May 25, John J. Reid states that it does not seem to be generally recognized that pilocarpin has a specific action in different forms of pruritis. He has known it used in pruritis coincident with jaundice with happy results. He has used it in pruritis vulvæ, pruritis associated with skin disease, and general pruritis due to no assignable cause. Pruritis seems to be a neurosis in some way allied to neuralgia and, like that disease, is periodic and may occur without any immediate cause. In pruritis vulvæ he has found the same benefit from pilocarpin in cases occurring with and without diabetes. The ordinary dose is one-quarter grain to be given only when the itching manifests itself, and is not to be repeated unless the itching returns. It is well to begin with one-eighth grain, inasmuch as some patients are very susceptible to the drug. He also notes a case of a medical student at the time of his final examination, who without the pilocarpin would have found it impossible to either think or write. In this case 1-120 grain of atropin with the pilocarpin prevented the sweating. In all the cases in which he used it, the drug was given by the month. In the same Journal for June 15, William J. Robinson calls attention to the use of pilocarpin as an adjuvant in the treatment of syphilis. He has had such remarkable results in certain cases which refused to be further influenced by the mercurials and iodids that he considers it his duty to bring it to the notice of the profession. In certain cases which seem to be supersaturated with mercury and yet no longer respond to the drug, no matter in what form given, the symptoms failing to be influenced or even becoming aggravated, pilocarpin will in a few doses often produce gratifying results. Its effect on stomatitis and salivation is remarkable, he asserts that nothing will stop mercurial salivation so effectually as will small doses—say two milligrams of pilocarpin; it is much more efficient than atropin or potassium chlorate. It acts as an eliminant and so cures the trouble by removing the cause. Cutaneous syphilides which will obstinately resist the persistent administration of mercury will disappear rapidly if pilocarpin be administered for several days, either in addition to the mercury or even if it be discontinued, provided of course the patient has had sufficient mercurial treatment. The pilocarpin appears to influence the system so that much smaller doses of mercury are efficient. He lays down the following propositions: (1) Pilocarpin is a most remarkable glandular eliminant, and glandular elimination is one of the most important factors in the successful treatment of syphilis. (2) Pilocarpin is of value in all secondary manifestations of the disease. (3) There are many cases which become intolerant to the further use of mercury. Discontinuing the mercury and giving pilocarpin in the interval

enables us to resume the former drug with excellent effect. (4) Pilocarpin should be prescribed alone, either in pills or solution, and given in doses of two to eight milligrams (1-32 to one-eighth grain) two to three times a day.

Sciatica: Archibald G. Hay, in the *Glasgow Medical Journal* for May, calls attention to the treatment of sciatica by means of saline injections. The treatment of sciatica by injection around or into the nerve is not new, and has shown at least as favorable results as other treatment. The large variety of drugs used for these injections leads to two conclusions; first, that the results of treatment have hitherto been ascribed to the action of the drug injected; second, that it is a matter of indifference what drug is used. In other words that the curative effect of the treatment is due to the fact that fluid is injected into or beside the nerve. The permanence of the cure in many cases negatives the explanation that it is due solely to the local anesthesia produced. His opinion is that the curative effect of the injection is due to its mechanical action on the lymphatic circulation of the nerve. As regards the saline, his opinion is that the action of saline injection in relieving sciatic pain is probably twofold. In the first place by diluting the lymph with which it mixes, it enables the latter to pass more easily through the obstructed trunks, and in the second place, by raising the pressure at the seat of injection it opens up these channels or possibly makes new ones between the nerve bundles. He prefers to inject just below the gluteal fold, as there is less danger of wounding the sciatic artery which crosses over the nerve just after it issues from the foramen, and so far he has not found it necessary to inject more than 10 cubic centimeters of sterile saline solution at a sitting. The injection itself is easy after a little practice, and practically painless. He takes a point in the gluteal fold midway between the great trochanter and the ischial tuberosity, and pressing deeply with the thumb feels the nerve as it lies upon the bone. He then injects 10 cubic centimeters of saline solution into the nerve, as the needle enters the nerve the leg is jerked sharply. After the injection the puncture is sealed with collodion and when this is dry the patient is told to walk about. Several injections may be needed for a cure, but the improvement after the first has so far been such that the patient willingly returns for treatment.

Osteomalacia: In the *Journal A. M. A.*, for March 2 (from the *Policlinico*), Bossi had occasion to treat a woman in the eighth month of pregnancy in an advanced stage of osteomalacia. He conceived the idea that possibly the vasoconstricting power of suprarenal extract might modify the circulation through the uterus and ovaries and through the bone-marrow. He therefore gave the patient an injection of 0.005 gram (about 1-12 grain) of a one to 1,000 solution of the suprarenal extract. It caused no disturbance, the pain was at once less intense and the patient was able to sleep that night. Seven injections were given in seven days, the improvement progressing rapidly, the bones being evidently in process of restitution, and the patient was clinically cured and entirely free from pain or other disturbances. He urges research on gravid

animals as to the influence on the bones of partial or total removal of the suprarenals. The results in this case were so prompt and so marvelous that hopes in regard to suprarenal treatment of osteomalacia are certainly justified.

Impetigo contagiosa: In the *New York Medical Journal* for June 8, Nathan T. Beers states that while no age is exempt, impetigo contagiosa is a disease of childhood, and although possible in any condition of health it usually occurs in the pale, poorly nourished little folks, whose resistance is lowered through lack of air and sunshine. Regarding seasons, late winter and early spring show the largest crops. The physician usually sees it in the stage of scab formation, but it is always discrete, never becoming confluent. It shows little tendency to itch and it is only when the scabs form that the child shows a tendency to disturb the lesions with the fingers or nails. The treatment is simple; a grain of calomel in broken doses, a saline to complete its action, and then some constitutional tonic to increase the general resistance. Externally the crusts are softened with olive oil, and removed with warm water and soap. The use then of an ointment of 10 grains of ammoniated mercury to the ounce, usually completes the cure.

Strychnin: Geo. F. Butler, in *Merck's Archives* for June, summarizes the actions of those drugs used to increase nervous action, and states that in strychnin we possess an agent of unquestioned power as an exciter of nervous action, and that the spinal cord is affected by it more than the brain. The drug is very useful in conditions of degeneration of the spinal cord, especially when of an anemic character. While of great value in all forms of paralysis, it should not be given in these conditions until from four to six weeks after the attack and then should be administered in small doses (grain 1-200 to grain 1-134) and cautiously increased to full tolerance. It is unquestionably the most valuable remedy we possess for all varieties of functional paralysis. Myelitis is often improved by strychnin after the failure of other remedies. In delirium tremens and in the treatment of chronic alcoholism strychnin nitrate alone or in conjunction with capsicin is the best remedy we have. Of the various salts of strychnin the nitrate is preferable to any of the others in the treatment of alcoholism. The hypophosphite is better as a reconstructive tonic, and the arsenate when vital incitation is indicated. The valerianate is advised in restoring tone in conditions of hypochondria, neurasthenia, spermatorrhea, and for the consequences of mental overwork. Atropin is another valuable drug in certain conditions of inaction, in the early stages of emotional melancholia, when there is marked cerebral anemia, its effects are most marked. Hydrastin resembles strychnin, but its influence is more slowly developed and more lasting. It stimulates the respiration and circulation, imparting tone and power to the heart, and influencing blood stasis like ergot. When the mucosæ are worn out by long-continued over-stimulation due to alcohol or condiments, it will do more than any other remedy to restore functional activity. The best effects of hydrastin are obtained by small doses long continued, from 1-67 to one-sixth grain, before each meal and at bedtime.

Cretinism: Louis Fischer, in the *Monthly Cyclopedia of Practical Medicine,* for May, states that instead of supplying the absent thyroid secretion and by this means regulating the internal glandular machinery, we find that by supplying the desiccated thyroid gland we stimulate to reactivity all glandular functions hitherto deemed passive. What at first appears to be a simple phenomenon turns out to be a very complex problem, for the solution of which we are indebted to the manifold teachings of Sajous. In no branch of therapeutics can so much progress be found as in the treatment of sporadic cretinism. To transform a human imbecile, backward mentally and also physically, into a normal being is something of which the physicians may be proud. One of the earliest symptoms met with in sporadic cretinism is constipation. This is chiefly due to muscular atony and also to the absence of intestinal secretions. This absence of secretion is evident because the stool is hard and dry, and usually of the scybalous type. As soon as the desiccated thyroid is given to a cretin the stool is softer and there is evidence of intestinal lubrication, due to the activity of the intestinal glands. Another favorable symptom is the restoration of the function of the sweat glands. He cautions concerning the toxic effect due to an over-dose of thyroid extract. The stimulus exerted by the thyroid extract on the vascular centers frequently causes flushing of the face and marked restlessness with rapid pulse rate. Five grains of the desiccated gland may be given in divided doses in one day, an equivalent of 1-16 of an average sheep's thyroid gland. Some cases will respond to half this dose while others may require more. The first evidence of too large dosage is evidenced by gastroenteric disturbance with vomiting and diarrhea and *fetor ex ore.* There may be abdominal pain and tenderness, besides very rapid loss of weight. Blood examination shows marked destruction of the red corpuscles. Some clinicians have prescribed iodin and the iodids as a substitute for the thyroid, but prolonged trial has proved them of no value.

Oxygen: Dr. C. B. Dennie, of Cleveland, writes as follows: Oxygen as successful therapeutic agent in many pathologic conditions is receivin , the attention of some of the ablest men in the profession, both at home and abroad. While its greatest field of usefulness is yet undetermined, the concensus of opinion seems to favor its use in incipient tuberculosis, shock and the affections of the lungs and air passages. Prof. Vanderpool Adriance, of New York, who has used it extensively in the bronchopneumonia of children in one of the Orphan Asylums, declares that its advantages are quite pronounced. Dumas, of Lyons, after a series of experiments in pneumonia, says that "the anxious look disappeared, cyanosis lessened, convulsive inspiration subsided, pulse became fuller and more regular and respirations decreased." Buck, of Boston, Mass., reports that most of his cases of incipient tuberculosis were not only improved by spray of oxygen through a tubular electrode, but many of the lesions were apparently cured—presumably encapsulated by fibrous tissue. There is no doubt of its benign influence preceding engorgement (consolidation) and resolution in pneumonia. The writer believes that the most satisfactory results from the use of oxygen are obtained in nervous shock and nearly all shock is of that character.

Muralt speaks highly of its use in constipation from atony of the bowels, its stimulating effect when applied locally through a rectal tube, exciting peristaltic action which produces free evacuations. Schmieden, of Bonn, in his treatment of tuberculosis by hyperemia, says that the artificial congestion produced by this method has been thoroughly tested and found very efficacious. He alludes to the Bier method of congestion by the compression bandage for tuberculous joints. The writer has had two occasions to test the compression bandage on tuberculous knees, in both of which there was marked improvement when instructions were strictly observed. The bandages were placed a short distance above the diseased joints, with sufficient constriction to promote congestion, but to carefully avoid any undue pressure that would produce blood stasis. If artificial hyperemia can accomplish good results in somatic tuberculosis by indirect means, how much more efficient may oxygen become when this natural factor of combustion goes directly to the parts involved. Of all intractable nervous diseases, sciatica has proved to be one of the least amenable to treatment, but recent experiments in Paris, Lyons and Bordeaux (says the *Bordeaux Medical Journal*) have shown that sciatica and the other neuralgias, which yielded to no other remedy, were cured by hypodermic injections of sterilized air. Its use in asthma, laryngismus stridulus and whooping cough, is unquestionable, and in the latter considered almost a specific. The result of outdoor treatment in early phthisis, whether on porch, roof or in a tent, even with its frequent disadvantages, has passed beyond the experimental stage, showing clearly what supplemental oxygen may do under better environment. Surely such powerfully vitalized air in a well ventilated room, with dietary and sanitary precautions, strictly observed, with the care and attention of loving friends, and all disadvantages eliminated, must be a step in advance in overcoming the "Great White Plague" so prevalent, so dreaded and so fatal.

Let me say for oxygen, that there is not only no one remedy in our therapeutics, that meets so many indications in disease, but also so rapidly relieves in many cases, and no other remedy has yet been found so quickly available in averting death.

Book Reviews

Physical Diagnosis, with Case Examples of the Inductive Method, by Howard S. Anders, A. M., M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia; Physician to the Philadelphia General Hospital, Tuberculosis Department; Late President of the Pennsylvania Society for the Prevention of Tuberculosis; Member American Medical Association, American Climatological Association, American Association for the Advancement of Science, etc. With 88 illustrations in the text and 32 plates. D. Appleton and Company, New York and London. 1907.

This is a convenient volume of 456 pages and within this compass covers most completely the subject of which it treats. Its divisions are four in number, comprising first, the chest; second, the abdomen and its principal organs; third, the Röntgen rays in medical diagnosis; and fourth, consiting of Röntograms and an index. The introduction treats of the importance and benefits of physical diagnosis, and the qualifications for its

successful study. Each subdivision of the subject is quite thoroughly considered and presented in an interesting manner. A complete index closes the volume, which is one of the most satisfactory of text-books. The excellent illustrations add greatly to its value.

Practical Medicine Series. Physiology, Pathology, Bacteriology. Evans and Gehrman. Series of 1906, Chicago, The Year Book Publishers, 40 Dearborn Street, Chicago.

This division of the Year Book Series deals with the three subjects noted, and contains the usual selection of review. These are well selected and give a very fair idea of the type of progress in the various branches. These reviews are followed by a dictionary of new words, which, as inevitable with such a collection, contains some words which are scarcely new, and admits some which would better be left to die a natural and early death.

The Practical Medicine Series, comprising 10 volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume X. Skin and Venereal Diseases, Nervous and Mental Diseases, edited by W. L. Baum, M. D., Hugh T. Patrick, M. D., William Healy, A. B., M. D. Series 1906. Chicago. The Year Book Publishers, 40 Dearborn St.

This volume contains, in a clear and concise manner, abstracts of the leading articles written during the year on the above subjects; it is illustrated by 10 photographs of interesting cases and also contains reports of a number of unusual cases. The editors have made excellent abstracts and the book will be found useful by general practitioners in keeping informed of the advances made in these special subjects.

Psychology Applied to Medicine. Introductory studies by David W. Wells, M. D., Lecturer on Mental Physiology, and Assistant in Ophthalmology, Boston University Medical School; Ophthalmic Surgeon, Massachusetts Homeopathic Hospital, Boston; Oculist, Newton (Mass.) Hospital. Illustrated, nearly 200 pages, with bibliography and index. 12mo., extra quality paper. Neatly bound in cloth. Price, $1.50, net. F. A. Davis Co., Philadelphia, Pa.

The author intends this work especially for the medical student, to bring home to him the importance of the psychic forces in medicine, a subject which, in the past, has been almost entirely neglected and which at present is given but scant consideration in the average college curriculum. He points out that we have erred in taking too materialistic a view of curative agents and have failed to avail ourselves sufficiently of the psychic elements of treatment which have been more or less abandoned by us only to be exploited with great profit both by Christian Scientists and others. The efficacy of suggestive therapeutics and the possibilities of hypnotic treatment are receiving far more consideration now than ever before and although the author does not go at all deeply into these subjects he endeavors to bring them before the student in an elementary way so that this knowledge can be intelligently pursued by reference to more advanced works. The work can be recommended as extremely interesting not only to the undergraduate but also to the practitioner unfamiliar with this topic.

A Manual of Obstetrics. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women in the Medical Department of the George Washington University, Washington, D. C., and in the Medical Department of the University of Vermont, etc. Tenth edition, enlarged and thoroughly revised. 12mo., 688 pages, with 30 illustrations and three colored plates. Cloth, $2.75, net. Lea Brothers & Co., Philadelphia and New York. 1907.

In the tenth edition of this work the author has followed the same general plan as in the previous editions, but has made some important changes in it. The chapter on "Fecundation and Nutrition of the Embryo" has been rewritten and gives a very clear and concise description of placentation and the early development of the embryo.

Other changes and the addition of 40 new engravings have helped to make the book an expression of the present day ideas of the subject. Very little space is given to theories, and obsolete methods of practice have been omitted, so that the bulk of the work consists of the really practical elements. Although not a complete work its brevity and simplicity make it especially suitable for the student beginning his studies, while the large amount of purely practical information makes it very acceptable to the busy practitioner as a handy book of reference.

Essentials of Chemistry and Toxicology, for the use of students in Medicine, by R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology in Cornell University. Thirteenth Edition. Revised by R. J. E. Scott, M. A., B. C. L., M. D., author of "The State Board Examinations Series." New York. William Wood & Company. 1907.

This little volume includes the essentials of chemistry and toxicology given in the form of questions and answers, a method which does not always appeal to us, but in the present instance seems to work out very satisfactorily.

The explanations to the questions are always sufficiently clear and thorough, and by means of cross references, any point brought out and not fully explained in the answer of a given question, may be quickly referred to elsewhere.

As a means of refreshing one's memory upon the subject of chemistry this volume is admirably arranged. We should suppose that for the purpose of review in the preparation of state board examinations this work would be of great help. A very satisfactory index enhances its value for the purpose of reference.

Aids to the Diagnosis and Treatment of Diseases of Children. By John McCaw, M. D., R. U. I., L. R. C. P., Edin., Physician to the Belfast Hospital for Sick Children. Third Edition. New York. William Wood & Company. 1907.

This volume on Aids to Medical Diagnosis is quite unlike any similar work and should prove of real value both to students and to practitioners who desire to review briefly the more important points concerned in medical diagnosis. In the compass of only 150 pages this volume considers concisely, and yet with sufficient thoroughness, the essential points in diagnosis of all the diseases encountered in medical practice. The chapter devoted to diseases of the nervous system is especially helpful in that it emphasizes the important points which we need to utilize in the

diagnosis of nerve diseases and which are yet so readily forgotten by the practitioner who only sees an obscure case now and then. It includes two plates of the segmental sensory skin fields and a number of tables showing the distribution of the cranial and spinal nerves and distribution of the motor nerves; also a helpful table for use in the differentiation of motor and sensory aphasias. A small volume, it can be readily slipped into the pocket and turned to at odd intervals. A very complete index is included. We are glad to be able to endorse this little volume so unlike and so much superior to anything else of the sort we have seen.

Books Received

University of Denver Catalogue, 1907-08.

The Climate of Southern Maine in the Treatment of the Later Stages of Hypertonia Vasorum. Louis Faugeres Bishop, M. D., New York City.

Albany Medical College Register of Students, 1906-07.

U. S. Treasury Dept. Hygienic Laboratory. Bulletin No. 35, Report on the Origin and Prevalence of Typhoid Fever in the District of Columbia. M. J. Rosenau, L. L. Lumsden and Joseph H. Kastle.

U. S. Treasury Dept. Hygienic Laboratory. Bulletin No. 34, by Ch. Wardell Stiles.

Endothelioma of the Ovary, with a report of a case of Hemangio-Endothelioma Perivasculare. Channing W. Barrett, M. D., Chicago.

Diseases of the Rectum, their Consequences and Nonsurgical Treatment. By W. C. Brinkerhoff, M. D., Steinway Hall, Chicago, Ill. Price $2.00. Orban Publishing Company (not Incorporated), 17-21 E. Van Buren St., Chicago, Ill. 1907.

Hygiene of Nerves and Mind in Health and Disease, by August Forel, M. D., formerly Professor of Psychiatry in the University of Zurich. Authorized translation from the second German edition, by Herbert Austin Aikins, Ph. D., Professor in Western Reserve University. G. P. Putnam's Sons, New York and London, The Knickerbocker Press. 1907.

Diseases of the Stomach, by Dr I. Boas, Specialist in Gastroenteric Diseases in Berlin, Germany. The Sole Authorized English-American Edition from the Latest German Edition. By Albert Bernheim, M. D. (Freiburg, Germany), Assistant to the late Dr D. D. Stewart at the Philadelphia Polyclinic Hospital and Post-graduate School, as Instructor in the Department of Diseases of the Stomach and Intestines, etc., etc. Appropriately Illustrated with Five Full-page Plates and Sixty-five Engravings in the Text. 730 Royal Octavo Pages. Extra Cloth, $5.50 net. Half-Morocco, $7.00 net. Sold only by Subscription. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The Standard Family Physician, a practical international encyclopedia of medicine and hygiene especially prepared for the household, by Prof. Carl Reissig, M. D., of Hamburg, Germany, and Smith Ely Jelliffe, A. M., M. D., Ph. D., Professor of Pharmocognosy, Pharmaceutical Department, Columbia University; Instructor in Pharmacology and Therapeutics, Medical Department, Columbia University; Visiting Neurologist, City Hospital, New York; Associate Editor, New York Medical Journal; Managing Editor, Journal of Nervous and Mental Diseases. With the assistance of many American and German specialists in the treatment of diseases and experts in medicine and surgery. Vol. I. and II. Funk & Wagnalls Company, New York and London. 1907.

Ohio State Pediatric Society

FIFTIETH ANNUAL MEETING, WEDNESDAY, AUGUST 28, 1907, AT CEDAR POINT.

PROGRAM: MORNING SESSION 9.00 O'CLOCK

1. Cerebral Pneumonia, S. P. Wise, Millersburg.
2. How Best Preserve the Child at Birth, D. S. Hanson, Cleveland.
3. Lipomatosis, J. J. Thomas, Cleveland.
4. Rachitis, C. L. Patterson, Dayton.
5. Infant Feeding in Health, H. B. Martin, Springfield.
6. Deferential Magnesium, Park L. Myers, Toledo.
7. Lukæmia, E. W. Mitchell, Cincinnati.

AFTERNOON SESSION 1.30 O'CLOCK

8. A Plea for a more Careful Study of the Individuality and Defects of Children, J. J. Moore, S. Charleston.
9. What can the Medical Profession do for Children in Matters of State, J. Morton Howells, Dayton.
10. Empyema in Children, S. W. Kelley, Cleveland.
11. Appendicitis in Children, J. F. Lorimer, Chillicothe.
12. Appendicitis in Children as a Complication of Measles, Joseph F. Fox, Toledo.
13. Tuberculosis in Children Answerable to Surgery, F. F. Lawrence, Columbus.
14. Some Thoughts in Relation to the Reproduction of Man, R. C. Stockton Reed, Cincinnati.
15. Late Manifestations of Syphilis in Children with a Report of a Group of Cases, A. F. Furrer, Cleveland.
16. Nasal and Pharyngeal Obstruction in Children, M. Metzenbaum, Cleveland.
17. Diphtheria, J. M. Moore, Cleveland.

Banquet at 7.00 P. M. followed by special address "Doses of Diet and Drugs" by A. Jacobi, New York.

Medical News

Dr Farquhar, of Thornville, has moved to Newark.

A. H. Hise and wife, of Carrollton, have returned from Boston.

H. B. Ormsby, of this city, is now located at 532 Rose Building.

M. O. Phillips, of Fremont, has returned from an extended trip through the east.

Dr MacTaggart and wife, of this city, recently took a trip to Colorado and New Mexico.

M. Leahy and wife, of Tiffin, took an extended trip in the east, leaving sometime in June.

L. and A. R. Allard, eye specialists, have opened offices at Hotel Turpen, Greenville.

J. E. Myers, of Springfield, who is on the Hospital Board, went to Cuba on a business trip.

J. U. Riggs and wife, of Bryan, spent a two weeks vacation in Port Huron and on the Lakes.

H. J. Lower, of Marion, recently spent about ten days up in northern Michigan, camping, hunting and fishing.

R. H. Bierbaum, of Dayton, is home from Huntington, Pa., where he acted as best man at the wedding of his uncle.

Lillian G. Towslee recently took an extended automobile trip, taking in the Jamestown Exposition and visiting Washington.

Warren E. Murray, who has been an interne of the Hospital in Springfield, has gone to Vienna for a year's study in the hospitals.

Dr Foster, of Mansfield, has gone on an extended trip to the west. He expects to visit Goldfield, Nevada, and various points in California.

J. M. Weaver, wife and Miss Mima Weaver, of Dayton, have gone to Ocean Grove, where they will spend the greater portion of the summer.

Forest Evans and wife, who have been visiting relatives in Bellaire, have returned to Panama, where the Doctor will resume his duties as surgeon.

Arthur Hitchens, director of the Antitoxin and Vaccine Laboratories of the H. K. Mulford Company, is in London engaged with Professor E. A. Wright in the study of Opsonins and Vaccine Therapy.

The fortieth regular meeting of the Lake County Medical Society was held at 8 p. m. on Monday, July 1, 1907. Program: 1. Reports and Presentation of Cases. 2. Miscellaneous Business. 3. "Fractures and Dislocations," Dr C. E. Ford, Cleveland.

The Mississippi Valley Medical Association is to meet at Columbus, Ohio, October 8, 9 and 10, 1907. Dr Geo. F. Butler, of Chicago, has been chosen orator in Medicine and Dr F. D. Smythe, of Memphis, Tenn., the orator in Surgery. No better selections could have been made. Titles of papers to be read at Columbus must be sent in not later than August 15 to have a place on the program. Henry Enos Tully, Secretary, Louisville, Ky.

The *St. Louis Medical Review* makes the announcement that henceforth it will appear as a monthly instead of a weekly. This change is necessary on account of the great cost of publication of a weekly as compared with a monthly, which is not sufficiently offset by the increased circulation of the *Review* or by the addition of considerable advertising matter. Only those conversant with the management of a medical publication will appreciate the financial difficulties of this question. The *Review* has our sincere sympathy and we trust that in the near future it may be able to resume its former weekly edition.

The *Interstate Medical Journal* (St. Louis) announces the purchase of the *St. Louis Courier of Medicine,* one of the oldest medical journals in the West, and its consolidation with the *Interstate* on July 1st. The *St. Louis Courier of Medicine* was established in 1879 by an association of prominent St. Louis physicians. It has always commanded a large following throughout the West and South, and held the respect and esteem of the entire profession of this country. This merger removes from the field an old and highly esteemed contemporary, and its consolidation with the *Interstate* adds strength and prestige to that periodical. This is the fourth medical journal that has been purchased and absorbed by the *Interstate* during the past few years.

The Lorain County Medical Society, together with the Cuyahoga, Ashland, Huron and Erie County Societies, held a very successful medical rally at Avon Beach, July 16, 1907. The following program was presented. Program: "Some Debts We Owe Our Clients, the Public and Ourselves," B. R. McClellan, Xenia, President Ohio State Medical Association; Discussion by Councilors and County Officers; "Squint," C. B. Bliss, Sandusky; "Treatment of Insanity," Brooks F. Beebe, Cincinnati, Chairman of Council; "Traumatism and Neuro-Psychoses," Charles J. Aldrich, Cleveland; "Goiter," Geo. Crile, Cleveland; "Acute Articular Rheumatism," W. H. McClellan, Ashland; "Milk Supply in Small Cities," G. C. Jameson, Oberlin; "Difficulties of a Health Officer in Small Cities," E. V. Hug, Lorain; "Study of Therapeutics in Connection with the Practice of Medicine," E. Cameron, Lorain. W. C. Lower, Councilor for the Fifth District, entertained a large party of the Cleveland profession on a trolley trip by special car to this meeting. About 60 physicians were guests of Dr Lower and the outing proved a thoroughly enjoyable one. Refreshments and music were provided on the trip. Time was also found for bathing and a baseball game, the special feature of which was Dr Sherman's umpiring.

Deaths

John Dietrich, a prominent Youngstown physician, died on June 23, from injuries received from a fall.

The Cleveland Medical Journal

VOL VI SEPTEMBER, 1907 NO 9

A Word or Two from an Ex-Journalist

BY SAMUEL W. KELLEY, M. D., Cleveland, Ohio

Professor Diseases of Children, Cleveland College Physicians and Surgeons, Medical Department, Ohio Wesleyan University; Surgeon in Chief Holy Cross Home for Crippled Children; Pediatrist and Orthopedist to St. Clair Hospital; Pediatrist to City Hospital, etc.

Mr. President and Members of the Association:

Gentlemen: Five years have passed since I laid down the blue-pointed scepter and abdicated the editorial throne, so weary after a reign of sixteen years that I felt a physical dread of the sight of a medical journal; yet I have never lost my interest in the work nor abated my admiration for those who perform it, nor been able to remain away from the meetings of this Association. I had no intention of addressing you at this meeting; but your Secretary, in his search for numbers for the program, with editorial astuteness dropped one thought that caught my attention. He wrote: "The fact that you are *not actively engaged* leads me to believe that possibly you are in a better position to give us valuable suggestions how we can make our publications more attractive to the profession." Whether or not the position of a "Has-been" entitles one to suggest to the "Now-ares," I decided to attempt it.

Just here let me state my judgment that the general average in utility and in attractiveness of American medical journals has greatly improved in the past twenty years, very greatly in the past ten and increasingly so since five years ago; and as I look around on these vigorous veterans and on these men in the prime of life, able to cope with any problem, I feel misgivings as to whether I have any message.

Read before the American Medical Editors Association, Atlantic City, June, 1907

I have discovered no unfailing sticking-plaster for new subscribers and no improved coin-extractor for the old ones, and no magic method of conjuring brilliant ideas in logical literary form from the work-fagged brains of contributing practitioners. But I can tell you from experience how to avoid some of the vain regrets that follow after the opportunity is past; how from the ill-requited office of the editor to gain some satisfaction to yourselves. For example, I regret the time I spent on the business management of my journal, and wish that I had earlier seen the way to free myself from the business side of the work, at least as to all details. If I ever again should engage in editorial work (which the Lord forbid!), I would stipulate that while the editor was to have absolute control of every word that went into the journal, advertising pages and all, he was to be free from all the pecuniary cares of the publication and at liberty to devote his entire strength to his legitimate work; and I think such an arrangement would promote success. I believe the medical editor rather than the publisher should have control, because I am convinced from personal observation and experience that no layman ever born can understand and appreciate medical ethics. A man must be educated as a physician and become practically a physician before he can acquire that moral *tactus eruditus* which in the normal medical man becomes as sensitive and subtle as an instinct. Occasionally even a physician fails to acquire it—but no layman ever acquires it. And no medical journal without medical ethics can achieve a success that is worthy of the name.

No medical editor can afford to spend his time soliciting subscribers. I have seen editors—good ones too, and successful to a degree—who thought it their duty to attend medical gatherings for that purpose. Better far for the success of their publications if they bent their whole energy to making better reports of those meetings and comprehensive comments upon them. I would rather, if need be, "earn that confounded guinea" to pay the printer, the engraver and the postage bill, by the practice of medicine, than to spend time commending my own journal to subscribers.

No one who has studied the subject can fail to realize how small is the appreciation of the editor's work in comparison with the expenditure of his gray-matter—how thankless his task! Have you ever sat in the reading room of a medical library and watched the doctors inspecting the medical journals? How cursed complacently the average reader turns the leaves of your splendid

magazine, viewing them all as a matter of course, just as if they grew on trees or fluttered down with the snowflakes!

But the most complacent and the most thank-empty is the contributor whose article you have spent a night or two in rewriting, correcting his alleged facts and his diction, clearing up his histories, re-arranging his argument, until you wonder if he will recognize in its metamorphosis the hodge-podge he sent you. Does he acknowledge? Not he! He tells his admiring friends that if he could only spare a half hour from practice now and then he would dash off such little things frequently. He dictated that one to his stenographer while he ate his breakfast but she failed to catch it all. I recall some instances of appreciation of such services but more of self-complacent ingratitude.

If I could live again my editorial life I would do less work on other men's papers and more on my own. I might undertake to suggest improvements to the contributor but would let him execute them. As a rule, I think editors are too solicitous for a great number of contributions and far too lenient as to their quality. They ought to be more severely critical as to the scientific value and as to the literary form.

What I now look back upon with the greatest satisfaction, as being more worth while, is work that distinctly belongs to the editor—getting the right articles from the right men, book reviews, the management of correspondence, and the writing of editorials. While editors are anxious to obtain a large number of available papers for publication, many of them pay little attention to systematic methods of securing such contributions. They wait for programs and then request papers. An editor should study the field of the profession, and particularly of that portion of it in his own city or state or department of medicine, as a chess player studies his board and his chessmen. He perceives their position; he measures their capabilities. Or rather as a teacher studies his pupils. He realizes their mental outlook often before they do so themselves. How often after I had suggested to a man that he ought to write a paper of a certain scope upon a given subject, has he said to me, "Why, that's true! It's strange I never thought to write about that. I believe I could. I will do it." And the article came—full of bright thoughts,—fresh from the mint, an "original article" worth reading. By such means can an editor not only acquire for his journal the attractiveness of the freshest and most valuable thoughts of his contributors but become a creative force, a leader, whether acknowledged or

not, as well as an arbiter of opinion and a purveyor of news. This office of leadership sometimes requires great tact. It is well to bear in mind Pope's dictum—

> "Men must be taught as if you taught them not,
> And things unknown proposed as things forgot."

Perhaps, later on, you may enjoy the supreme satisfaction of seeing the ideas you originated extensively accepted, or the measures you advocated widely prevail. It may be that the fruition will be so long delayed that no one will remember who planted the seed; but even so, does that so greatly matter?

As to book reviews a word:—If the editor reads too little the intelligent subscriber soon perceives in his reviews that he has no knowledge of the subject and no standards of comparison; or that the alleged reviews appearing in his journal are nothing more than publishers' notices. Really read and review the new books, or, having upon your staff of collaborators or associate editors those who can pass competent judgment, refer to them the books for review and demand a prompt response. There never was a book made that was not worth some kind of a remark. Describe the book; characterize it; and if it's a good book, praise it according to its merits; if it's a bad one, damn it according to its deserts. But for the sake of success, if not on principle, have and express some opinion of your own about it, and your readers will have some respect for the editor.

A department of correspondence is one that can be made far more attractive and valuable than it sometimes is. An editor should not wait until the spirit moves some active mind in the profession to select his particular journal to address on some live topic. From the quiet of his sanctum the editor should study the professional world, and very often by a timely solicitation he can get from the foremost thinkers and workers a brief statement in the easy, colloquial style of a letter, concerning matters of the liveliest interest to his readers.

As to editorial writing, have you not sometimes seen that which justified the suspicion that the editor, in the kindness of his heart, had sublet the contract to some needy medical student? Or that the editorial office was in the same building with a drug store and that the druggist "substituted" when the editor was out? I see too many good editorials to believe that the art of writing them is lost or altogether neglected; but is it cultivated as it should be in all quarters? Is there any reason, because custom sends the editorial into the world incognito, that it should be a lifeless, soul-

less, useless thing? Others, though unsigned, contain the newest knowledge, are full of character, of individuality, of charming persuasiveness or compelling force.

It is self-evident that a bright subscriber does not want a chapter out of a text book, and he does not want the news he read in other journals last month, and he does not want platitudes. Editorial writing need not always assume oracular wisdom. Upon how many subjects, think you, is knowledge so complete or satisfactory that the last word can be spoken? But the editor's fountain pen should be filled with interrogation points, his thought alert, observant, suggestive, stimulating intellection in the reader, declining to utter the final word but provocative of controversy, ever pointing out unnoticed avenues for exploration, untried fields for investigation, atmospheres hitherto unfanned by the wings of thought. The editor should be versed in medical history, a student of its philosophy, an observer of the fashions of practice, trends of teaching, tendencies of opinion. He should be able to take the larger view of passing events.

Never take up the editorial pen when not inspired. That is, be in your loftiest mood. Realize that you are taking a just view of the subject in hand, of the profession, of your clientele, of the individual medical reader and the public. Never indulge in personal pique, and soar above sectarian bitterness. Write clearly. If your are attacking an evil write fearlessly, forcefully. Put your whole power into each utterance. Assail the enemy with such shafts of logic, such bolts of argument, such scathing sarcasm and such burning scorn that there is no standing against you. When you are sure you are in the right you can make yourself a power.

Yet in some natures, often those with a fine sense of justice, the critical faculty and habit grow to an extreme degree—become hypertrophied and abnormally excitable, one might say. The editor should not be too continually criticising something or reforming somebody. Such a process may be beneficial to that something or somebody in the majority of instances, and may or may not further its object, but too much of it is not good for the editor himself.

You have all seen that tonic extract of a sermonette called "The Footpath to Peace," by Henry Van Dyke. It begins: "To be glad of life, because it gives you a chance to love and to work and to play and to look up at the stars; to be satisfied with your possessions, but not contented with yourself until you have made the best of them; to despise nothing in the world except falsehood

and meanness, and to fear nothing except cowardice; *to be governed by your admirations rather than by your disgusts;*"—and so on. It is this last admonition especially that I would commend to the hypercritical editor with a mission to reform the world. Some time leave off fault-finding and scolding, however well deserved, and hold up for the admiration of your readers the high ideals we all worship—sing the praises of the heroes of the profession and recite the glories of their achievements—live "in your admirations rather than in your disgusts," and the influence of your words, your mood and attitude shall not be lost upon your readers.

If any man have not the love for such labor—feels no inspirations, has no convictions, cannot endure its toilsomeness or be content with its rewards, or if, like myself, he feels a stronger call to the scientific professional work, it is better for journalism, as it is for him, that he leave the editorial, the journalistic work, to those whose greatest ambition lies in that direction; and he may do so knowing that it is in safe and competent hands.

The Indications for Therapeutic Uterine Curettage

BY R. E. SKEEL, M. D., Cleveland, O.

Probably no measure, excepting the removal of adenoids and hypertrophied tonsils, capable of being dignified by the name of operation, is more frequently resorted to than curettage of the uterus, with or without dilatation of the cervix as a preliminary measure. An inquiry into the reasons for the enormous vogue of this presumably minor operation, together with an attempt to settle its true place as a therapeutic measure, has proved of great interest and has led to some rather surprising conclusions. Having had made for me a rather thorough search of the literature it was found that the first mentioned use of instrumental curettage was by the French surgeon Recamier, a little more than one hundred years ago, and the indication he advanced for its use was to remove growths from the uterus which were causing hemorrhage. The indications as given today by different authorities it would be impossible to enumerate in a paper having the scope of this one but they extend through almost the entire list of symptomatic and pathologic indications connected with disease of the uterus and appendages with the exception of ovarian cystoma, in which condition, so far as ascertained, no one has yet ventured to suggest that it might be useful. A partial list of symptomatic

indications includes such diverse symptoms as amenorrhea, menorrhagia, metrorrhagia, dysmenorrhea, sterility, and leucorrhea. The pathologic list is still larger and includes not only stenosis of the cervix and anteflexion, but retroversion, retroflexion, subinvolution, infantile uteri, that hydra-headed bugbear chronic endometritis, uterine myomata and fibromata, salpingitis and even pyosalpinx, and in addition the obstetric condition of septic puerperal endometritis as well as abortion with retained secundines, and therapeutic abortion for pernicious vomiting.

Somewhere I have recently seen also a reference to the well known alterative effect of currettage, so that women, purely as the result of the operation, become more robust, full blooded and fat. I once heard a bright medical student assert that the ophthalmologist's creed was "Here is an eye, let's drop in some atropine," and when one peruses the list of conditions for which curettage is advised, he is inclined to believe that the gynecologist's creed has become, "Here is a uterus, let's dilate and curette it." The actual mechanical performance of dilatation and curettage comprises the forcible stretching of the circular muscle fibres of the cervix and the nerve supply to it and following this the scraping away, either of material loosely attached like blood clot, shreds of decidua, portions of membrane or placenta, or in the gynecologic patient the detachment and removal of that part of the mucous membrane covering the interior of the uterus, which does not dip into the glands penetrating the muscular wall. Just this much and nothing more can dilatation and curettage effect in a purely mechanical way. Before going into the possibility of good being done in the various conditions for which the operation is performed, let us first see what are the possibilities of harm.

The possibility of actual mechanical damage is always present and comprises rupture of the internal os by too forcible dilatation as well as perforation of the uterine wall by the curette, together with the rather unlikely forcing of fluid into the peritoneal cavity by the flushing which follows. If these injuries were perceived as soon as they occurred, the result would not be disastrous in an aseptic case with aseptic technic, but too frequently they are followed by the jamming of an instrument into the abdominal cavity and the withdrawal of a torn portion of intestine or omentum or both, and numerous cases are recorded in which this accident has been followed by a fatal outcome. The occurrence of infection after curetting is by no means rare, either by the introduction of pathogenic organisms with the instruments used, the

forcing of germs already present into the walls of the cervix during dilatation, the opening up of fresh areas to the invasion of infectious organisms already present, or the breaking down of barriers formed in the abdominal cavity by plastic exudate and consequent leakage of virulent pus into the peritoneal cavity. The anatomic relationship of the uterus and its blood and lymphatic supply makes acute uterine infection a matter of no mean importance.

The indications for curettage, which it is proposed to examine, may be divided into obstetric and gynecologic as no attention is to be paid to curettage for purposes of diagnosis. The obstetric indications may further be considered as those purely mechanical, and comprise removal of the ovum in early pregnancy for conditions which jeopardize the mother's life; the removal of debris from the uterus after abortion in aseptic cases; the removal of portions of placenta and membranes after late miscarriage, premature, or full term labor; and also the very hazy indication for acute puerperal infection.

Curetting in early pregnancy is almost universally advised for the removal of an intact ovum, but as this procedure is generally used for pernicious nausea and vomiting a slight modification is much safer and just as certain, viz., to first destroy the ovum by rupturing it, to pack the cervix and vagina thoroughly and give nature an opportunity to assist by dilating the cervix and separating the decidua, which she will practically always do within 24 hours. The curetting which follows is much simplified, the risk of injuring the uterus lessened, and the whole operation can be so quickly performed that an anesthetic is frequently entirely unnecessary.

Curettage is also the ideal procedure for the removal of remnants following incomplete abortion in an aseptic case or even in a case with high temperature, provided the temperature is due to decomposition rather than infection, but it is distinctly an abuse to forcibly dilate a tight cervix and roughly scrape the wall of a uterus which has been criminally tampered with, in such a case the procedure previously mentioned is preferable. The lymph channels from the cervix are so intimately blended with those from the ovary that ovarian infection followed by ovarian abscess and local or general peritonitis is a common sequel of such interference. So also is curettage after ovarian and pelvic infection has begun, and the slightest evidence of localized peritonitis is a distinct indication to keep instruments out of the uterus unless it is certain that

retained material is left in its interior that is adding fuel to the infectious process which is taking place outside its cavity. As the first step toward pelvic peritonitis is acute endometritis, the latter process ordinarily results in rapid emptying of the uterus before the former manifests itself and thus mechanical interference is anticipated and the necessity for it prevented. The curette is also sometimes necessary to remove debris after early or full term labor, although the finger is superior if it can be used, but in the presence of a cervix which will permit the introduction of but one or two fingers any effort to remove portions of placenta attached at or near the fundus must fail because of inability to reach that high. The curette is here decidedly dangerous because of the thin uterine wall, and needs the utmost caution in its use, in fact I believe the numerous accidents taking place from its use in obstetric cases are due to adherence to the example of the gynecologist, who scrapes the uterus, sometimes vigorously, and the young graduate follows that practice in cases of abortion or full term labor until he has perforated a uterus and learned by bitter experience that the two procedures are not similar even if the name is the same. A very bitter war has been carried on concerning the value of the curette in puerperal infections, a part of which might have been avoided had surgeons previously known something of obstetrics and thus have taken care to do no harm to the uterine wall. There is no question in my mind that curettage very early in puerperal endometritis is of great value in removing the necrotic layer but later when the uterine wall is involved or tubal ovarian and peritoneal infection has occurred, nothing is to be gained and much lost by any instrumental interference with the uterus, and such action can of course be of no avail after systemic infection is well advanced. On the whole, the curette skilfully handled will do no more harm than the much used intrauterine douche, and unlike the latter, sometimes does permanent good. It is, however, with this operation as a gynecologic procedure that I wish to deal more fully.

Pryor, I think, stated most concisely what is expected to be obtained by curettage in gynecology when he said that the object of its performance is to remove a diseased mucosa in hopes that the new one will prove to be healthy. It will be impossible to deal with all the conditions for which this operation is advised, but some of the common ones, together with one or two of the less common, will be taken up. In this connection both those conditions previously classified as symptomatic and pathologic will be con-

sidered and no special attempt made to separate them, the effort being to take up the operation as it is advised in actual practice.

Uterine leucorrhea: This symptom in all its forms from the normal glandular secretion to the profuse purulent discharge of gonorrhea is probably made the most common basis for a curetting. In fact it is so common that if a patient applies for an examination and states that she has had her "womb scraped," a little effort will usually elicit the fact that the only symptoms of which she complained were either leucorrhea or dysmenorrhea. Obviously the source of a discharge emanating from the uterus must be one of four things, an eroded cervix, hypersecretion of the cervical glands, hypersecretion of the uterine glands, or an infection of the interior surface of the uterus. Such infections are usually gonorrheal and only very rarely due to the ordinary pyogenic organisms. Hypersecretion from the cervical glands, I think I may confidently state, is never cured and but little improved by curetting. Hypersecretion from the glands in the body of the uterus is temporarily relieved if they are hypertrophic but the etiologic factor still remains after the curetting is performed and it is very common to witness a curetting for profuse uterine discharge, not gonorrheal in character, in which there is absolutely no change in the uterine mucosa. The etiologic factors behind such a case are frequently very obscure but hypersecretion of glandular structure from passive congestion, over stimulation, and particularly from anemia and allied general conditions is well understood. Curettage to relieve the anemia, neurasthenia, and constipation and cardiac or renal insufficiency which are behind the hypersecretion and profuse discharge is not only illogical but does no permanent good and tends to throw discredit on legitimate surgery. Gonorrheal infection of the uterus as is well known is most frequently limited to the cervix and when it extends to the body of the uterus it almost always extends also to its histologic and developmental extension, the tubes. To curette the body for the removal of infection from the cervix means almost always to extend that infection to the body, and curettage with involved tubes not only does no good but usually does harm. It required several very practical and bitter lessons to teach me to leave gonorrhea alone as soon as the cervix was involved and never to interfere in a surgical way with the interior of a gonorrheal uterus. In fact the only cases of leucorrhea, and I was about to say endometritis, for that is the usual diagnosis in instances of uterine leucorrhea, that are permanently benefited are those in

which, following abortion or full term labor or instrumental interference with the interior of the uterus, there is left behind after the acute stage a profuse purulent discharge, which may, I believe, be attributed to a long standing infection of so low an order of virulence as not to extend to the tubes or the more resistant muscular tissue of the uterine wall.

Dysmenorrhea: Next perhaps to leucorrhea this purely symptomatic indication is considered as of sufficient importance to demand dilatation and curettage. It must be conceded that there is an occasional case of true stenosis of the cervix in which the opening is not sufficiently large to permit the passage of the menstrual blood as rapidly as it is poured into the uterus. Possibly also premenstrual congestion of the uterus may cause some degree of pressure of one side of the uterus upon the other; but what good does free dilation and curettage do the average case of dysmenorrhea in the girl, young unmarried but courted woman, or sexually over stimulated bride? Usually the relief from pain lasts from three to six months, rarely longer, and nothing more could be logically expected. These girls and young women are suffering from everything but a diseased mucosa, most of all from hypersensitive nerves. Undoubtedly the stretching of the nerves of the cervix does temporary good just as does nerve stretching elsewhere in cases of neuralgia, but to expect permanent benefit from a purely local procedure of this sort is stretching the imagination too far. How common it is to have an over-worked high-school girl, teacher, stenographer, clerk or what not, suffer excruciating pain during her working period and be entirely unaware of the onset of menstruation while on her vacation.

Amenorrhea: Until we know more of the internal secretion of the ovaries and their influence upon the function of menstruation it is extremely foolish to discuss the use of the curette for its cure. That some cases are due to infantile uterus or ovaries is undoubted, that chronic disease of the blood, lungs and kidneys is responsible for others is also certain. That curettage can be responsible for the cure of any of these is contrary to ordinary common sense.

Sterility: Again we are confronted with a condition of the pathology of which we are entirely ignorant in the absence of gross anatomic change. That a curetting is often followed by pregnancy can not be denied and in the presence of this clinical fact we are obliged to concede that it is justifiable to curette for

sterility when the husband is competent and there is no gross change in the tubes to account for the condition. How much of the benefit is due to the operation and how much to contributory surroundings must remain unsettled so long as such surprising things as the occurrence of pregnancy after the passage of a uterine sound, absence of a few weeks on vacation, or divorce with re-marriage and demonstrated fertility of both husband and wife occur.

Menorrhagia and Metrorrhagia: Uterine hemorrhage is as much a symptom as is leucorrhea and depends both upon general and local conditions. At both extremes of the female generative period there occur hemorrhages which cannot be, or, at least, have not been, accounted for upon local grounds. Menorrhagia at the beginning of menstrual life is fairly common and usually demands no interference. Menorrhagia at the menopause may or may not be pathologic in character. I have been misled repeatedly into curetting patients at the menopause not only to find nothing out of the ordinary in the uterus but also to have the bleeding continue absolutely uninfluenced by the operation. Such an operation as a combined exploratory and therapeutic measure can not be condemned however, if, in one out of a great number, beginning malignant change is discovered and this discovery leads to radical operation. It may be permissible also to curette in some cases of myoma and fibroma merely as a palliative measure to temporarily control the bleeding and prepare the patient for radical operation later, and this use of curettage has been placed upon a more scientific foundation since it has been shown that the tumor itself is not so much responsible for the bleeding as is the change in the endometrium.

There remains, however, a class of cases, many times dating from a remote abortion, in which Recamier's growths in the uterus causing hemorrhage are to be found, and these cases are variously classified, but that of Pozzi is as descriptive as any, viz., "hemorrhagic endometritis." They are distinguished clinically by severe hemorrhage and the presence of small polypoid growths in the uterus, many of them composed of groups of decidual cells which have failed to atrophy. This particular form of endometritis is to my mind the one and only clear-cut and unmistakable indication for gynecologic curettage.

Miscellaneous conditions: Salpingitis, pyosalpinx, hydrosalpinx, etc., it seems to me are so far beyond the reach of intrauterine treatment of any kind, that their mention should serve

only to condemn its use. Any idea that an existing uterine inflammation leads to repeated infection of the tubes is putting the cart before the horse; and curetting the orifice of the tubes with the object of assisting a salpingitis to thus drain itself if founded upon inaccurate observation of the pathologic condition present. If the uterine ostium of the tube is open at all the uterus is reinfected from the tubes by the normal drainage into it. If a sactosalpinx of any form is present the obstruction to the tubes is almost invariably outside of the uterine wall and frequently some distance away from it.

If the above deductions are correct there is then just one unmistakable indication for therapeutic curettage and that is the one for which the operation was introduced by its originator, viz., to remove from the uterus growths causing hemorrhage. There are one or two others, sterility and the temporary control of hemorrhage from uterine tumors, which show some not very definite basis for their existence but the common and most used are without any justification. What then are the reasons for the widespread belief in curettage as a therapeutic measure? Undoubtedly there are many contributing factors, such as the common tendency for medical and surgical measures to run to extremes, the prevailing idea that the operation is a minor one and can do no harm if it does no good, rarely it may be abused for the sake of the fee.

On the whole, however, its great vogue may, I believe, be attributed to four factors: suggestion; cathartics and regulated diet; enforced rest in bed; and, more potent than all, the complete change of environment and surroundings. The element of suggestion brought about by the fact that an operation has been performed and that a cure is expected for the vague feeling of discomfort from which the patient has suffered is by no means a small one. Neither is the vigorous catharsis which relieves the stercoremia from which so many women suffer, together with improper and over or under feeding from which the wealthier and poorer classes respectively labor. Enforced rest in bed alone would relieve many an overworked woman of the middle and lower classes, but with all this, that factor which permeates all classes, from the highest to the lowest, which saps the vitality and undermines the health of more women than any other cause not actually organic in its character, is nerve strain. The ambition to dress as well, to live as well, to shine in the society of the stratum just above, and the pressure of living day after day with these things just out of

reach, is responsible for a vast number of vague discomforts from which women suffer and which they have been erroneously led to believe are associated with some mysterious ailment of that mysterious organ known as their womb. Under these circumstances it is not strange that a sudden diversion of the mind from its accustomed pursuits to the environment of the hospital should result in a decided change for the better in all their physiologic functions without the operation in itself having had any direct influence.

Such cases as these belong rather to the internist and neurologist than the surgeon, and *they* should recognize the fact that drugging alone has but a limited field of usefulness in conditions whose primary origin was mental and whose uterine slant has been brought about by the notion that a woman is merely an organism around a womb.

Conclusions: Obstetrically curettage has a well defined use in the removal of the products of early conception or the remnants of incomplete abortion.

Occasionally it may be useful after later miscarriages or even full term labor to remove material out of reach of the finger.

At the outset of puerperal infection it may do harm but usually does good. Later it is positively contraindicated.

Gynecologically it has one well defined use in so-called hemorrhagic or polypoid endometritis manifested clinically by bleeding.

Its wide vogue in other disorders is not due to benefits derived from the operation but from the associated change in environment and suggestion.

Large numbers of women who are now subjected to this so-called minor operation are medical not surgical patients.

Family History

BY WILLIS W. CAREY, Fort Wayne, Ind.

Deviations from the normal functions and structure are inherited or acquired. Hereditary transmission may be temperamental, functional or structural. This includes that imponderable quality known as hereditary predisposition; hence the importance of the family history.

In heredity we assume, or know rather, that the different conditions are the result, or follow the result, of certain changes

Read before the Indiana State Medical Society, May 23, 1907

which have taken place in the progenitors, and of which we learn by personal observation or the observation of others; hence heredity is that biologic law by which all beings endowed with life tend to repeat themselves in their descendants. By it the ground work remains unchanged, though amid incessant variations, and by it Nature ever copies and repeats herself. Heredity extends to all the elements and functions of the organism, its external and its internal structure, its maladies, its special characteristics, and its acquired manifestations. It may be traced in all that concerns the complexion of the skin, the shape of the body, the mode of walking and the habits of pronunciation. One author says: "Obesity is so truly the result of an organic predisposition that it has often made its appearance under privation and the disadvantages of hard labor." Heredity shows its effects in the fluids of the body as well as in the solid parts. That the blood is more abundant in some families than in others is well known and this transmission may predispose to hemorrhage.

Heredity is also shown in the reproductive powers. Some families being known for their fecundity. For example, a mother gave birth to 24 children, among them five girls who gave birth to 46 children in all, and a granddaughter on the son's side who gave birth to 16 children. Brooks makes the interesting statement that the separation of the sexes has been brought about as a sort of specialization of the individual, in two directions. The male cells are supposed to accumulate the newly acquired characters and represent the progressive element in evolution. The female cells, the conservative element, holding on to what has been gained in the past. Granting this to be true, it might account for the inherited tendencies which seem to pre-elect the maternal side of the house. This brings up Galton's law by which are taken into account not only the parents, but the grandparents. He shows that the inheritance from the parents can be represented by the fraction one-half, i. e., that one-half of the peculiarities come from the parents, one-fourth from the grandparents, etc.

As to the marriage of relatives, Maupas claims that the union of individuals having the same immediate descent is profitless. That this is true can be easily verified by investigating the homes for feeble minded, epileptics and almshouses. No wonder the State is anxious to throw around its citizens its arm of law and say who shall and who shall not enter into the marriage relation. Calkins suggests that the results coming from such marriages are due to the similarity of the chemical composition

of the two protoplasms of the parents of the individuals concerned. Heredity and long life are also closely associated. It is now shown that longevity depends far less on race, climate, profession, mode of life or food, than it does on hereditary vitality. Special treatises on this subject show that we find centenarians among the blacks as well as the whites, among those who have taken the greatest care of themselves, as well as those who have lived the hardest lives. Everything tends to show that long life is the result of an internal principle of vitality, which individuals receive at birth and which is so deeply impregnated in their nature as to make it apparent in every part of their organization. Insurance companies make much use of these facts, hence the importance of knowing the length of life of the applicant's progenitors.

Dr Halloway, in his report for the year 1905 of the Soldiers' and Sailors' Home for Orphans, says: "We have had to care for, during the past year, a greater number of those unfortunates who come to us bearing the taints of hereditary and constitutional disease, than ever before, and from these causes have occurred three of the four deaths in our institution during the past year." Number of inmates reported 577.

As regards the feeble minded, Buch and Shuttleworth find in 392 cases 15.47% of inherited causes. Carson, in the study of 1,000 cases, finds 132 imbeciles. He also reports the investigation of the descendants of one insane man for seven generations as follows: 25 pronounced neurotics, nine insane, three imbeciles, three epileptic and 10 still born infants; in all 50 abnormal descendants. A care and cost to the State, a millstone to themselves and friends, and a condition for which they are in no wise to blame but which they cannot surmount.

Epilepsy: There are in Indiana, at present, 920 epileptics in State and County Institutions, and that we are at last to have a separate institution for these unfortunate people is a step in the right direction. Gowers says of epilepsy: "There are few diseases in the production of which inheritance has greater influence." Some authors claim that only those cases coming on in early life are hereditary, but Gowers shows that it may come on at any period and gives the following tabulated account of 1,113 cases observed by him:

Under 20 years,	844	cases,	hereditary	history	319	or 37.8%
20 to 40 "	235	"	"	"	80	" 34.0%
40 and over "	34	"	"	"	9	" 26.5%

Dr Peterson, President of the Board at Sonyea, in his annual address, says: "Among the several thousand cases observed by me, I have never yet met with a case of epilepsy due to a reflex factor, although I have made it a point invariably to seek for such a cause.

Insanity: In insanity it is the unstable nervous organization that is inherited, not the particular neurosis or psychosis, and it must be our aim to seek for such manifestation amongst our patients' progenitors.

In the report for 1905 of the National Conference of the Associated Charities it is shown that the actual increase of insane persons in our National Institutions for the year was about 5,000. The number now receiving care in our State Institutions has already reached the alarming figure of 4,254, with 417 on the waiting list. Herter says: "Conditions of abnormal heredity underlie many morbid states of the nervous system. A neurotic heredity may be traced in the majority of all cases of insanity. The graver forms of insanity, especially paranoia and other allied conditions, always develop on a hereditary degenerative basis; but the simpler psychoses, mania and melancholia, may develop in persons without known hereditary taint."

Greisner says: "Statistical investigation strengthens very remarkably the opinion generally held by physicians, that, in the greater number of cases of insanity, a hereditary predisposition lies at the bottom of the malady."

We will now consider briefly two other diseases in which heredity plays a part—syphilis and tuberculosis.

Syphilis: The syphilitic, like the poor, we have with us always, sometimes carrying his mark so that "he who runs may read," and again showing itself only to the initiated.

Paternal transmission is of more frequent occurrence than maternal. It may come from either side or both. Drs Schaudinn and Hoffman, of Berlin, have discovered a microscopic body which they term spirochæta pallida. This they have found in the initial lesion, in buboes, and in twelve luetic infants. Metschnikoff and others have demonstrated the same. The significance of this has not altogether been decided, but that it is important cannot be denied. Hereditary syphilis is capable of provoking any and all of the injuries of the general nervous system that follow the acquired infection, and like it is often marked by a multiplicity of lesions in a given case. They may appear in early life or be postponed until later, often appearing in the twenties and thirties.

The lesions of hereditary syphilis are less amenable to treatment and of worse prognosis than those of the acquired form.

Tuberculosis: As to direct hereditary transmission, Anders says: "In exceptional cases the bacillus is found in the fetus in utero. In such cases the disease may remain latent to break forth in childhood or later in life, and although the fetus itself may display no evidence of tuberculosis, the fetal viscera may be infective to guinea pigs." Lehman reports a case of tuberculosis, the mother dying from tuberculous meningitis three days after the birth of her child. The child lived 24 hours and upon postmortem the lung, liver and spleen were found covered with nodules resembling tubercles, and containing tubercle bacilli in large numbers.

Baumgarten believes that the contagion may be transmitted and become pathogenic at a variable period after birth; First, because the infection is very frequent in young children, and secondly, because certain structures are apt to be accidentally infected and are commonly the seat of the lesions, i. e., the bones and joints.

Jonathan Hutchinson, in his "Law of Inheritance in Disease," says: "Two factors are admittedly of great importance in reference to the development of the affection. We must take cognizance not only of the bacillus itself, but also of the state of the tissue upon which it is implanted. The possibilities of inheritance are therefore twofold. It may be that the bacillus itself may pass bodily, or potentially, with the sperm or germ from parent to child, or it may be that a condition of tissues, liable to the attacks but for the time free from its presence, may be the result of transmission. Pathological facts leave us in no doubt that the tubercle bacillus may find its way into the body of the fetus in utero and then develop. Whether it does so in the association with the semen or in union with the maternal germ, or whether it is always derived by the ovum from the mother's blood, we are as yet uninformed."

It is clear, however, that as regards the heredity of phthisis we can at present do little more than state preliminary facts and suggest possibilities, and the prevailing creed which suspects external contagion as the cause of all attacks is probably a much too narrow one.

With these few truths, presented to us, it seems that the importance of the history of our patient's progenitors ought to appeal to us more strongly. Family defects are being more deeply inquired into with a much more decided result than before. People

are studying their children and trying to build up the environment and influence which will best tend to develop the talent given. Children are being taught in our public schools how to develop the body as well as the mind and are given exercise which will tend to correct any bad habits they may have acquired. The introduction of manual training is to be highly commended, inasmuch as it may detect talents that no one suspects and with the right guidance the child may become a second Edison.

As regards the family history it is not easy to turn to the father and ask if his people had fits or to the mother and ask if there were any crazy people on her side of the house. Such a history, when necessary, must be gained by tact and not in the presence of others. A great many times it can be procured from some other member of the family whom you can ask, on some pretext or other, to call at your office.

Families in which there are neurotic taints ought to be told so, if they do not wish to acknowledge them, and they should be taught how to overcome them. If the taints be serious ones, the results of marriage of such an afflicted person, and the crime he is committing and the shame he will bring to his offspring who will come into the world, handicapped, as it were, should be made clear. Some one has said: "A body weakened by sloth and dissipation, an intellect enfeebled by ignorance and disease and a conscience seared by immoral habits and thoughts, will invariably lead to disappointment and failure."

Families are marrying and re-marrying into families with neurotic taints, tuberculosis and epilepsy, without any word of advice from their family physician as to their fitness to marry. This training must start with the family doctor, whose duty is growing more and more to so surround his patient or so direct him, that he will not become ill, but lead a long and useful life. If he should be taught all those things that tend to prolong life, why not whom to marry?

I have in mind one case I will report. The girl was accomplished, pretty, robust and to all appearances healthy with the exception that sometimes at night she has peculiar spells. On her father's side are three epileptics. The young man in question, one of our school teachers, small in stature but full of vim and hustle, had nothing the matter with him, but he has a brother in an insane asylum, a sister, whom not more than six people outside of the immediate family have seen; with a history of two members of the family dying from spasm in infancy. These

people married, and, in the course of time, a child was born—an idiot—the future cost of which cannot be estimated either to the parents or State. The demands of motherhood were too much for the girl and she is now a confirmed invalid. This is happening everywhere and all the time and how much more important it is to see that every human life has a fair show than it is to see that our bulldogs, horses and pet breed of chickens have the right cross.

Not that we can eliminate these dreadful scourges of inheritance, but that each coming generation may be better able to guard each succeeding generation more carefully.

It seems to me that anything that will lessen the curse of inheritance of father to son, will lessen the ever increasing number of unhappy homes and the number of inmates in already overcrowded institutions, deserves our very best effort. It will not only be a crusade against the white plague, but one for a fair chance.

An Eddyite for Profit

It is one of the common occurrences in the average physician's life work, especially if that work is being done in a city, to have as a patient some individual who makes it a point to sneer at physicians and to belittle medical practice. Poor old Dowie, who has now gone to his reward and whose "church" and its commercial appendages are, like their creator, now in process of dissolution, was most bitter in his denunciation of physicians—in public—so bitter, in fact, that his deluded followers would have died, and in many cases did die, rather than call in a physician. But he, the high priest of his cult, did not hesitate to call in a physician—in private—when he became ill. From Boston comes the news that Joseph Armstrong, a prominent Christian Scientist, manager of the *Christian Science Journal* and publisher of all the Christian Science literature, was needed to give a deposition in the case now pending against Mrs. Eddy. When sought Armstrong could not be found, not having appeared at his office for many days. Investigation revealed the fact that he was suffering from an attack of pleurisy and was under the care of regular physicians. "When the devil was sick, the devil a monk would be; when the devil was well, the devil a monk was he." So the Dowieites, the Eddyites and numerous other "ites" who when well and painfree profess a distrust in, and an abhorrence of, physicians and the profession of medicine, when ill and racked with pain find the medical man a very handy person to have around.—*Journal A. M. A., August 24, 1907.*

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

The Official Organ of the Cleveland Academy of Medicine

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Newspaper Misquotations

The publication of articles dealing with medical matters by the average newspaper very frequently furnishes amusement to the physician, since the technical terms used are very apt to be wrong and very often the facts as given are far from accurate. Occasionally real harm is done by the publication of such articles without permission, or without the review of the article by a person familiar with the subject. An instance of this sort was the misquotation of an address given by Dr S. A. Knopf, the well known authority on tuberculosis. This address was delivered at Washington before the National Association for the Study and Prevention of Tuberculosis. In it Dr Knopf advised that morphin be given to patients in the last stages of consumption, merely to afford relief from the distressing symptoms. The day following, the *North American*, of Philadelphia, contained a sensational article in which Dr Knopf was reported as advising the killing of dying consumptives quickly and painlessly by large doses of morphin and as making a daily practice of such treatment.

The article has been widely quoted all over the United States, notwithstanding the emphatic contradiction of the report by the Secretary of the Association and others. Dr Knopf is still being overwhelmed with letters from people who have seen the newspaper statement, but not the denial of it. If it were merely a personal matter, Dr Knopf would probably consider it unworthy of notice, but it cannot be denied that such a report may be the means of alarming consumptives or their friends and interfere with the extension of the good work in the anti-tuberculosis cause.

We are very glad to give whatever publicity lies in our power to the statements of Dr Knopf, Dr George Dock, and the Secretary of the National Association, that the report of the *North American* was entirely misleading and at variance with the facts. The mistake was probably neither intentional nor malicious, but simply due to the failure of a layman to grasp the situation, hence the necessity of a censorship by a competent person on the staff of a newspaper or else the submission of such an article, to the physician quoted, for correction.

Probably the most widely circulated report of this sort was the erroneous quotation by the newspapers of some remarks made by Dr William Osler a year or so ago. Notwithstanding the falsity of the report it spread like wild fire and no doubt the great majority of the people still believe that Dr Osler really advocated the extraordinary procedure credited to him by the newspapers.

Insurance Fees

The efforts made by the profession to induce certain Life Insurance Companies to restore the former fee of $5.00 paid for examinations seems to be bearing fruit. We understand that the Mutual Company of New York has done so, and the *Pennsylvania Medical Journal* for August reproduces a circular letter from the Equitable Company of New York to its examiners announcing the restoration of the $5.00 fee for all examinations with an additional allowance of $5.00 for a microscopic examination of the urine when required. No doubt the example of these two influential companies will be followed by those others that still insist upon paying a lower fee. The matter has been thoroughly discussed in the various medical journals of the country,

and has been acted upon by a special committee of the A. M. A. and by many county and state medical societies. The justice of the claim for reasonable compensation for such expert work cannot be denied nor does it seem to be a wise business policy on the part of a company to pay an inadequate fee for services which may prove so valuable to it in protecting it from bad risks.

Professional Secrecy

The great danger of professional secrecy in the case of a person infected with venereal disease is discussed by E. H. Grandin in an address before the Society of Sanitary and Medical Prophylaxis. (*Monthly Cyclopaedia of Practical Medicine,* July, 1907.) He points out as examples the frequent infection of newly married women by their husbands who have a latent or chronic gonorrhea, the infection of an infant's eyes, due to a maternal infection from the same source, or the birth of a syphilitic infant owing to the infection of one or both parents. In many instances the physician who has treated a man for gonorrhea learns of the latter's contemplated marriage but, realizing fully the risks to the bride, he is bound to keep silence or can at most advise the prospective bridegroom of the danger; the responsibility of the physician in advising the bride or her relatives seems only too evident, and yet legally he is helpless and if he did notify them he might furnish grounds for a suit for damages brought by the man.

Boards of health have placed venereal diseases upon the list of infectious diseases to be reported by physicians, but as a matter of fact they are not reported, and hence it is utterly impossible to follow up such cases. Publicity would probably do more to control the situation and limit the spread of venereal disease than any other measure, but it would be a tremendously difficult undertaking to make it effectual and concerted action by the profession as a whole would be necessary. Until some such plan as this is in operation, or until the physician is legally freed from any obligation of secrecy, the sacrifice of many innocent women and children must continue. Dr Grandin urges that at least a start be made in this direction, even if it takes a century to effect any material mitigation of the evil.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Cardiac Conditions in Acute Infections: In the *Medical Record* for June 29, David Bovaird, Jr., considers the treatment of the cardiac conditions of acute infectious diseases under these heads: (1) circulatory failure at the height of the acute infections, (2) cardiac dilatation (acute), (3) bradycardia, irregular or intermittent heart action, (4) asytole. In the acute infections, the circulatory failures seen are not cases of cardiac failure properly speaking, but of a vasomotor paralysis produced by the effect of the toxins on the vasomotor center. The vasomotor paralysis affects especially the vessels of the splanchnic area, and the heart fails because of lack of blood to act upon. To strengthen cardiac action therefore, one must restore the tone of the vessels, particularly the splanchnics, and the remedies most efficient are caffein, camphor, infusion of normal salt solution and abdominal massage. His own experience with caffein and camphor has not led him to put great confidence in them, and while, theoretically, adrenalin meets the indications, its action is very transient and uncertain, and he has never seen the beneficial effects claimed for it. All are convinced of the value of normal saline solution to help the failing circulation, but we should use it cautiously in pneumonia, lest we overtax the right heart. Despite the apparent failure in experimental work the best clinicians still rely upon alcohol, strychnin and digitalis to meet this circulatory failure of the acute infections. Acute dilatation of the heart, resulting from myocardial changes directly, may occur at the height of any of the acute infectious diseases but is more frequently seen during convalescence. In most cases it may be avoided by requiring rest in bed for some days after the pulse becomes normal. The danger of acute dilatation is greatest in diphtheria, and may come on independently of exertion of any kind. The treatment is rapid, and vigorous stimulation of the heart, by camphor and ether and whiskey hypodermically, then strychnin and digitalis, caffein may be given or strong black coffee. After the crisis of the onset passes he relies upon the systematic use of strychnin and digitalis; with restlessness or pain, morphin or opium is of great help especially in children, and as long as there are any signs of cardiac weakness there is a risk in allowing any liberty especially in children. Bradycardia occurs most commonly during convalescence and most frequently after diphtheria. In convalescence from pneumonia or typhoid fever, bradycardia is quite harmless, but in diphtheria any disturbance of the pulse is to be viewed with concern and efforts made to prevent possible serious cardiac failure. Medication is of secondary importance, and if there is faintness or prostration with the irregularity give alcohol, caffein, or strychnin. Digitalis or strophanthus is not of service in these conditions. As to asystole, the sudden stopping of the heart is rare in the acute infectious diseases but most apt to occur in diphtheria or pneumonia. Care should be observed in the transition from rest in bed to active effort, the responsibility resting with the patient after having been warned. No treatment avails, death being instantaneous.

Sunstroke: In the *Therapeutic Gazette* for June (Journal Royal Army Medical Corps), Captain M. F. Foulds calls attention to a little known treatment for sunstroke,—namely ice-water enemata. His first cases were nine in number, unconscious, with deep stertorous breathing, dry burning skin, rapid pulse, and a temperature of from 107° to 110°. They were stripped and put to bed in the shade. One attendant poured water over them, as cold as could be obtained, and two others rubbed the body with ice. An enema of about a quart of iced-water was given every 10 minutes until the axillary temperature fell to 102°. The back of the neck was blistered. All the patients recovered and Captain Foulds thinks they owed their lives to the use of the enemata. Six others were afterwards treated and these also recovered under similar treatment. He also suggests that the treatment might prove useful in hyperpyrexia as in rheumatic fever, scarlatina, and tetanus.

Pneumonia: Wm. P. Northrup, in the *New York Medical Journal* for July 6, considers the treatment of pneumonia in infants and young children. Treat the patient as though he had an infectious fever. He insists upon hygienic precautions and surgical cleanliness in the case of the infectious diseases in infants. Free evacuation of the bowel is the first indication, and the fever will diminish a little, at least temporarily. After thorough cleansing of the intestinal tract with castor oil, give some substitute for milk for 24 hours, then gradually add diluted and peptonized milk. Remember that in the height of fever, in a severe case, digestion of milk may be quite impossible. Substitute water temporarily, barley water, some thin preparation of food or egg albumen, anything is better than raw milk at first. Infants and children have new and uninjured hearts, and the heart is frequently over-treated in the young. They do not require regular stimulation, that is stimulation by rule, only exceptionally do they require it. Nurses and physicians all watch the pulse too much, and the general condition too little. The experience with adults leads to this and the same need for heart stimulants does not exist. The consequence is the children are overdosed. Make the child comfortable and let it rest. Avoid poultices unless for local pain, using them only intermittingly, letting the skin become dry between applications, and discontinue as soon as possible. He summarizes the treatment as, purgation, calomel and castor oil, or castor oil alone in full doses. Careful feeding to avoid flatulence. Plentiful use of water for drinking and bathing. Quiet and undisturbed rest. Fresh, cool, flowing air. Antipyretics, bathing, sponging, cool drinks, no coal-tar products. Heart stimulants, wine, whiskey, strychnin. Early recognition of any complications, and their treatment.

Bright's Disease: In *American Medicine* for June, William Henry Porter treats of the therapeutics of Bright's disease as based upon its etiology. While it is well known to all that when the renal gland has become decidedly pathologic in its composition and especially is this so in connection with the intertubular tissue, or the interstitial and diffuse forms, it is impossible to restore the organ to its former perfect histologic condition, yet it can in many instances be restored

to such an extent that it will for many years perform perfectly its full function. If the lesion is recognized early, and suitable treatment is at once instituted, recovery is the rule. In treating the fully acquired lesions, out-of-door exercise must be insisted upon with as much precision as the use of medicine. Exercise must not be taken to the point of producing exhaustion but in sufficient amounts to increase the oxygenating capacity of the system, so that it will be enabled more perfectly to oxidize and fully utilize the proteid constituents. The clothing must be such that it will prevent undue chilling of the body surface from sudden atmospheric changes. In fact the best results are obtained when the surface of the body is kept in a gentle perspiration at all times. All unsanitary surroundings must be removed and overwork of the muscular and nervous system must be avoided. All mental worry, and anything that tends to disturb digestion must be controlled in some manner. The chief and all-important treatment, however, consists in the perfect management of the diet in accord with our advanced knowledge as to its composition and utilization by the system. Here as in all other diseased conditions, as well as in health, the well-regulated mixed diet is the ideal one to institute. Medication, so called, as formerly used and as still employed in many instances, simply adds fuel to the fire and prevents nature from accomplishing what she might otherwise do and thus prevents recovery. The treatment should be directed not so much to the kidneys as to removing the etiologic factors that enter into the production of these lesions. This will assist nature to remove the causative factors, and so far as possible, repair fully the local damage.

Vaccine Treatment: Rufus I. Cole, in the *International Clinics* (Vol. II, 17th Series), treats of the vaccine treatment of infectious diseases. He believes that sufficient clinical evidence has been presented to make it more than justifiable to employ this method, but we should guard against too hasty conclusions. Above all it should be insisted upon that the opsonic index is of absolutely no value unless carried out with the greatest care, and by one having considerable experience. Vaccines have been employed most largely in the treatment of chronic staphylococcus infections, such as acne and furunculosis, gonococcus infections, to a less extent in streptococcus infections, in colon bacillus infection, tuberculosis and in isolated instances in almost all infections in which the etiologic agent has been isolated. It is impossible to enter into all the variety of cases in which vaccine treatment has been thought advisable and has been carried out, but clinical results indicate that the method is of value. The results are hopeful and the method should be continued until we have absolute data as to its value.

Hemoptysis: P. S. Hichens, in the *Medical Review of Reviews* (*The Practitioner*), states the three chief indications in the treatment of hemoptysis as being to give all possible rest to the lungs and heart, to lower the blood-pressure and to increase the coagulability of the blood. Rest to the lungs and heart is obtained by complete rest in bed and by not allowing the patient to get up for any purpose, unless he is unable to pass a motion in bed without great agitation and difficulty.

Another measure which will soothe the patient and give him bodily and mental rest, quieting the cough and relieving the mental apprehensions, is morphin, given either by the mouth or under the skin. To lower the blood-pressure we may combine various measures. (a) Posture: the patient should not lie flat, but be well propped up with pillows, or a bed-rest. (b) Diet: a restricted diet, cool, and with a diminution of liquids and a small quantity of easily digestible solids, such as minced meat, or minced chicken in the form of sandwiches. Thirst may be combated by allowing small pieces of ice to be sucked. (c) Derivative medicines which will carry away fluid from the blood and dilate the abdominal vessels. The most convenient for this purpose are mild saline purgatives. (d) Vasodilators: If we cannot stop bleeding from the lungs by vasoconstrictors, we can certainly influence the blood-pressure in the lungs by vasodilators, either immediately and evanescently by inhalations of nitrate of amyl, or more gradually and continuously by glyceryl nitrate or erythrol tetranitrate (grain 1-10 to one-half). The third indication, to increase the coagulability of the blood, may be accomplished by giving 15 to 20 grain doses of calcium chlorid (or better calcium lactate) either three times a day or more frequently, as every four or six hours. This must not be given for more than three or four days at a time, otherwise the effect will be the reverse and the blood will become less coagulable.

Headaches: Beverley Robinson, in the *Monthly Cyclopedia of Practical Medicine* for June, believes that the results of urinary analysis would appear to be of some value whenever the cause of a headache is obscure and there are symptoms of gastrointestinal disturbance. He further states that the practical outcome, however, of urinalysis in obscure cases of headache connected with gastrointestinal fermentation, eructations and what not, all apparently included nowadays in "faulty metabolism," is only half satisfactory. We do indeed help the severity and frequency of many recurrent headaches by suitable medication, or treatment (lavage above and below) of stomach and bowels, but, up to the present time, we have rarely or never cured true hemicrania. Why? Because it is a constitutional neurosis. In many cases of headache, we have merely the temporary result of a toxemia. If we neutralize this toxemia, well and good, we cut short the headache as with a perfect antidote; if we neutralize merely, as it were, the result or concomitance of the toxemia (faulty metabolism) we are helpful but not strictly speaking curative. He is now investigating results obtainable with Metchnikoff's "lactobacillus," the great generator of lactic acid in the intestine, and with the legitimate hope, not of curing all forms of headaches and certainly not true hemicrania, but of neutralizing perhaps the toxemia of those headaches which seem to be intimately associated with neurasthenia.

Exophthalmic Goitre: In the *New York Medical Journal* for July 13, John P. Sawyer treats of the treatment of incomplete forms of exophthalmic goitre especially in relation to gastrointestinal disease. As to drug treatment he has tried nearly all the remedies recommended, especially arsenic and iodin, both in the iodids and by catephoresis. bromin in the various bromids has been especially used in the cases in

which palpitation or sleeplessness are prominent. He has found benefit from the use of arsenic but believes it to be harmful in the cases in which the small lymphocytes are in much less than normal proportions. The iodids have not been particularly successful except in the use of iron iodid with the patients whose blood shows a large mononuclear count particularly at the expense of the small lymphocytes. A few weeks administration of two or three grains of iodid of iron after meals is usually followed by a nearer approach to normal proportions. Sodium bromid in full doses is very useful to control palpitation and nervous excitement, generally when they are not controlled by the physical measures and serum preparations. Quinin bromid in two or three grain doses sometimes with a small dose of adrenalin is occasionally followed by considerable relief from the tremor and mental disturbances and sweating of the patients. But all these preparations he believes of secondary value to physical measures of environment, climate, hydrotherapy electricity and massage. He has had encouraging results from the serum preparations, as well as from thyroidectin. In cases which could afford it, or after a failure of thyroidectin, he has used the antithyroidin of Möbius, a serum preparation from the blood of thyroidectomized goats. This is given in doses of two to five cubic centimeters three times a day, and with it he has had most encouraging results. He is satisfied that these substances have added greatly to the comfort and physical well-being of a great number of cases.

Infant Diet: In the *Medical Bulletin* for July, W. C. Hollopeter treats of the natural feeding of infants. Breast-feeding is the natural and ideal method of infant-feeding, and every mother should nurse her infant, unless there are some serious contraindications. The contraindications to breast-feeding are: (1) No mother who is subject of tuberculosis should nurse her infant; (2) Nursing should seldom be allowed when serious complications have been connected with parturition, such as severe hemorrhage, puerperal convulsions, nephritis or puerperal septicemia; (3) If the mother suffers from chorea or epilepsy; (4) If the mother suffers from any chronic disease or is very delicate; (5) When no milk is secreted. The use of alum and alcohol or tannic acid, often prescribed before confinement to harden the nipples, does more harm than good, in that by their use fissures often result. Washing the nipples with hot sterile water followed by applying cocoa butter toughens instead of hardening them and is much preferable. He also recommends massage of the nipples at night. Before the infant is placed at the breast, the nipples should always be carefully washed either with plain sterile water or a weak boric acid solution, and after nursing the nipple should again be cleansed, and covered with a piece of sterile gauze. Regularity is very important, for it means the formation of proper habits. Regularity in the feeding and sleeping of the child is alike advantageous to the mother and infant. Regular habits of feeding and sleep and regular evacuations from the bowels are important factors in the prevention of gastrointestinal troubles so far as the baby is concerned, and help much in the progress of the child. Water should be administered freely and systematically. It should take the child from 15 to 20 minutes to fill its stomach and satisfy its hunger. Feeding when prolonged too much is very injurious

to both the mother and child. The whole operation of nursing requires the closest attention of the mother, whose physical condition has much to do with the development of the child.

The Cacodylates: *Merck's Archives* for July reminds us that Gautier, in 1899, introduced the cacodylates into therapeutics and for a number of years following the introduction of these organic arsenic combinations, enthusiastic approbation was given to them particularly by French therapeutists. On the foundation of purely hypothetical reasons, Fraser pronounced them worthless, and Fraser's authority has led practically all English authors to adopt his *ipse dixit,* and in most of out text-books his criticisms have been handed down. Spencer Dawes and Holmes C. Jackson (*Journal A. M. A.*) show, however, that Fraser's reasoning is based entirely upon false premises, and that his criticisms are misplaced and erroneous. The cacodylate of soda not only has a distinct pharmacologic action, but is decomposed in the body and is eliminated as arsenates in the urine and feces, and probably in the sweat and the breath. In 45 cases, similar to those in which arsenic is usually employed, 34 were cured, 11 were not benefited and two were made worse. The patient gains in weight and almost invariably feels better.

Nephritis: In the *American Journal of Clinical Medicine* for August, W. F. Waugh refers to a case of advanced nephritis with uremic convulsions, in which recovery followed under skimmed-milk diet, and with this formula: sodium acetate, one ounce; chloroform and benzoic acid, each one dram; water to make 12 ounces; dose a tablespoonful every four hours as long as albuminuria persists. He has used this treatment for nephritis for 30 years and has found it so efficient in nephritis of the desquamative type and has noted so many recoveries under its use, that his prognosis in such cases is not very gloomy.

Lakeside Hospital Medical Society

The Lakeside Hospital Medical Society held its regular monthly meeting Wednesday, July 31, 1907.

PROGRAM:

1. (a) A Case of Streptococcus Meningitis; (b) A Case of Streptothrix Meningitis, Dr Cummer.
2. A Case of Pyelitis in a Child with Gastroenteritis, Dr Stone.
3. Two Cases of Monoarticular Arthritis (Knee) with Outline of Treatment Employed, Dr Hofmann, Dr Ladd.
4. A Case of Recurrent Mastoiditis with Meningeal Symptoms, Dr Hofmann.
5. Report of a Recent Series of Cases of Pericarditis, Dr Vincent.
6. Report of a Case of Fatal Hemorrhage from the Ear in a Child with Chronic Mastoiditis and Generalized Tuberculosis, Dr Hofmann.
7. Report of a Case of Endothelioma of the Abdominal Viscera Associated with Marked Hemorrhagic Ascites, Dr Cox.
8. Demonstration of Treponema Pallidum, Dr Ladd.

Book Reviews

The Essentials of Chemical Physiology, for the use of students, by W. D. Halliburton, M. D., LL. D., F. R. S., Fellow of the Royal College of Physicians, Professor of Physiology in King's College, London; Author of "Textbook of Chemical Physiology and Pathology." Sixth edition. Longmans, Green & Co., New York, Bombay and Calcutta; 39 Paternoster Row, London. 1907.

This, the sixth, edition of an already well-known work contains a surprising amount of information for its size and the subject is presented in an extremely interesting manner. In perhaps no branch of medical sience are our ideas undergoing such modification as in physiologic chemistry and the accepted views of yesterday have to be discarded for the new discoveries of today. Especially is this true of the proteins and the processes concerned in their absorption and metabolism. This part of the subject has been brought thoroughly up to date, the new classification of these substances is stated to be only provisional on account of our incomplete knowledge of them but, thanks to the work of Emil Fischer and others, we are daily finding out more about them.

The action of the digestive ferments is well described and a brief resume of the processes of immunity deserves mention, this is really a question of physiologic chemistry and is as clearly expressed as our partial acquaintance with the actual processes concerned will admit.

The work is primarily intended for the student and directions are given for a series of experiments to be carried out by him, an advanced course is also given for those who wish to pursue the subject beyond an elementary stage. An appendix deals with certain technical subjects too lengthy to be inserted elsewhere in the text; diffusion, osmosis, etc., and the mechanism and use of certain instruments such as the polariscope, etc., are here explained. The book is of very convenient size and well made and will undoubtedly appeal to anyone interested in the subject.

The Treatment of Tuberculosis of the Spinal Column, by Dr F. Calot, Chirurg am Hospital Rothschild, am Hospital Cazin-Perrichaud, am Hospital de l'Oise et des départements, des orthopädischen Instituts in Berck, u. s. w. Translated into German by Dr P. Ewald, 1. Assistent an der chirurgisch-orthopädischen Klinik von Prof. Dr Vulpius in Heidelberg. 120 cuts with a preface by Prof. Dr Vulpius.

In this monograph the author reviews briefly his reasons for forcibly correcting the spinal column and elaborately describes how direct pressure may be applied in correcting the deformity. An interesting detail which is probably new is a description of a simple head sling. Some very instructive cuts are given showing the courses of abscesses. As to his well known previous work on forcible correction under an anesthetic no special mention is made.

Medical Jurisprudence, Forensic Medicine and Toxicology, by R. W. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology in Cornell University, and Tracy C. Becker, A. B., LL. B., Counsellor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo, with the collaboration of August

Becker, Esq.; A. L. Becker, Esq.; Chas. A. Boston, Esq.; Hon. Goodwin Brown; W. N. Bullard, M. D.; J. C. Cameron, M. D.; J. Clifton Edgar, M. D.; Jas. Ewing, M. D.; E. D. Fisher, M. D.; J. C. Johnson, M. D.; D. S. Lamb, M. B.; H. P. Loomis, M. D.; W. B. Outten, M. D.; Roswell Park, M. D.; J. Parmenter, M. D.; Irving C. Rosse, M. D.; E. V. Stoddard, M. D.; George Woolsey, M. D.; J. H. Woodward, M. D. Second edition, Volume Two. William Wood & Company, New York. 1907.

The second volume of this valuable work deals with forensic medicine, including death from various means, and the determination of survivorship The second part of the volume takes up the consideration of such matters as concern the mother and child, together with sexual crimes, natural and unnatural, and ends with a full treatment of the results and the legal relations of railway injuries.

Great care is taken to emphasize the importance of careful examinations by the physician and the attention to details which, while they have no especial bearing on the case from a purely medical point of view, may be of extreme value in determining the responsibility.

The illustrations are good and the arrangement convenient. The general appearance of the book has already been referred to in the review of the previous volume. In all important matters a large number of cases are cited and details are given where these may aid in the clearness. In fine, the second volume answers to the expectations called forth by the first.

Practitioner's Handbook of Materia Medica and Therapeutics, Based Upon Established Physiological Actions and The Indications in Small Doses to which is added Some Pharmaceutical Data and The Most Important Therapeutic Developments of Sectarian Medicine as Explained Along Rational Lines, by Thos. S. Blair, M. D., Member American Medical Association, Pennsylvania State Medical Society, Harrisburg Academy of Medicine, Member Visiting Staff of Harrisburg City Hospital, etc. The Medical Council, 4105 Walnut Street, Philadelphia, Pa.

This is a very satisfactory little work, presenting from the author's viewpoint what is of practical value in the various schools of practice in so far as the clinical use of small doses of drugs is concerned. He summarizes briefly the therapeutic uses of the agents he considers, and which he has found of the most marked worth, whether gleaned from the regular homeopathic, or eclectic field. Special stress is placed upon the difference of action of the large and small doses of many drugs, and the relative differences in strength and method of preparation of the United States Pharmacopoeia, the homeopathic and the eclectic tinctures. It will prove of much interest to all physicians regular or not, and presents much practical information within a small compass.

A Manual of Normal Histology and Organography. By Charles Hill, Ph. D., M. D., Assistant Professor of Histology and Embryology. Northwestern University Medical School, Chicago. 12mo. volume of 463 pages with 312 illustrations. Philadelphia and London: W. B. Saunders Company, 1906. Flexible leather, $2.00 net.

This is a brief but accurate manual of the subject and is designed

more especially for dental students, the organs and tissues with which the dentist is interested being given more than the usual proportion of space.

The text appears to be accurate and up to date. The figures are mostly reproductions from other well known text books. They are well selected, sufficiently numerous and well reproduced. The making of the book, both in typography and its flexible cover, is excellent. Altogether the book is a distinct addition to the long list of text books in this line and is commended for the field it aims to supply.

Syllabus of Lectures on Human Embryology: an introduction to the study of Obstetrics and Gynecology for Medical Students and Practitioners; with a Glossary of Embryological Terms. By Walter Porter Manton, M. D., Professor of Clinical Gynecology and Professor Adjunct of Obstetrics in the Detroit College of Medicine; Fellow of the Zoological Society of London, of the Michigan Academy of Sciences, etc., etc. Third edition. Revised and enlarged. Illustrated with a colored frontispiece and numerous outline drawings. 12mo, 136 pages; interleaved throughout for adding notes. Bound in extra cloth. Price, $1.25, net. F. A. Davis Company, 1914-16 Cherry Street, Philadelphia, Pa.

This small manual is offered to the medical profession as an outline of embryology. This seems to the reviewer a misnomer, because it does not represent the modern embryology. Its subtitle "An Introduction to Obstetrics and Gynecology" is more nearly correct.

The work does not take note of the modern advances, and errors of statement that were disproved ten years ago are repeated. Moreover, many obsolete terms are used. The treatment is very fragmentary and it is rather presumptuous for an author to attempt to give a sufficient treatment of embryology for the medical student in 100 duodecimo pages of text.

The appendix on embryologic technique is hardly to be taken seriously. The methods advocated might have been useful twenty-five years ago, but hardly now. The statement p. 116 that one may cut embryologic series for microscopic work *free hand,* gives an idea of the value of this.

The book may serve for certain introductory purposes but a student who has completed this should not consider that he has had a course in embryology.

Typographically the book is excellent.

The Technic of Modern Operations for Hernia. By Alexander Hugh Ferguson, M. B., M. D., C. M., F. T. M. S., Commander of the Order of Christ of Portugal; Professor of Clinical Surgery, Medical Department of the University of Illinois; Professor of Surgery at the Chicago Post-Graduate Medical School; President of the Chicago Hospital; Surgeon to the Chicago and Post-Graduate Hospitals; Fellow of the International Surgical Association, American Surgical Association, Chicago Surgical Society, etc., etc., Chicago, Ill. Illustrated by reproductions of original drawings from the author's collection. Chicago, Cleveland Press, 1907.

Modern Operations for Hernia, by Alexander Hugh Ferguson, of Chicago, is a most timely treatise especially in that the occasional surgeon and the surgically ambitious recent graduate are so frequently attempting

the radical cure of hernia. It is not only a critical review of all that generations of surgeons have produced in this field, but advances the ideas of one preeminently versed by the school of large experience.

The technic of the various operations for the common as well as the rare forms of hernia is lucidly set forth. This is particularly true of the so-called internal herniae.

The chapter on the "Indications for Operation" is a masterpiece and at once impresses the reader with the careful discriminating surgical judgment of the author.

The work is well illustrated, but the criticism might be offered that the plates are arranged with little or no regard for the text, which is confusing. This volume should be in the library of every practitioner in that it is an encyclopedia of the subject. The work is from the Cleveland Press of Chicago and characteristic of their typographic art.

Acknowledgements

Announcement, American Health Association.

Studies upon Hypersusceptibility and Immunity, Treas. Dept., U. S. A.

The Influence of Antitoxin upon Post-diphtheritic Paralysis, Treas. Dept., U. S. A.

Medicinal Treatment of Gall-Stones, H. Richardson, M. D., Baltimore.

Opsonins and the Use of Therapeutic Vaccines in Treating General Paralysis of the Insane, John D. O'Brien, M. D., Massillon, O.

Splanchnoptosia, Byron Robinson, B. S., M. D., Chicago.

Monthly Bulletin New York Department of Health.

McGill University, Annual Calendar.

Physicians' Manual of the Pharmacopeia and the National Formulary. Am. Med. Assn.

Manual of Diseases of the Eye, by Charles H. May, Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York.—1890-1903; Ophthalmic Surgeon to the City Hospitals, Randall's Island, New York; Consulting Ophthalmologist to the French Hospital, to the Gouverneur Hospital, and to the Red Cross Hospital, New York; Adjunct Ophthalmic Surgeon to Mt. Sinai Hospital, New York, etc. Fifth edition revised, with 362 original illustrations, with 22 plates with 63 colored figures. 1907. Messrs. Wm. Wood & Co. $2.00 net.

Organic Chemistry, including certain portions of Physical Chemistry, for Medical, Pharmaceutical and Biological Students, with practical exercises, by H. D. Haskins, A. B., M. D., Instructor in Organic and Bio-Chemistry, and H. M. Hanna Fellow, Medical Department Western Reserve University; Professor of Chemistry, Cleveland School of Pharmacy, and J. J. Macleod, M. B. (Aberd.), D. P. H. (Camb.), Professor of Physiology, Western Reserve University. 12mo., x+367 pages, 24 figures. Cloth, $2.00 net (8/6 net). New York, John Wiley & Sons. London, Chapman & Hall, Limited. 1907.

Correspondence

Editor Cleveland Medical Journal:

Dear Doctor:—In the Cleveland News of August 2d, the following paragraph appears:

"Dr N. M. Geer is now under indictment by the Grand Jury on the charge of practicing medicine without a license.

The true bill was returned in June, 1905, upon information furnished the Grand Jury by the State Medical Board.

Geer's lawyers filed a demurrer to the indictment. This demurrer has never been heard, and prosecution of the indictment has been delayed in consequence.

'I hope the two cases will be prosecuted against Dr Geer,' said County Prosecutor Leighley, Friday morning. 'Failure to prosecute the old indictment is due to the neglect of the State Board to push the case.' "

In view of the facts I am surprised that anyone connected with the Prosecuting Attorney's office should make the statement contained in the last sentence of the above paragraph.

Upon evidence furnished by the State Board of Medical Examination, Dr Geer was indicted for the illegal practice of medicine in November, 1903. Mr. Keeler, then prosecuting attorney, promised that the case should have an early trial. From that time on efforts were made from time to time to have the case put on trial, but without avail. In the spring of 1905 an investigation revealed the fact the case had been nolled in June, 1904.

This was done without the knowledge of the Board or any of its representatives.

Another indictment was obtained in June, 1905, but the Prosecuting Attorney could not be induced to put it on trial. In January, 1907, a change having taken place in the office of the Prosecuting Attorney, Mr. Gott took an interest in the Geer case and prepared to try it. Some legal technicalities were encountered which can be better explained by the attorneys. Later a demurrer was filed attacking the legality of the indictment. Since then the Board and its attorneys have used their best endeavors to have this demurrer heard in order that the case might be pushed to a conclusion.

If there has been any neglect in the prosecution of the Geer case it has not been on the part of the State Board of Medical Examination.

Fraternally yours,

H. H. BAXTER, President of the Board.

Medical News

V. D. Vietz, of Youngstown, took a trip up the Lakes during August.

S. B. McGuire and wife, of Canal Dover, spent a week at Silver Lake.

Harry Patrick and wife, of Elyria, recently took a trip to Port Huron.

D. W. Gans, of Massillon, spent three weeks fishing at Little Current, Ontario.

C. W. Conley, of Eaton, took an extended trip through the southwest recently.

G. E. Robbins and wife, of Chillicothe, report a very pleasant trip to Europe.

T. F. Reed, of Massillon, spent a month's vacation at Mitawanga on Lake Erie.

F. C. Smith and wife, of Geneva, spent their vacation in the Adirondack Mountains.

J. W. McMurray, of Marion, spent his vacation in an outing along the St. Lawrence River.

Dr Hedges, of Mansfield, has recently completed a special course in ophthalmology in Chicago.

M. Stamm, a well known Fremont physician, is at home again after circumnavigating the globe.

Eleanora Everhard and Gertrude Felker, both of Dayton, are on a trip up the St. Lawrence River.

H. S. Brown and wife, of Niles, recently took an automobile trip to Niagara Falls and Rochester, N. Y.

W. M. Denman and wife, of West Unity, are at the present time making a tour through the northwest.

J. L. Holden and wife, of Zanesville, are in Europe. They expect to be away about two months, touring England and the Continent.

R. E. Garnhart and wife, of Milan, were in the East for a short time, while the Doctor was taking a post-graduate course at Philadelphia.

Ira A. Tripp, who has recently returned from a European trip, has opened offices at 233-234 Osborn Building. Dr Tripp will devote himself to eye, ear, nose and throat work.

Lake County Medical Society. The forty-first regular meeting was held at 8 p. m. on Monday, August 5, 1907, at the Parmly Hotel, Painesville, Ohio. Program: 1. Reports and presentation of cases. 2. Miscellaneous business. 3. Address by S. W. Kelley, of Cleveland, on "The Summer Complaints of Children."

A biography of the late Nathan Smith Davis, the "Father of the A. M. A.," by Isaac N. Danforth, will soon appear from the Cleveland Press of Chicago. Such a work will prove of great interest to the profession and especially to members of the A. M. A. It is but fitting that the record of a man who has played so prominent a part in the development of medicine in America, should be preserved and rendered available in the form of a biography.

American Medical Editors' Association. The thirty-ninth annual meeting of this Society was the most successful in point of attendance and general interest ever held. The rapid increase in membership is an assurance that in the future the meetings of the American Medical Editors' Association will be an important feature annually. Sixty-four new members were elected. The papers presented were of unusual interest, were thoroughly discussed and will appear in the form of a bound transaction early this fall. The papers read were as follows: The Future of

Medical Journalism, by James Evelyn Pilcher, M.D., Pres. Shortcomings of Physiology the Chief Obstacle to Medical Progress, by C. E. DeM. Sajous, M.D. How Can We Make Medical Journalism Better? (a) For Our Readers. (b) For Our Advertisers. (c) For Ourselves. By W. C. Abbott. A Word or Two from an ex-Journalist, by Samuel W. Kelley, M.D.* The First Medical Journals, by O. F. Ball, M.D. Twenty-five Years of Medical Editorship, by Stephen Lewis Pilcher, M.D. The Psychology of Medical Journals from the Reader's Standpoint, by T. D. Crothers, M.D. Further Reflection on the Official versus Independent Medical Journals, One Year's History, by W. J. Robinson, M.D. The Situation, by C. F. Taylor, M.D. Some Aspects on Medical Journalism, by W. F. Waugh, M.D. Subject Not Announced, by J. J. Taylor, M.D. A Few Feeble Remarks, by W. A. Young, M.D. Medical Abstracts and Their Relation to the Medical Journal, by Mary M. S. Johnstone, M.D. The American Medical Editors' Association, Past, Present and Future, by Joseph MacDonald, Jr., M.D. An important feature of the meeting was the appointment of a Committee of Publicity, whose duty it will be to see that the medical profession, through the medical press, are promptly informed upon all matters of general interest. The Committee appointed was: W. J. Robinson, M.D.; Thomas Stedman, M.D., and the Secretary of the Association. The following officers were elected: President, C. F. Taylor, M.D., Philadelphia, Pa., Editor of the Medical World; 1st Vice-President, Kenneth Millican, M.D., St. Louis, Editor St. Louis Medical Review; 2d Vice-President, H. E. Lewis, M.D., N. Y., Managing Editor of the International Journal of Surgery; Secretary and Treasurer, J. MacDonald, Jr., M.D., Managing Editor of the American Journal of Surgery. Executive Committee: W. C. Abbott, Editor of American Journal of Clinical Medicine, Chicago, Ill.; W. A. Young, Editor of Canadian Journal of Medicine and Surgery, Toronto, Ont.; D. C. English, Editor of the Journal of the Medical Society of New Jersey, New Brunswick, N. J.

Deaths

Leo W. Sapp, of this city, died at his home August 4.

John S. McBean, a prominent physician of Cadiz, died July 27, after a lingering illness.

Winfield S. Stone, a well known physician, died at his home in Caledonia after an illness of about six months.

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*Appearing in full in this issue of the Journal.

The Cleveland Medical Journal

Vol VI October, 1907 No 10

Suppuration in the Retroperitoneal Glands

BY C. A. HAMANN, M. D., Cleveland, O.

Suppurative processes in the retroperitoneal glands are not common occurrences. Lesions of the intestinal mucosa, such as those of typhoid fever, and appendicitis, are probably the most common causes. Tuberculosis is another factor, and thirdly there is a group of cases in which the suppuration seems to be primary in these glands, *i. e.,* there is either no evident source of infection in the neighborhood, or there has been suppuration in the inguinal glands. Roughly then, one might divide the cases into three groups. 1. Those due to lesions in the intestinal mucosa—such as typhoid fever and appendicitis. 2. Tuberculosis of the glands, either primary or secondary, and 3. Cases of suppuration (acute and due to ordinary pus cocci) in which there is no source of infection in the neighborhood, or the suppuration is secondary to an infection of the inguinal glands.

As is well known, the mesenteric glands in typhoid become hyperemic and swollen; according to Osler, necrotic foci are common and the same author states that suppuration was encountered in several of his cases, in one instance a large mesenteric abscess having formed. As one would expect, it is especially the group of mesenteric glands at the lower end of the ileum that is affected.

In a case recorded by Lehmann (*Centralblatt für Klin. Med.,* Aug. 1891, pp. 649) there was suppuration of a mesenteric gland, the pus showing a pure culture of the bacillus typhosus.

Fraenkel (*Verhandlungen d. Cong. f. Innere Med.,* 1887, pp. 179) also reported a case in which 1½ litres of pus were evacuated; the bacillus typhosus was the only organism found.

Michie (*Brit. M. J.,* 1888, I, pp. 1388) reported a case of

Read before the Academy of Medicine of Cleveland, September 20, 1907

suppuration in a mesenteric gland successfully operated upon (Keen).

Primary tuberculosis of the mesenteric glands is fairly common in childhood. Woodhead (quoted by Morf, *N. Y. M. J. and Phila. M. J.*, Aug. 29, 1903, pp. 410) found 14 cases of primary tuberculosis of these glands in 127 cases of tuberculosis in children.

Carr (quoted by Morf, *idem.*) found five instances in 120 autopsies in children.

Morf found tuberculosis of these glands in four per cent. of 232 autopsies, recorded in the Rush Medical College, and Koenig found these glands affected in two per cent. of 2300 autopsies. In these cases, however, the tuberculosis was not primary. No statistics can be found in regard to the frequency of primary tuberculosis of the retroperitoneal glands in adults.

Experiments in Cornil's laboratory by Dabrolonsky, and Cornet's observations, show that the bacilli can pass through the intact mucosa and infect the glands; in some cases the leukocytes are the active agents in conveying them (Morf).

The experiments of Nicola and Descos confirm these observations.

When suppuration occurs in these tuberculous retroperitoneal glands, the abscess or rather the collection of puriform material may burst into the peritoneal cavity, producing local or general peritonitis. The abscess may burrow extensively in the loose retroperitoneal tissue, and then point in the loin, or above Poupart's ligament or in the thigh. Painter and Ewing (*American Medicine,* Sept. 24, 1904) point out that such lesions in these glands may cause spinal symptoms, simulating those of Pott's disease; the symptoms in other cases may suggest hip disease, osteoarthritis, aneurism and osteomyelitis, besides various abdominal conditions.

Richardson and Owen report cases of acute tuberculosis of these glands that simulated appendicitis, and some years ago I recorded an additional case in which the symptoms produced by tuberculous glands along the external iliac artery also led to the diagnosis of acute appendicitis; an operation disclosed the true state of affairs. Following appendicitis there may be an infection of the retroperitoneal glands—namely those posterior to the cecum and colon. Infection of these glands is an occasional cause of persisting fever after an operation for acute appendicitis. In other cases an abscess forms in these glands after the original

wound has closed. Such cases are to be treated, it is needless to say, by the establishment of proper drainage.

It is to the third group of cases that I wish more particularly to direct attention this evening. The symptoms which were present were much alike in the three cases that we have had and may be briefly summarized as follows: After a short period of pain in or about the groin, and in the lower abdomen, there follow fever, chills, and flexion of the thigh on the abdomen, more or less abdominal distension, and in a few days a tender mass can be felt in one or other iliac fossa. The symptoms are quite suggestive of appendicitis; in one of the cases, the flexion of the thigh and the gait of the child strongly suggested hip disease. In two cases reported by Pegram (*Transac. Rhode Island Med. Soc.,* Vol. VI, pp. 643) the diagnosis of hip disease was in fact made. Their histories read almost exactly like those of my cases. It should be mentioned that Koenig in his text-book refers to such cases occurring in children; he merely states that several times he has had occasion to open these retroperitoneal glandular abscesses; nothing is given in regard to the cause.

Source of Infection: In one case there was a suppurating inguinal adenitis prior to the appearance of the mass in the iliac fossa; the abscess was incised by Dr Laffer. Here of course it is easy to see that there must have been direct extension along the lymph vessels to the external iliac glands. In another case, there was no apparent source of infection, and in the third case there was a vague history of trauma.

Microorganisms found: Streptococci were found in one case and staphylococci in two others.

The diagnosis is to be based on the general symptoms, particularly the fever, and more especially on the presence of a tender mass in the iliac fossa with flexion of the thigh on the abdomen. A careful examination ought to enable one to differentiate it from coxitis. Appendicitis is not so easily excluded. However a typical case of appendicitis would come on in a manner that is more or less characteristic. It would be more acute in its onset and progress, with epigastric pain followed by vomiting, then the localization of the pain in the region of the appendix, rigidity, etc.

The treatment consists in making an incision above the outer half of Poupart's ligament, cutting down to the peritoneum—pushing that membrane out of the way—and evacuating the abscess without tearing through the peritoneum. This is I believe always possible. Gauze and tube drainage should be left in the cavity.

In one of my cases, the abscess caused a fulness in the iliocostal space, and the incision was made here.

After drainage has been established there may still be burrowing of pus in the loose retroperitoneal tissue, resulting in a subphrenic abscess; or the pus may find its way into the pleural cavity through the diaphragm, as happened in one of my cases.

The following brief histories of three cases will illustrate the subject: Case 1, M. L., referred by Dr Tanner; the patient, a girl aged 13 years, was seized with severe abdominal pain, on June 13, 1907, followed by nausea and vomiting. The temperature rose to 104°, and tympanites developed; the pain became somewhat localized in the left iliac fossa and on June 18 a distinct mass could be felt here. It was thought to be a case of appendicitis, the appendix possibly being on the left side.

An incision was made over the mass and the peritoneal cavity opened; it was then found that the pus was retroperitoneal, and accordingly the abscess was opened further out, near the crest of the ilium. Two or three enlarged glands were also removed. During the manipulations, it is likely that the peritoneal cavity became infected, for after operation she developed all the signs of a severe peritonitis. She ran a septic course, and on July 8 it was found that she had an empyema on the left side. A portion of a rib was excised and a large amount of pus was evacuated; there was an opening in the diaphragm, through which considerable pus was removed from the subphrenic region. After this she gradually improved, and at the present time there is only a small amount of discharge from the thoracic opening, there is no fever and her general condition is very good.

Case 2, R. N., a two year old girl, referred by Dr Laffer. Patient had recently had a suppurating inguinal adenitis; the abscess had been opened by her physician and the wound had closed. Shortly after this, on July 8, she began to have pain in the right groin, and a few days later a distinct mass could be felt just above Poupart's ligament. She had fever, the thigh was flexed on the abdomen, and Dr Laffer made a diagnosis of suppurating iliac glands. An incision above the outer half of Poupart's ligament was made down to the peritoneum; the serous membrane was pushed away from the abdominal wall until the abscess cavity extending along the iliac vessels was reached and about half an ounce of pus and broken down gland tissue was evacuated. Drainage was established and the child made a prompt recovery.

Case 3, H. Mc. D., age 5, referred by Dr Cohen. Patient gave a vague history of a strain or contusion of the left side of the trunk a week or more before this illness began. Dr Cohen had been seeing him for a few days and found that he had fever, the evening temperature being 105°, with pain in the left iliac fossa and left lumbar region, and flexion of the thigh on the abdomen. When we examined him, together on August 23, we found that there was a fulness in the left iliocostal space, tender on pressure; one or two masses could also be felt in the iliac fossa; these were thought to be enlarged lymph glands. The fever, swelling, tenderness, and a high leukocyte count pointed to the presence of pus. An incision was made in the iliocostal space and after division of the transversalis fascia several ounces of pus were evacuated. The abscess cavity extended into the iliac fossa and bore no relation to the kidney—*i. e.*, it was not a perirenal abscess. Drainage was established, the temperature at once came to normal and the boy was well in a couple of weeks.

Appendicitis in Children

BY A. F. HOUSE, M. D.,
Associate Professor of Clinical Surgery College of Physicians and Surgeons, Surgeon to St. Clair Hospital, Cleveland

The subject of appendicitis is one of great importance; it has occupied the attention of the medical profession for many years; it has been discussed and debated at almost every society meeting of any note until one would suppose that there was but little more to learn concerning this rather puzzling disease. Notwithstanding this much-debated subject, there can be no question but that appendicitis is the most important acute abdominal disease of the present time, and that, excluding perhaps certain zymotic diseases, it is the cause of more deaths than any other acute abdominal lesion.

There are certain features in connection with appendicitis in children which require special attention, because if looked upon from the same standpoint as in adults, our results will not attain the highest degree of satisfaction. We must also bear in mind that, the older the child the nearer the disease approaches the adult form.

Anatomic Differences:—As for the appendix itself, the differences between the infantile type and the adult form lie in the relative size of the appendix, the thickness of the coats and the

Read before the Academy of Medicine of Cleveland, September 20, 1907

form of the ceco-appendical junction. Compared with the adult form, the infantile appendix is slightly larger in relation to the size of the body and considerably larger if it is considered in relation to the entire alimentary canal. The coats of the infantile appendix are much more delicate in proportion, especially the submucous coat. (Kelly.) In many children the meso-appendix is very short, which aids disturbances in the circulation of that portion of the appendix which projects beyond the end of the mesentery. The omentum in young children is very small and not very substantial, hence it cannot be of as much use in protecting the general peritoneal cavity from a diseased appendix as in the adult.

Etiology:—The etiologic factors in producing appendicitis in children are much the same as those that cause the disease in the adult. The most prominent of these is the occurrence of bacterial infection in a vestigial organ which, like others of its class, possesses but a low vital resistance and is susceptible to destructive changes on slight provocation. The bacillus coli communis is constantly present in the intestinal canal and consequently in the appendix, finding its normal habitat there. It retains its non-pathogenic characteristics as long as the structure of the appendix is unaltered. Slight abrasions of its mucous membrane, however, may occur from the presence of hardened fecal matter, or circulatory disturbances may arise from angulation or kinking of the organ, or by pressure on it when it is situated to the outer side of the colon and between the latter and the lateral boundaries of the abdominal wall where it is frequently found at operation; all of these render an organ, functionless through evolutionary changes, exceptionally vulnerable to bacterial infection. The relationship between appendicitis and infectious diseases must be borne in mind. Errors in diet are frequently noted in the histories of children, more especially in the recurrent form. Foreign bodies and fecal concretions are as frequently met with in children after the fifth year of age as in the adult, the reason for which undoubtedly lies in the fact that the hard fecal concretions so often met with in appendicitis take some time to form and are therefore rarely found in infancy and early childhood.

Metchnikoff and Genser also mention the etiologic relation between intestinal worms and some forms of appendicitis.

Sex:—According to statistics, the greater liability of the male sex to appendicitis is as conspicuous in childhood as in later

life; according to Manly's statistics the proportion of boys to girls is at least two to one. According to my own record, which is not large, in 83 cases, ranging between the ages of three and 16 years, there were 55 males and 28 females.

Classification:—Although appendicitis may be classified pathologically as catarrhal, ulcerative, suppurative, perforative and gangrenous, yet it seems to me to be useless to attempt a classification on the basis of the pathologic changes. From the clinical point of view these distinctions are of little value, as the severest forms at first may present the mildest symptoms, so that it is impossible at the bedside to determine the degree of pathologic change taking place. It would appear then that the whole matter can be summed up in the statement that: An infection takes place from the interior of the organ, that this leads to a more or less violent inflammatory process that may lead to changes, varying from simple, interstitial, round celled infiltration to all the grades of suppuration, ulceration, local perforative sloughing and complete gangrene of the organ.

Symptoms:—There is a general consensus of opinion that the symptoms of appendicitis in children are often extremely vague and obscure. Usually there is acute abdominal pain at the outset; this pain is reflected to the distribution of the plexus of Meisner and Auerbach and referred to the neighborhood of the epigastric region or somewhere about the umbilicus.

This pain no doubt at the beginning of the attack is as severe in the child as it is in the adult, but the uncertainty of its location in many instances impairs its value as a diagnostic symptom.

Children usually dread any palpitation of the abdomen and complain almost as much in one part of the belly as another.

Tenderness in the right iliac region, however, is an important symptom. There may be but a small tender area at first and the location of the point of maximum tenderness may vary with the location of the appendix.

Rigidity of the right rectus abdominis muscle is perhaps one of the most important guides in the diagnosis of appendicitis in the adult, it is often in children equally obscure for the reason that the child is suffering pain and is prepared to cry out and, unless taken unawares, tightens its abdominal muscles as soon as, or even before, the skin is touched by the examiner's fingers. The dread of being hurt causes the muscles to act on guard at almost any point of the abdomen. The utmost gentleness and patience are necessary together with diversion of the

child's attention and if this symptom can be positively elicited the diagnosis is at once confirmed. In obscure cases an examination by the rectum should never be neglected; in those cases in which the disease has advanced beyond the appendix, the extension takes place along the right pelvic wall where the inflammatory mass can be easily felt.

Tumor:—May or may not be palpable until after the first 24 or 48 hours. It may be quite absent in the severest cases. When present it may be either an indefinite induration or a circumscribed mass, and its extent and character are often obscured by the coincident tenderness and rigidity.

We should bear in mind in making these examinations that the abdomen of the child is but a miniature of that of the adult; also the relative approximation of all the organs and the close contiguity of those in the pelvis and in the upper abdomen; and especially in children under eight or ten years of age, that the important symptoms with the exception of vomiting are apt to be masked. The lack of judgment and ordinary intelligence in eliciting the history of the attack or the neglect of the use of the only instrument of any service in the diagnosis of this disease, the palpating hand of the physician, are responsible for the failure in many instances in making an early diagnosis of appendicitis.

In children who are ill trained, nervous or fretful, the use of an anesthetic (chloroform) which is easily administered affords a good opportunity to examine the iliac region through the thin relaxed abdominal wall.

Vomiting:—This is, in children, usually the most persistent symptom; it is at least the most evident. It is apt to continue in spite of restrictions in food or drink. Medication seems to have no effect in relieving it and when it persists for many hours without other adequate reason and if it be accompanied by severe pain with absence of intestinal movements the suspicion of appendicitis should be very great.

If it persist with severe abdominal pain for 24 hours or more, even with intestinal movements, the suspicion is still considerable.

Diarrhea is, of course, unusual and points more toward a gastroenteritis, but still it may occur with an attack of appendicitis.

Tympanites:—When this occurs with vomiting and gradually increases and is accompanied by either local tenderness or mus-

cular rigidity, the diagnosis of appendicitis becomes more and more probable.

Pulse and Temperature:—The pulse is often of value, as is also the temperature, which often at the onset rises to 103° or over. However, these two symptoms have more significance, perhaps as regards the severity, rather than the actuality of the disease.

Diagnosis:—The symptoms on which we most depend for our diagnosis of appendicitis are pain, local tenderness, muscular rigidity, vomiting and abdominal distention.

The differences which appear in appendicitis in the child and in the adult assume the utmost importance upon the clinical side. The differences consist in the obscurity of the diagnostic symptoms, and in the more insidious progress of the disease, together with the child's inability to locate pain, general restlessness and fretfulness and the unreliability of the significance of temperature and pulse.

Pain:—It is often impossible to elicit a clear statement as to the exact seat of pain, the child at one moment pointing to the upper, at another to the lower abdomen, it hurts everywhere apparently, not especially in the appendicular region. This symptom, which of itself in the adult is of great significance, can only help us in the case of children by its combination with other symptoms, and the surgeon must depend largely upon palpation, watching the face of the child, whose attention at the same time is diverted during the process.

Local Tenderness:—Tenderness to pressure is apt to be equally doubtful, the child generally dreads any manipulation of the abdomen and complains almost as much in one part as in another; however, tenderness in the right iliac region when pronounced is the most valuable of all signs of appendicitis, both in diagnosing and in estimating the progress of the disease.

Muscular Rigidity:—This symptom is an important one The rigidity is usually well marked over the inflamed area, but may involve the entire lower half of the muscle; comparisons made by gently stroking with the fingers across the fibers of the rectus muscle of each side will usually elicit relatively increased tension on the right side, even in comparatively mild cases.

Diagnostic Value of Examination of the Blood:—In making a leukocyte count in cases of appendicitis, we must bear in mind that few rules ever existed that have no exceptions. Leukocytosis is largely dependent on bodily resistance toward infection,

and therefore the degree of increase can be no guide to the intensity of the pathologic process. It is but a short time back when a leukocytosis of 10,000 was looked upon as indicating the presence of pus, while more recently it has been stated that at least 35,000 leukocytes must be present before pus may be suspected, though we know that pus is often present with a much lower count, and that there may be no leukocytosis, even when a number of ounces of pus are present, provided the abscess is walled off and *vice versa*.

I am fully satisfied that the degree of leukocytosis is of little relative importance. The differential diagnosis, in my mind, is not always an easy matter as between appendicitis and some of the following diseases: Gastroenteritis, diaphragmatic pleurisy, basal pneumonia, typhoid fever, ileus, hip disease and hernia. Those which in my experience have proven most puzzling are gastroenteritis with the gastric element most predominant, diaphragmatic pleurisy, and basal pneumonia.

The persistency of vomiting with severe pain in the abdomen for more than 24 hours, especially if there be no diarrhea, favors the diagnosis of appendicitis. If there be diarrhea with the existence of high fever, accompanied with vomiting, it rather favors gastroenteritis.

It may seem strange to some of you to dwell on the difficulty of differentiating a diaphragmatic pleurisy or basal pneumonia from an acute attack of appendicitis. Within the past year I have met with two cases in which it was for a time impossible to make a diagnosis between these conditions. I cannot better illustrate these difficulties than to briefly relate one of these cases.

The patient, a girl aged seven, who had enjoyed good health, was seized on December 5, in the early morning, with a severe abdominal pain. She was at once given a dose of castor oil, and throughout the day this was followed by two doses of Rochelle salts; later in the day the vomiting began and continued more or less for 24 hours. There was fever and a rapid pulse. The bowels refused to move in spite of cathartics, which were followed by enemata. The abdomen began to distend, the pain continued, there was no cough and no pain was assigned to the chest; late that night, 22 hours after the commencement of the attack, I saw her, in consultation with the family physician, and was prepared to operate. It was a question as to diagnosis; the vomiting, absolute constipation, abdominal pain and tenderness made a diagnosis of appendicitis or intestinal obstruction prob-

able, but owing to lack of more definite symptoms and the lateness of the hour it was decided that a delay of a few hours was advisable. In the morning the signs of pleurisy with probably a basal pneumonia were developed. She made a good though slow recovery. In this case for at least 30 hours there was an entire absence of abnormal chest sounds, and the severity of the abdominal symptoms seemed markedly to favor intraperitoneal inflammation. It was in this case impossible to make a diagnosis until the abnormal chest sounds developed.

It should be remembered that in many children the early symptoms of appendicitis are apt to be those associated with motion, the so-called larvate form, as in the following case:

Some years ago, while dressing a fractured limb, a lady, a neighbor of my patient, wished me to see her son, a lad of ten years of age who was out in the street playing marbles. He entered the room with a marked stoop and a distinct limp, and in standing assumed a position similar to that of hip disease. On inquiry, the following history was elicited:

Six weeks previously he had had an attack of vomiting with pain in the abdomen and obstinate constipation. A physician was called, who prescribed for an attack of acute indigestion, which relieved him of his pain at least for a time, for in two days he was up and around. On the day I examined him a distinct tender mass was found in the right iliac region, the right leg was flexed and adducted, there was rigidity over the lower abdomen and considerable pain on pressure over and around the mass. Temperature was 102° F. and pulse 92. He had had no considerable pain since the first day and no chill.

At the operation performed the following day an abscess containing an ounce and a half of pus, surrounding the appendix, was evacuated and a necrotic appendix removed.

Another point is to be considered in the progress of the disease. A case that is apparently mild will sometimes gradually drift, perhaps without any alarming symptoms, into a grave condition with general septic peritonitis in spite of the most careful watching.

The pulse and temperature may remain normal, vomiting may cease, or it even may not have occurred. Abdominal distention may not be marked and the bowels may continue to move, and yet in the face of all this a general peritonitis is developing.

I believe that there is not the same effort on the part of nature in many children to wall off the inflamed appendix, that

so often occurs in adults; not only is this spreading tendency of the infection insidious, but it is often fulminant and rapid. It has been my misfortune to have encountered a number of such cases in which the disease pursued such a course. I am also inclined to believe that there is a greater tendency to rapid gangrene in children than in adults.

It should be borne in mind in making an abdominal examination in a child, that the adhesions are often extremely delicate, and that more than ordinary care should be exercised in order not to rupture them.

The Prognosis of Appendicitis:—It was the great mortality brought about by the delay of surgical procedure that placed the early operation upon a safe and sound surgical basis.

Remove the appendix while the disease is still confined to that appendage. Experience teaches that the only certain feature about appendicitis is the uncertainty of the termination under so-called medical treatment, or when operative procedure is delayed. Of those which recover under the expectant method of treatment not less than 30 percent suffer recurrences. (Dorfer.) What sane man can question that there is a time in the history of every case of appendicitis when operative treatment can be instituted with a mortality risk not greater than one-half percent. On the other hand, many cases are finally turned over to the surgeon by the general practitioner with not one chance in 200 for a recovery.

There can be no doubt then but that the prognosis of appendicitis is unfavorable in the cases treated without operation in proportion to the severity of the infection. On the other hand, in the cases treated operatively, other things being equal, the prognosis is unfavorable in proportion to the delay in performing the operation.

Treatment:—So long as the high mortality from appendicitis comes from waiting and the low mortality from operating early, while the infection is still confined to the appendix, just so long must we take the position that every case of acute appendicitis should be operated on as soon as the diagnosis can be made.

The mortality in appendicitis results from the extension of the infection from the appendix to the peritoneum or from metastatic infection from the same source. This extension can be prevented by removing the appendix while the infectious material is still confined to this organ. Early operation is, therefore, a conservative, not a radical procedure.

Unfortunately for many reasons this practice cannot always be carried out, and many cases are and will continue to be turned over to the surgeon, which have passed beyond the early stages of the disease and in many such cases immediate operation will not always give the desired results. This class includes those cases in which the infection has spread beyond the appendix, whether through a perforation of its wall or through the transudation of pyogenic bacteria through its inflamed coats, and which give us a clinical picture of diffuse peritonitis in which the abdomen is distended, the temperature high, the pulse rapid and of high tension, the child's expression most anxious and indicative of very serious intra-abdominal infection, the bowels constipated and unable to cause the expulsion of flatus, and in which vomiting is continuous, and tenderness is diffuse over the entire abdominal wall, the tongue and skin dry, and which end with delirium, coma and death.

There is still another class of cases in which the features are pinched, the skin cold and clammy, the temperature normal or even subnormal and the pulse rapid and thready, the abdomen hard and rigid throughout, without much distention.

In this type of diffuse peritonitis, the patient is in a state of collapse, and operative interference is almost always followed by a fatal termination. Owing to this treacherous behavior of the inflamed appendix in the child as well as the lessened tendency to limit the inflammation by adhesive peritonitis, I feel it imperative to advise early operative procedure in every case of acute appendicitis occurring in children.

I contend that it is not within the knowledge of any physician or surgeon to say what the pathologic conditions present at the seat of disease may be, nor does he know how the attack will terminate.

What was catarrhal in one hour ceases to be so in the next. What was simple inflammation in the morning may become ulcerative by night and perforative or gangrenous before the next morning. Many physicians still hesitate to urge operation on the child who is having a mild attack and advise waiting until other attacks have occurred. I am fully aware that the position thus taken may in some cases be justified by the outcome and either no second attack may occur or the second attack may be as mild as the first. On the other hand, of a given number of children in whom the disease has commenced with a single mild disturbance, a proportion large enough to be of grave importance

will at the first recurrence develop a type of the disease that is either very dangerous or fatal.

It is difficult or impossible to predict after one mild attack of appendicitis whether no recurrence, recurrence in a mild form or recurrence of a severe and dangerous type will ensue. One is forced, therefore, to regard the future of every child who has had a clearly defined attack of appendicitis—no matter how mild—as uncertain.

No medical treatment of proved value for appendicitis has ever been presented to the profession, and the pathology of this disease renders it extremely unlikely that any such treatment will ever be discovered. In other words, every case of appendicitis is liable sooner or later to demand surgical interference for its cure.

So eminent a pediatrist as Roach (Pediatrics 1896) declares that inflammation of the appendix is essentially a surgical disease and is one which under all circumstances should be placed immediately in the hands of a surgeon.

No less an authority than Howard A. Kelly, in his admirable work on appendicitis, says that every case of frank appendicitis in a child should be operated on, if seen in the early stages of the disease, because so many cases of appendicitis in children end in a general peritonitis and so many end in the formation of an abscess, it should be a rule to give prompt surgical relief as soon as a diagnosis is made.

The question of operation in cases of recurrent attacks of appendicitis is, I believe, not a difficult one to decide, as a secondary outbreak of inflammation means that the primary cause is still present and likely at any time to endanger the life of the patient.

As in the first attack, so in the second and third attacks, we have no means of knowing what the course of the inflammatory process may lead to, nor is it possible for us to determine what the pathologic conditions present at the seat of the disease may be and therefore an appendicectomy should be done as soon as the diagnosis is made.

I make but one exception to this rule and that is in cases of diffuse septic peritonitis. In these cases the "Ochsner method" of treatment should be employed when it is possible to follow out this plan.

I have yet to see a death that was caused by a premature operation, while I have seen many when medication was pro-

longed until the surgical remedy was of no avail, and the sooner the general practitioner is brought to a realization of the fact that acute appendicitis is a disease that should be treated surgically, the sooner will the mortality in this disease be decreased.

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Notes on the Treatment of Epilepsy

By CHARLES J. ALDRICH, M. D.

I shall limit myself to the discussion of the so-called idiopathic epilepsy, which actually means the epilepsy for which we can assign no certain cause. This, of course, will take out of the discussion all cases of epilepsy resulting from exogenous poisons, such as alcohol, lead, etc., as well as those cases of epilepsy resulting from poisons manufactured within the body from known causes, such as from Bright's disease, diabetes, etc. Also, we shall not consider the cases of epilepsy that result from gross disease of the brain, such as meningitis, tumors, etc. Epilepsy, either focal or general, which results from trauma, will not be considered. All of these epilepsies are secondary epilepsies.

Long before Socrates, with the tender veneration of the Greek for the mentally afflicted, wrote of *morbus sacer*—the sacred disease—the medicine man had been concerned with the treatment of epilepsy.

Epilepsy then, as now, was a mystery. The virile imagination of the primitive man was excited by the many things about him for which he had no explanation. How natural that he should look upon one so strangely afflicted as touched by the hand of the deity that "moves in mysterious ways his wonders to perform."

Morbus Deificus—the God-making disease; *morbus astralis* and *morbus sideratus,* or star-struck disease, are ancient names of epilepsy showing the mystic idea of its heavenly origin.

Later, when demonism possessed man's ideas, it was called *morbus daemoniacus.* These names alone reveal the ancient notion of the pathology of the disease and, of course, reflect the treatment.

Because of epilepsy being an affection wont to declare itself before all men and from the earliest times recognized as non-

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Read at the meeting of the Northern Tri-State Medical Association, at Detroit, Mich., July 9, 1907

contagious, it has been observed by the laity and profession alike.

The medicine man has been confounded by its mysteries and driven to the grossest superstitions in its treatment. Recognizing the helplessness of the physician, the laity have indulged their mysticism in seeking strange remedies for a strange disease. Indeed. all mankind seems to have struggled in search for a cure for "falling sickness."

Arethaeus says that many physicians among the followers of Aesculapius believed that venery cured the epilepsy that begins at puberty. It was the doctrine that the retention and decomposition of the semen was a cause of this form of epilepsy.

Hector Boetheus, in 1536, wrote of castration as a cure. According to him this means of cure was not uncommonly resorted to by the Scotch.

Coelius Aurelianus, Mercatus and Platenus castrated for epilepsy. Trousseau relates the story of an American who earnestly besought him to castrate him to cure an epilepsy. I have had a man under my care for the past two years that, here in the great state of Ohio, was castrated in an attempt to cure epilepsy.

We have surgeons and many of them who recommend and practice castration of the female *in extenso* for epilepsy when statistics and common sense alike cry out,—*peccavi.*

The Arabs used dried asses' dung as a cure.

Early English physicians and continental medicine men believed that the mistletoe was a sovereign remedy.

The French and other people believed in the anti-epileptic efficacy of the powdered dried skull of a man that died a violent death.

In 1607 Topsall recommended the "gall of a ferret" to be used against the "falling sickness."

Scatologic remedies have been used since the very earliest times, and by many peoples in the treatment of epilepsy. I have personally met with two instances, one in which the feces of a cat had been used, on the recommendation of an old German wise-woman. Another case wherein the urine of a virgin had been enclosed in a hollowed out turnip and suspended in a chimney by a woolen string until the urine had disappeared and the turnip dried. The turnip was then made into a powder and given to the patient on the recommendation of a French-Canadian wise-man.

Nor need we look to primitive people to find such foolish remedies being used. Hare states that in Australia snakes heads

in rum have been quite extensively used. He also relates that a prominent German hunting club requested that magpies be furnished the Princess of Bismark that she might make an anti-epileptic powder from their incinerated remains.

This retrospect has been indulged in for the purpose of revealing how a disease, of whose etiology and pathology we have such obscure notions, may lay hold upon the superstitions of not alone the laity, but of the medical profession itself.

Little gain was made in the treatment of epilepsy until the time that bromid salts were almost accidentally discovered to be of value in the treatment of the disease.

Sir Charles Locock was, perhaps, the first to recommend its use, in 1857. The use of bromid spread very rapidly and was used so indiscriminately in all forms of convulsive disease that, had it not been a remedy of such splendid possibilities, it would have long ago fallen into disrepute. For perhaps no other remedy, unless it is mercury, has produced such evil effects.

Careful consideration of all the facts in the case, and supported by a large number of personal observations of epileptics whose histories I have taken pains to follow over long periods of time, convinces me that in bromid we have the best remedy for the alleviation and cure of the epileptic habit.

I believe Sir William Gower is right when he states that many more cases of epilepsy are cured by bromid than the statistics show. The reason for this lies in the fact that we are unable to follow them up.

While the number of cases that I have personally observed and followed up is too small to eliminate the coefficient of error, yet they convince me that a suitable case intelligently studied and then carefully treated by bromid stands a ten per cent chance of being cured, while the amount of alleviation that can be afforded in the incurable cases is very great. Indeed, it is a tremendous difference to a man and his family whether we are able, with careful treatment, to keep him from having a fit for three or four months instead of one every two or three days.

No one can be sure in a given case of epilepsy that bromid will be of any benefit whatever, although I think I must modify this statement very much, since I have been using the salt starvation method to which a more extensive reference will be made later.

Trousseau's great success in the treatment of epilepsy was

due to the fact that he individualized every single case. I have for years followed this method as closely as possible.

The cases are first carefully studied and then the milder forms of treatment tried, to mitigate the number of attacks, before the bromid treatment is entered upon. Too much time, however, should not be wasted lest your patient becomes discouraged by the trying out of the various remedies that have a less baneful effect upon the system.

There seems to be a small proportion of cases that are benefited more by the simpler and less powerful drugs, and in all cases, unless there is some particular reason, these remedies should be first tried. A critical consideration of these remedies will be taken up in their place.

In considering the bromids theoretically we would be led to believe that bromid of lithium is the most powerful and that bromid of sodium least useful. Clinical observation, however, absolutely disproves this fact. There seem to be, however, certain cases in which a combination of the various forms of bromid is more effective than the use of a single one.

There are a few useful rules which should be always considered in connection with the administration of the bromid salts.

1. In the beginning of the treatment a full or even large dose should be administered, and if it is not large enough to completely inhibit the attacks then it should be increased. But as soon as the attacks cease then the dose should be diminished until the smallest dose that will control all of the attacks, both slight and severe, should be administered and persistently continued.

2. The general health should be conserved by hygienic measures, and the bitter tonics should be continuously administered not only for their effect of increasing the appetite but for the stimulating effect which they exert upon the mucous membrane of the stomach.

3. The hour of administration is important. Each case should be studied and a table kept in which all the seizures, day and night, should be recorded. This should be carried out in the early treatment of cases before the administration of the bromid. Careful study will reveal the hour most liable to the incident of the attack. In nocturnal epilepsy, that occurs immediately after the patient falls asleep, the bromid should be given early in the evening. If the attacks come on after midnight

then it should be given at 10 o'clock, on retiring. If it occurs in the morning just before or just after the patient awakens, then the patient should be aroused at midnight and receive the largest dose. If, however, the patient has his attacks during the day he should receive his largest dose during the day; the first one early in the morning. Two doses in 24 hours is a safe rule.

4. Because of the tendency of bromid to irritate the stomach it is best taken near the meal hour, and I believe the smallest dose acts best if given an hour before. Sometimes when given in large quantities of water it seems to exert its greatest value.

5. The sudden withdrawal of the bromid is never advisable. Indeed, such an injudicious procedure may invite *status epilepticus*.

Bromid intoxication must be and usually can be prevented. Your patient should be kept in a hygienic state that will favor elimination.

The smallest doses of bromid that will control the epilepsy should be found and then the patient should be watched for cumulative effects.

The administration of digitalis and belladonna, one alternating with the other, for a period of three or four weeks seems to prevent bromid intoxication, and increases the intensity of its remedial effects upon the epilepsy without the deleterious effect upon the general constitution. Belladonna, particularly when given along with arsenic and hydrotherapy, will prevent the disfiguring bromic acne.

In suitable cases the combination of bromid in some of the fatty oils, such as sesame oil, seems to overcome its irritative qualities. Bromipin is of value. Spratling recommends it to be given as follows: Bromipin, 4 oz.; syrup simplex, 4 oz.; spirits of peppermint, 4 drs.; mucilage of acacia, enough to make 16 ounces. The dose of this mixture for an adult is two or three tablespoonfuls three times a day after meals.

I believe the greatest gain in the bromid treatment lies in the dechlorization, or the salt starvation method, devised by Toulose and Richert, which consists of the withdrawal of salt or the chlorid of soda and the substitution of bromid of sodium in the food. In this manner it is believed, and clinical observation appears to bear out their idea, that the blood takes the bromin from the bromid of sodium instead of the chlorin from the chlorid of sodium, and that this combination with the

blood allows the over-sensitive nerve structures of the patient to be continually bathed in the most powerful anti-epileptic agent known to us.

If the theory of Gower is correct, that undecomposed bromin passes into the epileptic's nerve structures and in some way restrains their morbid affinity for oxygen then this method should prove the most effective of any one at our disposal.

Clinically, I think this is true. In experimental cases that have resisted all other forms of treatment I have found salt starvation with bromid of soda substituted to be the most effective, not alone in controlling the attacks, but in absolutely curing fully ten per cent of the cases.

The length of this paper will not allow me to refer to the many dangerous results from bromid poisoning, and no man should treat epilepsy who is not familiar with all its manifestations, nor should we entrust a patient with any prescription for a bromid preparation. Every patient taking bromid should be under the observation of a physician.

Digitalis is a very old remedy for epilepsy, in fact it was prescribed by Parkinson as far back as 1640. We should perhaps consider in this connection the other cardiac tonics, such as adonis vernales, convallaria and strophanthus. These remedies given alone are of very little value. When, however, they are given in conjunction with bromid in carefully selected cases, they seem to exhibit something beyond a synergistic effect.

Belladonna in full constitutional doses, I believe to be superior to either digitalis or any one of its congeners.

Cannabis Indica has appeared to be of signal benefit in the same class of cases that are benefited by the zinc preparations. The dose should be gradually increased until the physiologic effect is secured. In those cases of epilepsy occurring in people who also suffer from migraine and in which there seems to be a relation between the migraine and the epilepsy, it appears to possess curative powers. The same cases are helped by the members of the anilin group, especially acetanilid.

Gelsemium is of distinct benefit in all forms of epilepsy, especially when combined with solanum.

Experimentation with 15 cases of epilepsy in my clinic showed that one-half of one dram of the fluid extract of solanum Carolinense three times a day was of benefit in reducing the number of attacks, and in those patients with a good strong

physique and digestive powers it was quite effective when combined with gelsemium.

The tincture of simulo, a plant of the hyssop family from South America, has been investigated by Eulenberg. Peterson believes that it deserves a trial, since it is absolutely harmless, which cannot be said of bromid, digitalis, belladonna and other drugs used in epilepsy.

Nitroglycerin is of occasional benefit in epilepsy, usually, however, the convulsion is of senile or presenile origin. I believe it is a dangerous drug in the ordinary forms of epilepsy, and should rarely be used.

In a certain class of cases of momentary unconsciousness occurring in children, also in adults, with a small thready pulse, who occasionally suffer from momentary lapses of consciousness, nitroglycerin appears to be of benefit. I believe that these cases are very likely closely associated with Stokes-Adams disease and are really circulatory affairs.

I have found very little benefit from the use of borax. Indeed, for the last five years I do not think I have prescribed it in a single case. I have, however, found benefit in the administration of zinc, particularly zinc oxide, in fairly large doses,—eight to 30 grains a day.

I have also secured benefit from the administration of binoxid of manganese in from nine to 25 grains a day. The cases of epilepsy in which this remedy has seemed of use were in the people of rather fleshy habit, with puffy faces, that would cause one to suspect the lack of proper thyroid secretion. In these cases I have invariably combined the thyroid extract with the binoxid and have been able, by following out these ideas and occasionally associating zinc or arsenic with those remedies, to reduce the attacks to a minimum without any evils from the medication itself. Indeed, I can recall two positive cures.

The opium and bromid treatment of Flechsig I have rarely used except in *status epilepticus,* and then not as Flechsig recommends it. I prefer to produce a narcosis by the hypodermic injections of morphin instead of opium *per os* or *per rectum,* and at the same time giving large doses of bromid combined with chloral. Making a lumbar puncture and withdrawing the fluid if found to be in excess is good practice in *status epilepticus.*

In the beginning of the milder forms of epilepsy, I invariably resort to the milder treatment, such as zinc, binoxid of man-

ganese, asafetida, acetanilid, hydrotherapy and out-door life before resorting to bromid.

The administration of strychnia has become a fad in medical practice. It has largely taken the place of the habit of prescribing quinin, which obsessed our medical forefathers. It is often prescribed in epilepsy. It should never be administered in epilepsy. It increases the excitability of the nervous tissue and usually increases the number of spasms.

Surgery, in its invasion of every department of medicine, has been invoked for the cure of epilepsy. Trephining, while often of signal benefit in cases of gross brain disease or traumatic epilepsy, is occasionally of benefit in the so-called idiopathic epilepsy. Why it is we do not know. It is resorted to much less frequently than it was a few years ago, and some authorities absolutely condemn it. I have observed two cases in which trephining not only diminished the number of attacks, but the progressive deterioration of the mentality seemed to be arrested. I believe that the procedure is justifiable in selected cases.

Ligation of both cerebral arteries was recommended by Alexander, of Liverpool. The procedure was based upon a preconceived and erroneous idea of the pathology of the disease and is no longer thought of.

Janesco proposed the complete bilateral resection of the cervical sympathetic as a cure for epilepsy. Beck and Roswell Park have performed this operation and reported the usual improvement that follows almost any surgical interference in epilepsy, but there have been no later or supplementary reports indicating that the improvement has been permanent. I believe it is now relegated to the extensive limbo devoted to surgical fads and fancies.

One of the most recent proposals is that of Dr Wyman, of Detroit, Mich., of an operation for the relief of pyloric spasm as a cure for epilepsy. I am interested in knowing the results which he has secured. Until pyloric spasm can be shown to cause epilepsy I shall doubt its efficacy.

Abdominal section, particularly in the female, for the relief of certain gynecologic affections for the cure of epilepsy has been resorted to with about the same results as castration has in the male. Were it not for the placid confidence which the average female mind has in the gynecologist this procedure would have long ago been relegated to the same place that castration of the male has been.

A great many peripheral irritations have been supposed to be the cause of epilepsy. It appears to me that we can only explain the occasional cure of cases of epilepsy by relief of some peripheral irritation by assuming that the patient has the epileptic habit, by which I mean that he has inherited or acquired a peculiar erethistic condition of the nerve tissues which causes the brain to react against the ordinary peripheral stimulation in an unusual and peculiar manner.

Relief of intestinal autointoxication of children, teething, worms, eye strain, adherent prepuce will afford cure in occasional cases. And some epilepsies recover spontaneously,—why, we know not.

In a man with an epileptic constitution, and I assume and feel positive that such a constitution is almost always necessary to the development of an epilepsy, he should be most carefully guarded against peripheral irritation.

The absolutely negative results which were attained by Gould and his associates at the Craig colony for epileptics in New York State by applying glasses ought to satisfy the most carping observer that a well-established case of epilepsy is absolutely beyond the efforts of the refractionist.

It has been impossible for me to refer to the psychic treatment of epilepsy, which is extremely important. The surroundings and the regular life which is maintained in colonies are nearly always beneficial. Out-door life is an extremely important means in the cure of epilepsy, particularly when the epilepsy develops in a sedentary individual in middle life without any history of syphilis, or without evidence of renal disease.

I have notes of the case of a man who took up the occupation of a traveling salesman, traveling entirely on foot, and which has resulted in the cure of a severe epilepsy that had been in existence for a period of five years.

There has been a great deal of talk about the diet of the epileptic. A common sense diet in epilepsy is better than any scientifically regulated diet which the ultra dietetic specialist can foist upon his patient.

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Some Cases of Injury to the Eye by Steel

By WILLIAM EVANS BRUNER, A. M., M. D., Cleveland, Ohio.

The following cases of injury to the eye by a foreign body have been seen very recently by the writer, and as each one presents some points of interest, they seem worthy of publication.

Case I. Double perforation of the sclera with retention of the foreign body in the orbit.

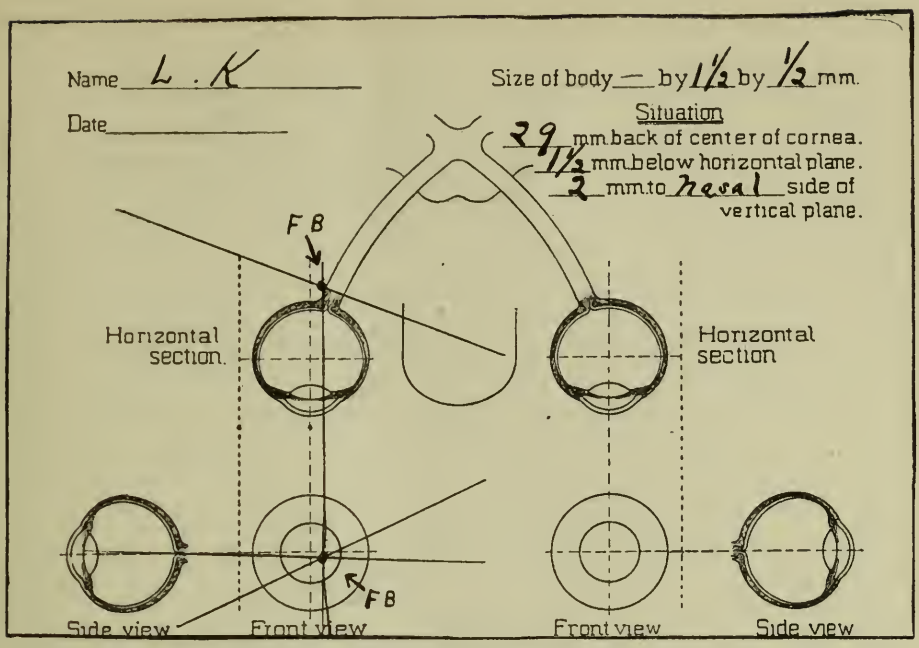
L. K., age 23, was referred to me by Dr Suchy, March 12, with the history that 12 days before while he was hammering steel a piece supposed to be very small struck him in the right eye. He had considerable pain in the eye for several days, but none since then. The vision has been blurred with practically no change. Examination shows only the very faintest hyperemia of the bulbar conjunctival vessels and the iris responds freely to light. Near the center of the cornea is a small irregular scar. Back of this in the anterior capsule of the lens is a horizontal gray line, at the inner edge of which is a faint dark spot, as though it might be rust or dirt brushed off a larger foreign body as it passed through the capsule. The lens is partially cataractous. A satisfactory view of the fundus could not be obtained on account of the condition of the lens; but downward and inward could be made out several glistening white patches, one of considerable size, and several small ones. It is evident that a foreign body had entered the eye, and these white patches in the fundus suggested the possibility that it might have perforated the sclera posteriorly and entered the orbit. He was referred to Dr Hill, who took a radiograph which showed the foreign body posterior to the eye ball to the outer side of the optic nerve. (Figure I.)

The patient was accordingly advised to have nothing done unless some further symptoms should arise demanding interference, but was told to report occasionally for observation and immediately if he should have any trouble with the eye.

When seen May 21, two months after the injury, the eye shows practically the same condition. He has had no trouble with it since the first examination. The vision of the eye is 2/45. The left eye has a vision of 6/5 partly with normal fundus.

Case II. The Haab magnet fails to dislodge a piece of steel which is removed by the small Hirshberg magnet through a scleral incision after localization by the X-ray.

Mrs. M. H., age 46, was referred to me by Dr Kelker April 3 with the history that four days previously she was standing at the curb when a street car passed her. There was an explosion and flash of light somewhere about the car and something struck her in the left eye. The vision was at once seriously impaired,



F. B. Foreign Body.

FIGURE I.

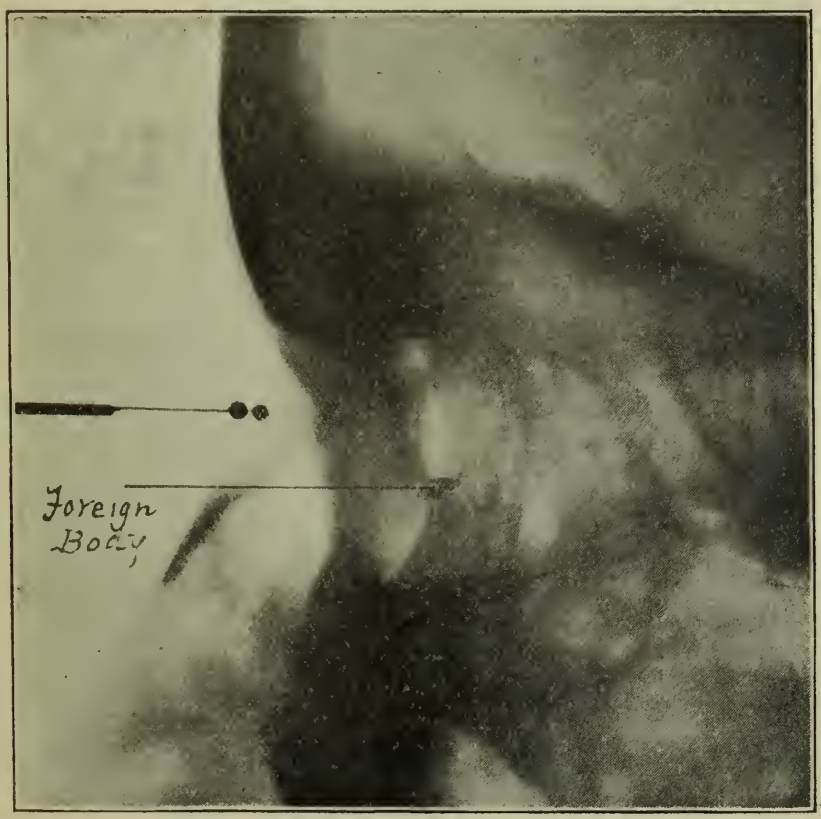
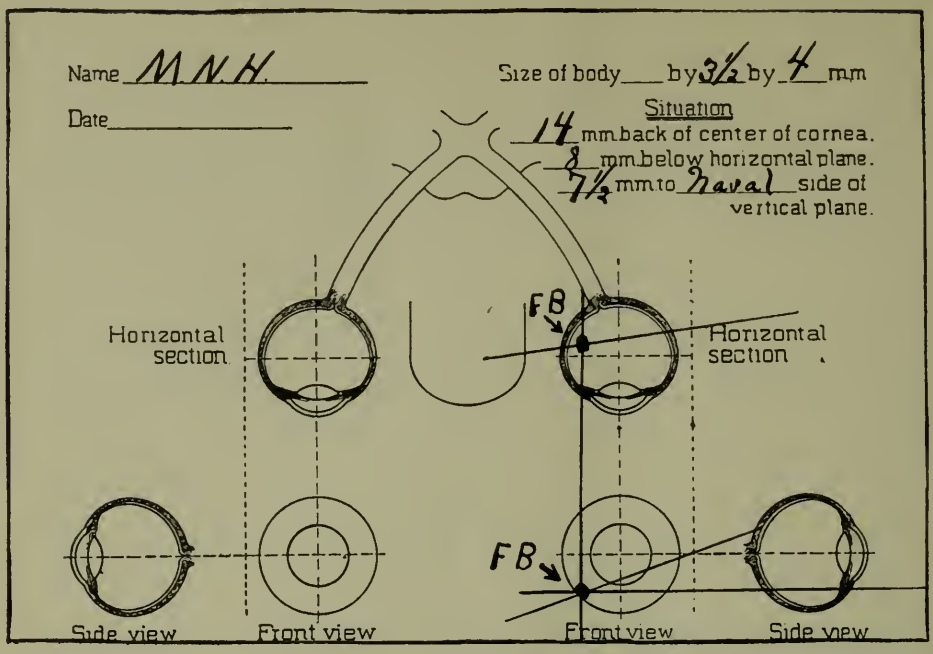


FIGURE II.



F. B. Foreign Body.

FIGURE III.

FIGURE IV.

but there was neither pain at the time nor since. Examination shows slight bulbar injection and the anterior chamber very slightly more shallow than in the right eye. There is a cut four or five millimeters long in the cornea extending from a point corresponding to the outer margin of the pupillary area downward and inward at an axis of about 75° to a point slightly more than half way between the limbus below and the pupillary area. Back of this is a large hole in the iris, almose square in shape, several millimeters long on each side. It is partially covered with blood. The sphincter of the iris as a narrow margin still remains intact. The iris is slightlv attached to the under surface of the wound. The lens is partially cataractous and seems more dense downward and outward, but there is no red reflex except the very slightest in the extreme periphery above. There is no view of the interior. Light perception and projection are good. The iris responds faintly to light, but the pupillary edge is somewhat irregular from a slight posterior synechia. Tension is normal. In the right the vision equals 6/6 and the fundus shows nothing pathologic. She was told of the serious character of the injury and the probability of there being a foreign body in the eye, and a radiograph was advised. Atropin was instilled, which in several days dilated the pupil evenly, except, of course, at the point of the wound. She failed to report for several days, but on the eighth a radiograph by Dr Hill revealed a foreign body within the eye ball. (Figure II.)

When I saw her again, first the Johnson magnet was applied without any response, except a very slight sensation when the tip was placed at the lower inner portion of the eye ball. The Haab magnet was then also tried and at first gave no sensation whatever, but after several trials, first by gradual approach and then with a sudden jerk, she began to feel it very slightly when applied to the same portion of the eyeball downward and inward. There was no sign, however, of the foreign body. There was slight uneasiness for a day or two, after which the eye felt perfectly comfortable.

On April 19 the Haab magnet was again applied, this time with very definite pain but without any appearance of the foreign body. A second radiograph was then taken to be sure of its exact location. It was shown to be in the lower inner quadrant of the eye well posteriorly. (Figure III.)

An operation through a scleral incision was advised. She finally consented to this and on April 30, though there was absolutely no redness whatever in the eyeball and no pain and the tension remained normal and there was no longer light perception, she was operated upon at Charity Hospital. A scleral incision was made downward and inward. The Parker magnet

was first applied to the incision without any result. One of the long tips of this magnet was then introduced within the wound but on account of the weight of the magnet it was difficult to direct the tip toward the supposed location of the foreign body and there was no response to the current. The small Hirshberg magnet was then introduced well within the eye toward the point as indicated by the radiograph and upon its withdrawal the foreign body was brought to the edge of the wound. The larger magnet readily drew it through the wound and with forceps it was disentangled from the overlying conjuctiva. A conjuctival stitch was used and a bandage applied. There was no reaction whatever, no pain and the eye healed very promptly.

May 11 the eye shows no redness whatever and she has had no pain since the operation.

Case III. J. B., age 30, came to Lakeside Hospital April 19 with the history that on March 12 a piece of steel from a punching machine struck him in the right eye. From that date until April 18 he was in another hospital in the city. He had some pain at first but this soon subsided. Examination showed very slight bulbar injection. There was a scar in the cornea, the lens was cataractous with extensive posterior synechia and he was having apparently no pain. A radiograph showed a long slender foreign body extending antero-posteriorly, possibly with the posterior end imbedded in the sclera. (Figure IV.)

Haab's magnet was tried without any effect. It did not even produce the slightest pain or indication of there being anything within the eye.

On May 2 a scleral incision was made and both the Parker and the small magnet were used. The vitreous was found to be entirely fluid and the eyeball collapsed, but no foreign body could be obtained. The eye was then enucleated and upon opening the eye a long slender piece of steel was found in the vitreous surrounded by exudate and firmly held anteriorly. Applying the magnet then to the steel the eye could readily be lifted with it but the steel could not be dislodged. Recovery was uninterrupted. It is a question whether it might not have been possible to remove the foreign body if the patient had been seen immediately after the accident, before the inflammatory exudate had formed so firmly about it. Although the piece of steel was large the Haab magnet gave absolutely no indication of its presence and simply again proved how uncertain and utterly unreliable it is as a means of diagnosis, while the radiograph showed it very distinctly.

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

The Official Organ of the Cleveland Academy of Medicine

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

Medical Legislation

What was unquestionably the greatest meeting held by the State Association convened at Cedar Point, August 28, 29, 30—great on account of the scientific value of the papers presented and doubly so by reason of the awakened interest in legislation pertaining to public and professional interest.

The House of Delegates and the Legislative Committee augmented by the Auxiliary Committee on Public Policy and Legislation are composed of men who are earnest self-sacrificing workers with wholly altruistic motives. These bodies discussed thoroughly and have outlined the following legislative campaign for the ensuing year. The measures to be presented to the General Assembly relate

1. To the regulation of the manufacture and sale of proprietary medicines within the State; to secure for Ohio the full benefits of the provisions of the national pure food and drug law.

2. To the creation of the office of the County Medical Officer of Health.

3. To the amendment of the law on criminal abortion.

4. To the prevention of the advertisement, in the public press, of cures for venereal and sexual diseases.

5. To the registration of vital statistics.

6. To the re-establishment of local boards of health for cities, on the merit system, as provided by the code law of 1902, before amended in 1904.

7. To the appointment of all public medical officers from nominations by the State and County Medical Societies.

8. To the amendment of Section 1536, 730 R. S., so as to limit the legal publication of the rules and regulations of health authorities, to their titles.

Besides this duty of promoting the enactment of bills, in cooperation with the State Committee, each auxiliary committeeman has independent duties to perform in his own community and county society.

A summary of these duties are:

1. The enforcement of the provisions of the medical practice law by keeping a roster of all medical practitioners in the county (a card index box being furnished free by the State Medical Board for this purpose) and instituting prosecution of all unregistered practitioners (and mid-wives) by reporting names and evidence to the Secretary of the State Medical Board.

2. Giving aid to the State Medical Board in the revocation of licenses of practitioners who are guilty of fraudulent advertisement in the public press. See Resolution of the Board in August number of State Medical Journal, pp. 87.

3. Identification and patronage of ethical pharmacists by members of the County Medical Society.

4. Condemnation of "proprietary medicine journals" by resolution of medical societies providing that each member should return sample copies to publishers and that further patronage of such journals by subscription be discouraged.

5. Giving aid to local sanitary organization by looking to the proper appointment of officials and insisting upon efficient sanitary administration by the proper reporting of cases of communicable diseases, as required, and by exacting that the public health service be free from political influence and in accord with the advance of sanitary science.

6. Support of those candidates for Prosecuting Attorney and Police Judges who will serve best the needs of the profession and public policy by vigorous defense of medical and sanitary laws.

7. Measures adopted by county societies to condemn the mention, in the public press, of the names of physicians and surgeons, in connection with professional service; and, requests of editors of newspapers to omit such mention from their news columns. This movement is in relation to number two of this series and with number four of the first series.

8. Distribution of copies of the Great American Fraud by members of County Societies, to their patrons and the general public.

9. Medical inspection of schools by voluntary service in cities where such inspection is not provided by municipal authority, as exemplified by the Montgomery and other County Medical Societies. This is suggested as a public and humane duty, being educative and preparatory to official action in a most important branch of the public health service.

10. The improvement of the public milk supply, through the efforts of commissions appointed by County Societies, is an appeal to the humane, as well as the business, instinct of the more likely dairymen to furnish "certified milk" (for infant feeding especially) under conditions and dairy rules prescribed by the commission in charge. The commissions should arouse public sentiment by publishing the truth about faulty dairies and dirty milk, educate the people through newspaper cooperation and stimulate official inspection by veterinary standards.

The foregoing is exemplified by the action of County Societies at Cleveland, Dayton, and Cincinnati.

In order that legislation may be secured intelligently, funds are necessary for the employment of legal advice, travelling expenses for committeemen must be paid and for this purpose the State Association have appropriated $1,000.00. That this amount is wholly inadequate will appear to those who have worked on legislative committees. The Council of the Academy of Medicine of Cleveland have undertaken a movement toward raising the sum of $10,000 for the support of the measures outlined above and for aid in defeating measures that may be proposed by certain interests which would be inimical to public health. In view of the fact that the resources of Medical Organization are taxed to the utmost for maintainance (especially true of the Academy of Medicine) subscriptions are asked for. This fund is to be placed at the disposal of the Committee on Public Policy and Legislation.

The profession is waking up to a sense of duty in this field. In all other departments of human activity organization is characteristic. Every other calling from editor to hod carrier is organized for self protection or for the promotion of public good.

At last the medical profession looks up from scientific pursuit long enough to observe its neglected duty in the direction of public policy and legislation. The legislative committee in its work in the past has received no indication of responsive appreciation, but now if generous subscriptions are made definite progress is certain.

The Ophthalmic Reaction of Calmette

Among the recent clinical tests for the determination of the presence of tuberculosis, in those instances in which the ordinary physical signs fail or are insufficient, the ophthalmic reaction first introduced by Calmette, is perhaps the most interesting. In June of this year, Calmette presented the results of his experiments with 29 subjects, infants and adults, before the Academy of Science in Paris. He found that the ocular mucous membrane, upon contact with a solution of tuberculin, presented a reaction more or less pronounced, depending upon the extent of the local focus present, in all subjects in whom there existed a tuberculous focus. Using a drop of a one percent solution, instilled by an ordinary dropper into the lower conjunctiva, he obtained a reaction which consists essentially of congestion of the palpebral conjunctiva and in certain instances of a more or less intense edema. The caruncle becomes swollen, reddened and occasionally covered with a mild fibrinous exudate. This vascular injection increases slowly, reaching its maximum in from six to 10 hours after the instillation of the tuberculin. The patient usually complains of a mild sensation as of a small foreign particle in the eye, and perhaps a slight disturbance of vision, depending upon the amount of exudate present. The course of the temperature is usually not notably affected. This phenomenon of the congestion gradually disappears, in infants after about 18 hours and in adults after about 24 hours. In subjects without any tuberculous focus the instillation of a drop of one percent solution of tuberculin produced absolutely no reaction. Calmette applies for this phenomenon the term, ophthalmic reaction. This simple clinical experiment has since been taken up by a number of observers who have all, in a large measure, confirmed these results.

M. M. Letulle studied this ophthalmic reaction upon 39 men and 27 women, all considered as being tuberculous subjects. Of these 66, the reaction was positive 63 times and negative three times. Of the negative cases, two were practically moribund subjects, in whom the absence of any reaction was expected on the grounds of there being no power of reaction for defense upon the part of the organism. The third of the negative cases was in an individual in whom the clinical proof of the presence of tuberculosis by the finding of bacilli in the sputum was absent, hence this case could not be considered as definitely proven to be tuberculous.

M. Dufour tested the reaction upon 10 children, eight of whom reacted positively, and clinically should be considered as tuberculous, with the exception of a single child of three and a half years, in whom the presence of bacilli was extremely doubtful. The two negative results were seen in a nontuberculous child and in a small patient, the victim of so profound tuberculous cachexia that it is probable there was no reaction on the part of the organism. Of 20 other children who were tested in the same way, five reacted positively and manifested clinical lesions of pulmonary, lymphatic or bony tuberculosis, the 15 children who did not react, with the exception of one child, were not suspected to be tuberculous.

Later M. Comby made the same test using a one percent solution in 16 children suffering from diverse affections. Eight of these, clinically suspected to be tuberculous, gave positive reactions and eight others showed no reaction. Of these latter eight, two subsequently died, and autopsy showed the absence of any tuberculous lesion. The local reaction in this series of cases was mild in six instances but was so excessive in two instances that M. Comby decided to employ a comparatively weak solution; using a .5 of one percent solution in these two latter children he obtained quite as marked a reaction as with a stronger solution. In this report, July 26, 1907, he states that he has made 69 tests for this ophthalmic reaction, 24 with a solution of one percent and 45 with a solution of .5 of one percent. The reaction was negative 31 times and positive 38 times, and in four cases in which an anatomic verification was possible (two positive and two negative cases), the diagnostic truth of the reaction was sustained.

In this country this test of Calmette's has been carried out by a number of independent observers. The reports are as yet perhaps too few upon which to base accurate conclusions as to its value, though all the evidence at present points overwhelmingly to its accuracy as a good clinical test supplementary to the ordinary routine and infinitely more agreeable than the ordinary tuberculin reaction as it has been practiced for many years. The simple instillation of the glycerin extract of tuberculin in no way inconveniences the subject and there is no discomfort following it even if it prove positive, other than a mild sense of ocular irritation, some burning, redness and congestion as noted above. In those instances in which no reaction follows there is absolutely no discomfort. The writer of this brief note has himself submitted to the test, twice, having had a .5 percent solution in one

eye and 10 days subsequently a one percent solution in the other. In this case, there being no reaction, the simple procedure was forgotten immediately. Whether or not this reaction is to be placed upon an accurate scientific basis sound enough to warrant its general usage, it remains an extremely interesting phenomenon and is still worthy of further exhaustive clinical experiment to determine the full extent of its accuracy.

Recent Work on the Parathyroid

In the recent increase of scientific work on the relations of the thyroid gland to the body economy it is natural that the closely associated parathyroid glands should have excited a renewed interest.

For many years the statement of Gley that the parathyroids were, so to speak, early stages of the thyroid and were capable of changing into the latter was accepted more or less without discussion but later the opinion grew that there were essential differences. Gley's statement was based largely on certain experiments to the effect that the amount of iodin in the parathyroid was proportionally and even at times actually larger than that in the thyroid. This fell in readily with the theory that there was a sort of a system of the ductless glands, known from the most important of the group as the thyroid system, and that iodin was an essential constituent of all. This theory is now among the many which have become of merely historic interest, but the question of the parathyroids is still of active interest. Recent work at Baltimore has shown in a careful series of experiments that the parathyroids of the dog, cow, horse, sheep and of man contain no iodin or only traces too small to be considered or estimated. It may be possible that in the research of Gley portions of thyroid were exsected along with the parathyroid, and that the iodin content occurred in this way.

In association with this article is another dealing with the results of removal of the parathyroids. It has been known for some time that in carnivora the removal of these glands, if done efficiently, results in the condition known as tetany, but the parallel observation that this is not the case in herbivora, or at least only on rare occasions, has demanded explanations. The same laboratory, after a series of experiments in which this result of other observers has been confirmed, has come to the conclusion that the reason is probably that there are present in the animal

other small portions of these glands which escape removal. This is of course analogous to the fact that leaving part of the thyroid at operation, or the presence of accessory thyroids, is able to prevent the symptoms naturally rising from the total removal of the gland. The embryologic development of these glands, coming as they do from two pairs of the original gill clefts, makes the probability of multiplicity greater than if their source was a simpler one.

Summation of all the recent work on the subject seems to indicate that the parathyroids are regular in their occurrence, vary in number and position in different species of animals, and have a definite pathology of their own, which is practically independent of that of the thyroid, their relation to which seems to be anatomic rather than physiologic.

The International Dermatological Congress

During the week of September 9th to 14th the Sixth International Dermatological Congress met in New York. It was the first time that this Congress had been held in America and there were some fears as to its success. The number of foreign delegates present, the arrangements made by the American dermatologists for the entertainment of their guests and the general high character of the meetings proved these fears to be groundless.

As is so often apt to be the case with such meetings the very wealth of material to be presented interfered somewhat with the smoothness of the sessions. The American members were fortunate in being able to present a rich clinical material for exhibition. The number of cases was so large and their interest so great that those interested particularly in the clinical side of dermatology regretted that more time was not allowed for the examination of the cases shown. On the other hand those interested more particularly in the scientific side of the subject wished that there might have been more time for the discussion of the papers read.

The program as originally prepared included a number of formal presentations of themes of general interest. Unfortunately this portion of the program could not be carried out in its entirety because of the absence of several who were to read papers. However, two of the themes, "Tropical Diseases of the Skin" and "The Present Status of our Knowledge of the Parasitology of Syphilis" were fully presented and much of general

interest was brought out. The excellent presentation of "Tropical Diseases of the Skin" by the medical members of the United States Army, Navy and Public Health and Marine Hospital services must be a matter of pride to the American medical profession. The work is an indication of the scientific zeal and progressiveness with which new duties and new opportunities have been met by the medical departments of the various governmental services. Possibly the matter of widest moment was the discussion on the etiology of syphilis. The papers presented, by those who have devoted most time and energy to the subject, were unanimous in the view that spirochæta pallida is the cause of syphilis and in the opinion that the finding of the organism is of the greatest value to the clinician and to the pathologist. The only note of antagonism was a reiteration of Saling's objections, which had already been amply explained and met.

The regretable tendency of many dermatologists to base their terminology and classification of skin diseases upon slight external differences rather than upon deeper, fundamental pathologic changes was, of course, in evidence. It is a tendency, however, which is bound to receive modification from meetings such as the successful one held in New York.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Mercury Injections: In the *Journal A. M. A.*, for August 3, William S. Gottheil states that he has used the intramuscular method of mercurial administration almost exclusively in public and in private practice since early in the nineties, and either personally or under his direction, between one and two thousand injections have been given annually for a number of years past. The rapidity of action of the drug when administered hypodermically is surprising, especially on the earlier and acuter manifestations of luetic intoxication. The patient suffering from violent cephalalgic or osteocopic pains obtains relief in a very few hours, objectively there are distinct signs of improvement by the second day, or at most by the third; general eruptions commence to fade, and broken down lesions, primary, secondary or tertiary, show decided marks of retrogression. On the later lesions, the action of the drug when administered in this way is of course somewhat slower, but it is still very much more rapid than when given by the mouth. The more obstinate and relapsing of the later manifestations, such as the palmar and plantar syphiloderms, mucous patches, etc., react, and sometimes with surprising rapidity, though they have proved entirely recalcitrant to mercury administered by the mouth or even by inunction. He states as his positive belief that the intramuscular injection of the insoluble mercurials affords a

greater certainty of the nonappearance of active symptoms than the ordinary methods. He has several times given as much as 20 drops of the suspension, or two grains of the salicylate of mercury weekly, with rapid absorption and only beneficial effects. Properly administered the injections are almost painless. If the right site in the depths of the gluteal muscles is selected, the skin made thoroughly cold with ether, the puncture and the needle withdrawal made rapidly, though the actual injection of the suspension be done slowly, the pain is an entirely negligible factor. Indurations after the injections do not occur as a rule, and he believes the dangers of embolism of the lungs after the injections to be almost illusory. In the *Medical Review of Reviews,* for July (*Wien. Klin. Wochenschr.*) Freund discusses the advantages and disadvantages of the insoluble preparations of mercury. As to the shape assumed by the injected mass, and the rapidity with which absorption takes place, it was found that the metal did not assume a marked spindle form, but rather an oval disk. Small particles of the metal become detached from the original mass and wander into the surrounding tissue. The absorption appears complete from the ninth to the tenth day, the greatest amount taking place during the first four days. To obtain a practically continuous and even absorption of the metal, it seems proper to give the injections (of salicylate of mercury) at intervals of about eight days.

Epididymitis: In the *New York Medical Journal* for July 27, Julius J. Valentine asserts concerning gonorrheal epididymitis, that no patient treated by irrigations for gonorrhea acquires epididymitis unless the epididymis is involved when he presents himself for the first examination; the development of epididymitis is then exceptional. Galvanism yields brilliant results in the inception of this complication. Pain is promptly arrested, and the swelling soon recedes. As regards local applications, a slight modification of the ointment of Prof. Leopold Casper is recommended. It consists of ichthyol 25 parts, guaiacol five parts, mercurial ointment 10 parts, petrolatum and wool-fat aa ad 30 parts. This ointment is thickly spread upon four layers of gauze cut of a size to completely cover the scrotum containing the inflamed epididymis; over the gauze a layer of cotton is placed; this is enveloped with a sheet of oiled silk and all firmly compressed with a strong suspensory bandage, selected to thoroughly compress the scrotum, and hold it immovable against the ascending pubic rami. Painting the scrotum with silver nitrate, tincture of iodin, guaiacol, etc., have been discarded, and the use of ice applications is condemned. The time honored flaxseed and tobacco poultice is still recommended when the scrotum is extensively involved in the inflammation as shown by intense reddening and such hyperesthesia as to prevent manipulation of any kind. In some cases of hyperacute epididymitis heat is not borne and even increases the suffering. Then the ordinary lead and opium renders excellent service. When inflammation of the epididymis has not extended to the cord, or involves only its lower third, Fricke's strapping is the most effective method of treatment. When tense edema accompanies epididymitis, or when local hyperemia is very great, relief and aid to treatment are readily obtained by numerous slight punctures into the superficial layers of the scrotum.

Antitoxin: In the *Monthly Cyclopedia of Practical Medicine* for July, Edwin Rosenthal believes that in the administration of antitoxin it should be used as directed at its beginning, to-wit: begin with the initial dose, the second dose should be double the first, the third double the second dose, and so on. He is firmly persuaded that it is the only true method to follow, and he has had practically no mortality to record, or perhaps one or two percent, this taking in all varieties of the disease. Antitoxin is the specific for diphtheria and nothing more. This is an axiom that should not be forgotten. To use antitoxin after the infection has so permeated the system that the patient suffers from toxemia is irrational and foolish. While it is permissible to use the serum in all cases and at all times, it is because we use it in the cases of sepsis and the like that are clearly no longer diphtheria, that the serum has fallen into some disrepute, on account of these failures. While antitoxin is a specific for diphtheria and nothing else, use it for its value. Prophylaxis should always be the rule and no case can be said to be too mild not to require it. He has seen cases change so rapidly from a benign to a malignant form, that one had the impression it was malignant from the inception. He has always immunized any one exposed, no matter what the condition. Even if the exposed one has a typhoid, a pneumonia, a conjunctivitis, a burn or scald, antitoxin should be used. Antitoxin cures diphtheria, but does not cure its results. Used early enough antitoxin may so modify the infection that little or no after effect can be noted. After the antitoxin is given then calomel in varying doses as required by the urgency of the case, from 1-10 of a grain to five grains at a dose every hour till an evacuation is obtained. Treat the local manifestations as indicated; watch the heart simply as in any grave infection; give suitable stimulants, food, plenty of air, etc., but above all things the serum should be used correctly, judiciously and with an understanding of the subject. The idea is to treat a disease, and not attempt to overwhelm it, as it were, with a substance that is used only for a certain purpose.

Physiologically Tested Drugs: The *Therapeutic Gazette* for July calls attention to the fact that as it is the function of the Pharmacopoeia to recognize methods which are well established, rather than to act as a pioneer in new fields, so it has been the function of several progressive manufacturers for a number of years to subject these important drugs to physiologic tests made upon the lower animals, and any one who has failed to compare the variable results which he obtained from untested drugs with the accurate results which he obtained from tested samples, can have no conception of the satisfaction which the use of such products brings to the anxious practitioner. The editor has more than once expressed surprise that physicians who are content to use only the best of steel in surgical operations should be satisfied to employ any Galenical preparation to relieve critical states, which may be dispensed by any druggist, it being a well known fact that commercial methods govern the production and sale of crude drugs quite as much as they govern the production and sale of all other articles which are to be found in the markets of the world. As most of the skill of a physician, after making a diagnosis, is exercised in determining the exact dose of a given remedy

which is needed by an individual patient, it is essential that all Galenical preparations like tinctures and fluid extracts should be as nearly as possible of an identical strength if his conception of quantities and doses is to be of any value to his patient. W. J. Robinson in the *Medical Record* asserts that while standardization was a step in the right direction, showing a desire to give the profession preparations of more or less uniformity, it is merely a step, a single step, in the evolution of an exact and definite materia medica, and to stop there would be to rest on a broken reed. He believes the standardized preparations in many cases are apt to deteriorate, although when standardized they may have contained the amount of active principle required. He advises giving up most of the Galenicals, and using whenever feasible the active principles instead.

Syphilis: L. Duncan Bulkley, in the *Medical Record* for August 10, believes syphilis to be a much more common disease than is generally supposed to be the case, not infrequent even in good circles of society, both in the city and the country. Another plain truth about syphilis is that although it may be called a rebellious disease, as far as regards any natural tendency to recovery, it is yet very tractable if exactly the proper measures are carried out, in every respect with perfect obedience and for a sufficient length of time. Mercury is still the one and only remedy which exercises a specific control over the disease. The various methods of its administration are familiar, but that by the mouth is, and probably always will be, the common and favorite method, and is that which he usually employs. To be really effective it should be given to tolerance, the mouth being carefully watched to avoid salivation. He constantly sees patients with florid manifestations of syphilis who have been receiving only a quarter of a grain of protoiodid of mercury three times daily, a totally inefficient dose. While the hypodermic administration of mercury is steadily gaining ground, and by many is advocated as the only proper method of treatment in all stages of the disease, he does not share this opinion, although he has had some little experience with it. He emphasizes the truth too often forgotten in practice, that the patient is constantly to be regarded and treated quite as much as the disease itself. As regards the supposed value of mineral springs in connection with syphilis, he is confident that their value and importance has been very greatly overestimated both by the laity and by the profession at large. He believes in fact that much harm is often done by the false security which patients frequently have who have undergone what is often called a cure at one of these places.

Drugs to Assist Labor: In *Mercks Archives* for August, James E. Davis classifies the drugs used to assist labor under three heads: those producing tetanic contraction of the uterine muscle, as ergot, hydrastis, cotton-root, etc.; those producing normal contraction, as kola, quinin, cimicifuga, glycerin, sugar, etc.; and those which act as general systemic tonics, stimulants, eliminatives, narcotics and anesthetics. Ergot and other drugs of the same physiologic type exhibit power, in full doses, to influence tetanic uterine contractions. All unstriped muscular fibres are stimulated. When ergot is administered in small

doses, 10 minims or less, the effect is that of a stimulant to the normal intermittent contractions. The drugs of the nontetanic group produce a varying effect upon well established contractions; quinin in doses of 10 grains, fluid extract of kola in 30 minim doses, sugar in one ounce doses, fluid extract of cimicifuga in one dram doses, have resulted in a strengthening of the pains. The use of drugs to assist labor requires a good knowledge of the approximate time required for the desired physiologic effect, and this will, under certain circumstances, determine the particular drug or drugs selected. If given by mouth, ergot, quinin and most other drugs of their class manifest beginning effects in from 15 to 45 minutes, reaching full physiologic action in from one to four hours. There is a wide variance in the action of drugs given when labor is in progress, not only are the factors of absorption and elimination significant but the character of the labor, with the mental and nervous temperament, will have much to do with the results obtained. In considering the use of drugs producing tonic contraction, the weight of opinion among obstetricians of large experience is against their use until the uterus is empty. It is important to remember that quinin, cimicifuga and like drugs should not be given in small doses, as the result will be lessened reflex activity. Ten grains of quinin, for example, should be administered early enough to secure the full effect. A more thorough understanding of the therapeutic value of drugs used to assist labor will doubtless restrict their use, as labor is intended to be a normal process.

Lactation: The *Medical World* for August summarizes as follows the rules which the nursing woman will do well to follow: (1) Let the meals be taken regularly, take no food between meals, unless a cup of cocoa or a glass of milk. The diet list is best held pretty closely to milk, fish, eggs, vegetables, fruit, cereals, bread and butter, with meat not oftener than once daily. Rather more fluids than the usual amount should be ingested, but benefit is rarely to be derived from malt extracts, beer or other unaccustomed stimulants. (2) Exercise has a powerful effect on the milk secretion, and the nursing mother finding her milk deficient in quantity should accustom herself to outdoor exercise as early as possible, and keep it up regularly. It is necessary to avoid overheating of the body, and the exercise must always be discontinued before the point of fatigue is reached. (3) The emotions have an influence on milk secretion also, and a nursing mother should guard against anything that she knows may excite or grieve her unduly. If the quantity of milk is deficient add to her ingestion of fluid, and if desired to limit somewhat an excessive secretion of milk, decrease proportionately the ingestion of fluids. The total solids may be increased by shortening the nursing intervals, decreasing the exercise and decreasing the amount of fluids ingested. The total solids may be decreased by lengthening the intervals of nursing, increase in exercise and increased amount of liquids ingested. The fat content is increased by increasing the amount of meat in the mother's diet, and adding fats which are readily digested and assimilable. The fat is decreased by decreasing the amount of meat in the diet. The proteids are increased by decreasing the amount of meat in the diet and are decreased by increasing the exercise to the

limit of approaching fatigue. Mothers suffering from chronic disease should not attempt to nurse their infants, nor should those whose habits of life are irregular. It is also advisable for those with a tendency to insanity, or who are unable to control their tempers, or who cannot secrete 10 ounces of milk daily to forego nursing.

The Heart in Fever: Steplane Leduc in the *New York Medical Journal* (La Province Medicale) directs attention to the danger to the patient of paralysis of the heart in febrile diseases and believes that many lives may be saved if prompt attention is given to the condition of the heart. The necessity of preserving the horizontal posture is generally recognized. Sudden death is most frequent in those patients who, rising from the bed, attempt to stand upright on the floor. This is owing to the sudden increase in the intracardiac pressure. The heart wall is also weakened by the elevated temperature of the blood (thermic myocarditis). This may in great measure be prevented by the steady application of an ice-bag over the precordia. A piece of flannel should be placed under the bag to protect the skin.

Tuberculosis: Chas. G. Foote, in the *American Journal of Dermatology and Genito-Urinary Diseases,* states that there is practically unanimity of opinion in the profession that tuberculosis of the testicle is a surgical affection. It is only in advanced cases of general tuberculosis or of an acute miliary type that surgical procedure can be dispensed with. He is not sanguine as to castration in advanced cases, but at least advises free opening and local treatment with drainage of all suppurating foci. Castration, too, is by no means without danger; death followed from shock, a few hours after castration, in a laboring man, apparently in first-class condition (except for a badly suppurating testicle). The constitutional treatment is an important consideration. As soon as possible the patient should be where he can live in the open air. He advises forced feeding, cod liver oil, and especially the syrup of the iodid of iron, which he has found most successful in cases of surgical tuberculosis.

Scarlet Fever: *American Medicine,* for July, asserts that all attempts to produce a specific serum for scarlet fever have ended in failure. Some success, however, has followed the use of Moser's polyvalent serum in which nearly 30 different strains of streptococci are employed. The majority of observers report good results from the use of the serum. These good results apparently arise from the fact that in several cases at least the symptoms fall under two classes: (1) Those due to the specific scarlatinal infection, and (2) those due to secondary streptococcic infections, to which the scarlet fever patient seems peculiarly susceptible. Moser's serum acts upon the second class of symptoms, averting or lessening the secondary complications. It is recommended to use the serum as a routine measure in all severe cases. The best results are obtained when used the second or third day. The dose is from 100 to 200 ccm. The failures seem to be due to its being used too late or the serum being of too low a potency. The only objectionable feature is the frequent occurrence of an urticaria, or erythema.

Academy of Medicine of Cleveland

The fiftieth regular meeting of the Academy was held at 8 P. M., Friday, September 20, 1907, at the Cleveland Medical Library.

PROGRAM:

Appendicitis in Children (Appearing in full in this issue), A. F. House, M. D.

Suppurating Retroperitoneal Glands (Appearing in full in this issue), C. A. Hamann, M. D.

The Flexner Serum in the Therapy of Cerebrospinal Meningitis, L. W. Ladd, M. D.

Dr Ladd reviewed the work of Flexner in experimentally producing epidemic cerebrospinal meningitis in monkeys and his success in treating the disease in the higher apes by the administration of a serum obtained from goats or horses. In preparing the serum the animals were inoculated first with dead cultures and later with increasing doses of the living organisms. The exact nature of the curative principle in the serum is as yet undetermined. The work of the German investigators, who were working simultaneously with, and independently of, Flexner, was also reviewed. Dr Ladd had used the Flexner serum altogether in 17 cases, 16 of which were reported, the other being a chronic case still unrecovered. Of these, five were seen within 24 hours of the onset, and all recovered; one patient seen within 48 hours was in extremis and died; four were seen within 72 hours, all recovered, one having a slight deafness remaining, another a slight foot-drop; three were seen within 96 hours and all died; two seen within two weeks of the onset, one died of chronic hydrocephalus, the other recovered; and one case seen one month after onset died of chronic hydrocephalus; a mortality of slightly over 30%, a very favorable result in comparison with other epidemics and the previous mortality of the present one. The serum was given intraspinally by lumbar puncture, first withdrawing some of the fluid, which in all these cases contained large numbers of the organisms, these, in all cases, subsequently grew out on cultures. Subcutaneous injection of the serum was also used. Examination of the spinal fluid after a secondary lumbar puncture, showed an increased number of organisms within the leukocytes, indicating possibly an increased phagocytosis. The possibility of harm from the injection of a large amount of serum, resulting in the death of a large number of organisms and the consequent liberation of a large amount of intracellular toxin, should be therefore considered.

The following are applicants for membership: Drs F. X. McNamara, M. E. Blahd, Ira A. Tripp, George U. Bennett.

The Council of the Academy held a meeting on Wednesday, September 11, for the transaction of routine business. The feasibility of raising a fund of $10,000.00 to defray the cost of legal advice and other expenses for legislative purposes was also discussed.

Lakeside Hospital Medical Society

The Lakeside Hospital Medical Society met on Wednesday, September 4, 1907.

PROGRAM:

1. a. A Case of Subphrenic Abscess.
   b A Case of Stone in the Common Duct (Charcot's Intermittent Fever).
   c A Case of Stone in the Cystic Duct with Pus in the Gall Bladder.
   d A Case of Portal Phlebitis.
   e A Case of Ruptured Gall Bladder, in a woman four months pregnant, with Recovery.
   f A Case of General Peritonitis due to Colon Bacillus, with Recovery.
   g A Case of Stricture of the Esophagus.
   h A Case of Dislocation of Cervical Vertebrae. Dr R. H. Birge.
2. A Case of Luetic Laryngitis. Dr A. B. Eisenbrey.
3. a A Case of Angina Pectoris with Pain Referred to the Abdomen.
   b A Case of Pernicious Anemia. Dr F. Vincent.
4. Report of a Case of Hepatic Lues. Dr H. G. Sloan.
5. Demonstration of Spirochaeta Pallida.

The Lakeside Hospital Medical Society held its regular monthly meeting on Wednesday, September 25, 1907.

PROGRAM:

1. A Case of Dilatation of the Heart during Convalescence following Laparotomy. Dr Bower.
2. A Case of Typhoid Fever with Acute Cholecystitis—Operation. Dr Stone and Dr Lewis.
3. A Case of Intestinal Obstruction following Appendectomy. Dr Lewis.
4. A Case of Inguinal Hernia of One Side followed by Inguinal Hernia of the Opposite Side during Convalescence. Dr Hofmann.
5. Two Cases of Meningitis. Dr Eisenbrey and Dr Ladd.
6. Report of a Case of Puerperal Sepsis with Ulcerative Colitis. Dr Bower and Dr Russ.
7. Report of a Case of Pneumonia and Endocarditis with Marked Pain in Right Hypochondrium. Dr Hoover and Dr Birge.
8. Report of a Case of Tetanus following Vaccination. Dr Stone.
9. Pathologic Specimens. Dr Russ.
   a Some Early Typhoid Lesions of the Bowel.
   b Fibrous Myocarditis Associated with Coronary Thrombosis.

St. Alexis Hospital Alumni Association

The fifty-fourth regular monthly meeting of the St. Alexis Hospital Alumni Association was held at The Hollenden, on Thursday, September 5, 1907, 8 p. m. Program: A Nasal Tampon, Dr J. E. Cogan; A Paper, Dr J. V. Kofron; Puerperal Eclampsia, Dr T. J. Calkins.

Book Reviews

Annals of Surgery. A Monthly Review of Surgical Science and Practice. Edited by Lewis Stephen Pilcher, M. D., LL. D., with the collaboration of J. William White, Ph. D., M. D., Sir William Macewen, M. D., LL. D., and W. Watson Cheyene, C. B., F. R. S. J. B. Lippincott Co., publishers, Philadelphia. $5.00 per year.

The June number of the Annals of Surgery is an especially illustrated number and is full of good things, both in the text and illustrations.

Dr J. Collins Warner discusses plastic resection of the mammary gland and his article is illustrated by seven excellent black and white plates, showing the various steps in the operation recommended. He calls attention to the necessity of having some recognized mode of attack for benign tumors of the breast, instead of the haphazard exploratory incisions which have been customary. He makes his incision along the outer hemisphere of the gland so that the breast can be thrown over toward the sternum and the most remote regions of the gland can be freely exposed by radiating incisions through its under surface. As the breast falls not only downward but outward when the patient is in an upright position, this incision is concealed from view. He gives accurate instructions as to how best to sew up the various wounds to prevent any retraction of the nipple and to reconstruct a normal-looking breast.

Dr W. J. Mayo discusses gastric and duodenal ulcer from the standpoint of operating-room results, with the view of somewhat modifying the generally accepted opinions. In a series of 200 cases of ulcer, Mayo found that 87 involved the stomach, 98 the duodenum, and 15 were independent ulcers of each viscus; showing that ulcers which can be actually recognized are fully as often found in the duodenum as in the stomach. He states that undoubtedly many ulcers that extend up to and perhaps involve the pyloric sphincter on the duodenal side have erroneously been regarded as pyloric, therefore gastric, and the statistics have been compiled on this mistaken identification. He gives a method of easily identifying the pylorus by recognizing the thick walled vein which extends from the anterior margin of the pylorus on the gastric side upward, and a similar vein which extends from the superior margin downward until it nearly or quite meets the one from below. This arrangement of vessels is beautifully illustrated with two plates. He also discusses the relation of indurated ulcer to cancer and non-indurated mucous ulcer.

John C. Munro discusses the end results in benign lesions of the stomach surgically treated. He analyses the results in a series of 150 cases, giving the lesions found, the various operations performed for relief and the subsequent condition of the patients.

Robert C. Coffee discusses a special method of operating for persistent fecal fistula. The details of the operation are very carefully given and the article is illustrated by a series of six beautiful colored plates, which add a great deal to a correct understanding of the text.

John A. Bodine discusses local anesthesia in inguinal hernia operations. He states that in his last 400 operations for radical cure of inguinal hernia no case has been operated on under any other kind or method of anesthesia. He claims that from every standpoint it is far superior to general narcosis.

Andrew J. McCoch has a very interesting article on the classification of cysts of the suprarenal gland with a report of a personal case.

Alfred T. Osgood discusses diagnosis of obscure cases of renal and ureteral calculus. A history and physical examination he regards as very important, but the greatest aid is given by X-ray examination and cystoscopic examination of the bladder, with catheterization of the ureter.

Edward L. Keyes has an excellent article on tuberculosis of the testicle. He discusses the history of 100 patients and gives his conclusions as to the best method of surgical treatment. There are several other very interesting articles and reports of cases, making this number an unusually valuable one.

The Practical Medicine Series, Volume III, the Eye, Ear, Nose and Throat, edited by Casey A. Wood, C. M., M. D., D. C. L., Albert H. Andrews, M. D., Gustavus P. Head, M. D. Series 1907. The Year Book, pnblishers, Chicago.

This volume, which consists of short but concise reviews of the best articles written during the past year on diseases of the eye, ear, nose and throat, is the same size as other volumes in the set. It is divided into three sections dealing with the eye, ear, and nose and throat, respectively; each section takes up its subject in as full and systematic a way as the reviews of articles will permit. References to the original article are always made, so that subjects of interest may be followed further if desired. It is as complete and comprehensive as any work of its kind in English, and the fact that these subjects are in one small volume make it valuable to the man who wishes to look over the whole field.

A Treatise on the Principles and Practice of Medicine, by Arthur R. Edwards, A. M., M. D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Northwestern University Medical School, Chicago; Attending Physician to Mercy, Wesly Hospitals, etc. Illustrated with 101 engravings and 19 plates; 1,328 pages. Lea Bros. & Co., Philadelphia and New York.

In a work on the principles of the practice of medicine, limited in size to one volume, the subject cannot be dealt with in an encyclopedic manner, but by a most systematic method of discussion the whole field is amply covered, a great mass of valuable data is supplied and the author has succeeded in producing a most satisfactory and practical treatise. A feature that will prove most attractive to the average practitioner and to the student is the carefully detailed treatment suggested. Too often the author of such a work feels that a full description of the disease itself is sufficient and that the treatment is largely a matter of individual opinion; this view, however, does not appeal to the practitioner who can frequently satisfy himself as to the diagnosis but is in doubt as to how he can best restore the patient to health.

Another good point is that the author realizes that his book will be studied, not only by those already familiar with the subject, but also by the inexperienced. He therefore supplies in many cases the explanations for phenomena that, although perfectly obvious to the experienced, are not clearly explicable to the novice unless the relation of cause and effect are explained.

The general arrangement of the subject follows the generally accepted

plan, beginning with the specific infections, such as typhoid, etc., followed by the diseases of the circulatory, respiratory and other systems. In the description of each disease a judicious selection of different typographic forms for the use of headings and subheadings systematizes the subject matter so well that a comprehensive view of it is easily obtained. The insertion of a number of tables of differential diagnoses is in accordance with this plan. Numerous references to observations and results of other workers are found in the text and a considerable number of plates and figures are of decided help. The work demands a hearty recommendation as a very concise and useful summary of the modern ideas of medicine.

Physicians' Manual of the Pharmacopeia and the National Formulary, an Epitome of all the articles contained in the U. S. P. VIII and the National Formulary, by C. S. N. Hallberg, Ph. G., M. D., Professor of Pharmacy, School of Pharmacy, University of Illinois, Member of Committee on Revision of the U. S. P. and of the Committee on the National Formulary, and J. H. Salisbury, A. M., M. D., Assistant Professor of Medicine, Rush Medical College, Late Professor of Medicine, Chicago Clinical School. American Medical Association, Chicago, 1907.

This little work has been issued by the American Medical Association to further its crusade against the use of secret proprietary drugs and mixtures. The average physician is deluged with advertising literature and besieged by agents of the companies manufacturing these drugs so that he is apt to forget the resources of the U. S. Pharmacopeia and the Medical Formulary and to prescribe some unknown compound which may or may not deserve the claim of its agents, but which is usually more expensive to the patient than a corresponding U. S. P. preparation.

The arrangement of the subject matter is very convenient, the type indicating from which of the larger works the particular article is taken. Under the head of each drug, the various preparations containing it are given, together with their strength and doses. A considerable number of prescriptions are suggested. The index is very complete and includes the common names of the preparations and also the synonymous proprietary names. A therapeutic index of the various diseases with the approximate drugs for their treatment is also given. The book is of convenient pocket size and should be in the hands of every physician who intends prescribing in an intelligent manner.

Books, Pamphlets, etc., Received

Does the Opacity of Incipient Cataract Ever Regain Transparency? Leartus Connor, A. B., M. D., Detroit.

Report of the Sixth Annual Conference of Sanitary Officers of the State of New York.

Five Hundred Surgical Suggestions. Practical Brevities in Surgical Diagnosis and Treatment, by Walter M. Brickner, B. S., M. D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York; Editor-in-Chief, American Journal of Surgery; and Eli Moschcowitz, A. B., M. D., Assistant Physician, Mount Sinai Hospital Dispensary, New York; Associate Editor, American Journal of Surgery. Second Series. Duodecimo; 125 pages. New York, Surgery Publishing Co., 92 William St., 1907. Price, $1.00.

Medical News

J. F. Reid, of Warren, spent his vacation at Worcester, Mass.

W. H. Taylor, of Youngstown, spent his vacation on the lakes.

J. F. Burchett, of Vanceburg, has decided to locate at Ashland.

O. W. Bonner, of Delaware, has returned from a trip up the lakes.

R. W. White, of Youngstown, spent his vacation in New York City.

W. B. Hubbell and wife, of Elyria, made the lake trip to Mackinac.

D. W. Gans, of Massillon, spent a three weeks' vacation at Georgian Bay.

D. A. Berndt and wife, of Portsmouth, spent ten days at Atlantic City.

Dr and Mrs Gray, of Dayton, recently made a tour of the great lakes.

J. A. Cross and wife, of Youngstown, took a two weeks' trip up the lakes.

E. M. Louthan has moved into Rogers, where he received a hearty welcome.

W. A. Melick, of Zanesville, visited New York and Philadelphia on his vacation.

Wilson Claggett, of Dayton, spent his vacation on a fishing trip up in Wisconsin.

O. F. Hills and wife, of Wooster, spent their vacation on a trip to Atlantic City.

Dr Conway, of Niles, met with a very painful accident, sustaining a broken arm.

H. W. Wineberg and wife, of Youngstown, spent a pleasant vacation in Canada.

A. S. B. Nellis and wife, of Dayton, took a trip sometime in August up into Canada.

S. J. Podlewski and wife, of Steubenville, had a very enjoyable trip up the lakes.

Lister Pomerene and wife, of Coshocton, spent a three weeks' vacation in Minnesota.

J. B. Kotheimer and wife, of Youngstown, spent three months of the summer in Europe.

J. J. Lawrence, formerly of North Lawrence, has taken up a residence in Canton.

George S. Mytinger, formerly of Cincinnati, has opened an office in Washington C. H.

O. E. Portmann, of Canton, took a trip to Minnesota for the purpose of visiting his brother.

A. L. Sherick, of Ashland, spent a very pleasant three weeks at Mullet Lake, Michigan.

Frank Fife, of Dayton, recently made a tour of the lakes, being absent about two weeks.

P. H. Cosner, of Newark, after a month's outing at Buckeye Lake, reported a splendid time.

C. V. Garver and family, of Lorain, made a three weeks' visit in Wooster and West Salem.

R. W. White and wife, of Youngstown, have returned from a two weeks' visit to New York City.

Arba Green and wife, of Youngstown, spent a most delightful vacation in the northern wilds of Wisconsin.

R. L. Morse, of Norwalk, has returned from Ann Arbor, Michigan, where he completed a post graduate course.

W. E. Loughridge and wife, of Mansfield, spent their vacation at Niagara Falls and other points up the lakes.

W. E. Allyn, of Chardon, spent a very pleasant vacation on a trip to the Exposition, Baltimore and Washington.

O. M. Wiseman, of Zanesville, who recently underwent an operation for abscess of the ear, is able to be out again.

Dr and Mrs Hoover, of Edgerton, made a trip early in September to Niagara Falls, New York and the Exposition.

E. H. Porter and wife, of Tiffin, visited the Bermuda Islands and Maine on their vacation. They were gone a month.

A. W. Bice, of Lima, who has been studying in the old country for the past six months, with headquarters at Vienna, is at home again.

Will Ingalls, who has been studying in Germany, has returned to his home in La Grange after an absence of about a year and a half.

D. C. Wilson and wife, of Ironton, on leaving Los Angeles, took a trip to the Jamestown Exposition and visited several eastern places before returning home.

Peter Beaugrand, Fremont's pioneer physician, has recently celebrated his 93rd birthday. Although not practicing medicine, he is still active and in the best of health.

P. M. Wagner, of Canal Dover, has returned from abroad, where he has attended the clinics in London and Berlin. He has been taking a post graduate course in eye and ear specialties.

Springfield, Ohio, has recently started a Medical Library in connection with the Warder Public Library. C. H. Kay, President, Noah Myers, Vice-President, and T. M. Reade, Secretary, are the officers.

Herbert L. Burrell, President of the American Medical Association, is now engaged in preparing a work on Surgery, which is to be published by Blakiston's Son & Co., of Philadelphia. From the enviable reputation as a surgeon and teacher, which Dr Burrell has made, the book will assurredly be a success.

The forty-second regular meeting of the Lake County Medical Society was held at 8:00 p. m., on Monday, September 2, 1907, at the Parmly Hotel, Painesville. Program: Reports and Presentation of Cases; Miscellaneous Business; "Some Common Affections of the Nose and Throat," H. G. Sherman, Painesville.

H. S. Davidson, of Barberton, Coroner of Summit County, M. I. Hunt and Mark D. Stevenson, of Akron, were seriously injured in an automobile accident September 16. Dr Davidson had a rib broken, Dr Hunt was seriously bruised, and Dr Stevenson suffered from a severe scalp injury, due to falling on his head.

Deaths

G. H. Kemp, of Barnesville, died in September.

H. W. Carter, of Cuyahoga Falls, died August 25, after an illness of eighteen months.

S. N. McCloud, a prominent physician of Marysville, dropped dead Saturday morning, August 24, as the result of an attack of heart trouble.

The Cleveland Medical Journal

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The Relation of the Medical Profession to the Laity

By N. S. SCHWARTZ, South Newbury, O.

There is neither a written nor an unwritten law of this society making it the duty of the outgoing president to make an address; the occasion, however, seems so opportune that I cannot forego saying something concerning a line of missionary work leading to a true conception, a better understanding of the mutual relation between the medical profession and the laity.

As the conservators of the health and lives of the people, we are not well and truly understood by the masses; our motives and purposes in forming closer organization are misconstrued as meaning only a commercial or mercenary combination, when such is indeed the farthest removed from our purposes and is as unjust and undignified as untrue. For this we may be in a measure to blame, for have we not, until within recent years, stood aloof from a large section of the profession, out of all harmony with professional autonomy, not in accord with one another because of sectarian prejudices and petty jealousies, the outgrowth of competitive rivalry? However, true this may have been, happily such a condition no longer endures; a new era has dawned upon the professional horizon. Instead of a warring, antagonizing, disturbing element, organization has changed the medical profession into an harmonious working guild with a unity of purpose to lessen the sum of human suffering, to prolong life and to stay death. Such is our purpose here today as an organized medical society and auxiliary unit of the State Medical Society, than which there is no greater organization representing such unselfish, selfsacrificing, intelligence employed for the public good in this State. Now, knowing all this to be true beyond fear of contradiction, is it not therefore our duty as practitioners of medicine and surgery and members of this society, an integral

part of the State professional body, to educate the laity so that we may be adequately understood and appreciated as to our purposes, powers, and limitations? In this we must be our own missionaries and we should employ such honorable means, as becoming dignity gives us, to reach the people, and if we omit this, patent medicine venders and advertising quacks will continue to impose their "hogwash" upon the credulous and unwary at the cost of life, health, and the hard earnings of their votaries. Conscienceless scoundrels that they are, vampires living on the life blood of the people, barnacles on the ship of true medicine, parasites on the professional body! I may say here without danger of contradiction or charge of being pedantic, that no profession or organization of men stands in such close relation to the public weal as does the medical society and the members individually in the communities where they reside.

The wealth and prosperity of a State or Nation does not reside in its monetary value alone; the mere possession of farms, houses, stocks and bonds are but evidences of the health and producing or earning capacity of her people. These constitute a nation's wealth, and we, the medical profession, are the guardians, the conservators, of the health and happiness of the people. We have much in proof of these assertions. Sanitary science or preventive medicine has imposed new functions on the profession. To the previous mandate "to restore health and preserve life without hazard, when possible, and at all hazards when necessary," has been added "prevent disease." That this mandate, this crowning climax of professional unselfishness, is not an empty pretention, a dead statute on the pages of progressive medicine, our acts show and we point to this with pride. Boards of Health, where they exist, have with unceasing vigilance ferreted out the cause and sources of disease, and suggested ways and means for their arrest, aided by the police power granted them by the State to enforce their commands, and these measures bear most heavily upon those who practice medicine in all its departments. The demands of preventive medicine are absolute; we must isolate, quarantine, immunize, without fear, favor, or affection. Failure to comply means punishment by the State or just cause for malpractice by any individual injured by sickness or death because of professional dereliction. This being true, the laity should know that we are given no choice in the execution of these mandates and should yield us a cheerful obedience in these as in all things necessary to limit the prevalence of contagious

or infectious diseases. They should also know that opposition or refusal on their part to yield to these measures makes them amenable to penalty.

More adequate sanitary surveillance is to be secured for suburban districts by asking the legislature to pass a law providing a Health Officer for every county in the State thus bringing us in touch with the State Board and giving to every citizen and ward equal protection. I am pleased to say our society stands pledged to the support of such an act. What the functions of this provision will be, I cannot here enumerate, but that medical inspection of our public schools will be one, I have no doubt.

Let us not forget to impress upon the public mind that the "Pure Food and Drug Bill" approved by the President June 30, 1906, was framed by the National Legislative Council of the American Medical Association, and its passage secured by a petition of 2,000 medical societies representing 135,000 medical practitioners of the United States, led by the National Legislative Council whose chairman is Charles R. L. Reed, of Cincinnati, Ohio, a member of the Ohio State Medical Society. We are greatly indebted to his untiring efforts in the face of the opposition of corrupt liquor dealers and adulterated food manufacturers and those trafficking in all sorts of fraudulent goods. These mercenary vampires pooled their issues against the passage of this grand act, which has for its purpose the security of the people against imposition in the necessaries of life and serving as a guard to the honest producer as well as the necessary consumer, a law more benignly beneficent than the "Pure Food and Drug Law" does not grace the statutes of this State or Nation.

What then were the conditions from which we are redeemed by this law? This can be answered best by quoting from Dr Reed's report made to the State Medical Society at Cedar Point. He reports as follows:

"The mere fact that under State laws, however rigorous they might be, a manufacturer of fraudulent products in one State could carry on his business without hinderance if only he sought a market outside of that State, shows the importance of National legislation on the subject, even with the question of importation left out of consideration. The fact was, that this state of affairs resulted in having our commerce flooded with all sorts of spurious products. The market was so large that the art of adulteration, substitution and misbranding had become one of the most remunerative in the category. The plan of the adulterators was of course to make cheap things look like expensive things, old

things look like new things, dirty things look like clean things, and poisonous things like inocuous things, all of course with the object of selling them for the highest possible price. This was accomplished either by making something outright from artificial elements or by taking the original article and adding to it some cheaper things that would add either to its volume or weight or both, or some coloring matter to make it look what it was not, or something to preserve it overtime against actual disintegration, all to the hazard of the health of the consumer." In alluding to the articles adulterated he says, "I have time to allude to but few of the many and will restrict myself to the necessaries of life. Oleomargerine which is naturally white was made to look like genuine butter by such added ingredients as carrot-juice and annatto. Fresh butter was adulterated by such added ingredients as oleomargerine, renovated butter and coloring matter. Sausages made from stale meat were made to look fresh by such added ingredient as red ochre and crumbs of bread and crackers, sweepings of bakeries and groceries and the offal of hotel and restaurant kitchens. Tea was made profitable by such added ingredient as coal-tar dyes, turmeric, Prussian blue, plumbago, indigo, soapstone, gypsum, catechu and foreign leaves together with tea leaves previously steeped. Coffee in the whole grain, when of inferior grade, was restored to a marketable color by the use of such added ingredients as green pigment, yellow ochre, iron oxid, burnt umber, and almost every other household necessity was adulterated, even flour, the very staff of life, was adulterated with marble dust, fluor spar and other added ingredients reduced to an impalpable powder. Medicines used in filling prescriptions were found to contain added ingredients, dangerous alike to the lives of the patients and the reputation of the physicians."

With this brief mention of what we stand for in the realm of preventive medicine, I pass on to show where we stand as healers of the sick, for even though our vigilance as sanitarians has accomplished much, particularly in the limiting of the destructive epidemics that in years past swept over the land, reaping rich harvests in untimely deaths and chronic invalidism along their path, and burdened nearly every breeze with the mourner's sigh, nevertheless disease and death are still abroad and eternal vigilance on the part of medical practitioners is not alone a necessity but an imperative duty that we owe to our patients, the profession and to ourselves. In all this we are not found wanting. Disease, in whatever form it presents itself, is more promptly and perfectly understood, the various causative factors are inquired into; instruments to aid our senses and facilitate diagnosis are provided, so that even the most hidden recesses

of our bodies may be illumined and explored; the microscope shows us in an unerring manner the character of every organ and cell, healthy or diseased, and there is no product so minute that we need pass it by undetected and unrecognized. When a clear solution of conditions has been made pathologically, this will suggest the therapeutic measures necessary. Our pharmaceutical armamentarium, once crude, nauseous, inelegant and uncertain, has been evolved into a refined, palatable, elegant, accurate pharmacology. The medical properties of remedial agents are so well known and so scientifically accurate in their preparation that the physician can prescribe with almost mathematical certainty as to desired results. Along this line of progress *"alkalometry"* represents the acme of advanced pharmacology, and I believe, when once fully understood by both the profession and laity, will come into universal use. The growing practice of self-dispensing by physicians is also a great step in the direction of security for the people against substitution and carelessness.

But, we can dwell no longer here, let us pass to the domain of surgery, last but not least within the province of this address. In this department, as in all others in the category, evolution has wrought wonderful progress, so that our powers for good are almost limitless, and the miracles of tradition have been almost equaled by actual demonstration by the surgeon's skill. The innermost citadels of life are invaded by the surgeon's knife; the brain, heart and lungs are no longer forbidden latitudes.

The few references made here are but an index to the great volume of progress all along the line of progressive medicine. They are yours, they are mine, ours to use in our daily round of duty as practitioners of medicine in all our professional relations to the public. It is also becoming in us to proclaim to the laity what we truly represent as a profession both collectively as we are here, a medical society, as well as individually in our daily functions as doctors of medicine. We are the medium that brings the accumulated wealth of learning to their homes and bedsides in hours of distress, and certainly this means much. In our socity work we deliberate how best to meet the grave responsibilities of medical practice, the society is a school for mutual instruction, exchange of opinions and consensus of judgment. I will here say that no honest progressive practitioner can afford to ignore this source of post-graduate instruction. It is much to be regretted that there are still those who have not as yet identified themselves with society work, and in so standing

divorced from the leading progressive elements of the profession they are not only unjust to themselves but their clientelle as well. There is no good reason why every legitimate member of the medical profession should not do work in his local medical society, State and National organization, and nothing short of an inordinate feeling of self-sufficiency will keep him out. I hope there are none within the jurisdiction of this society so possessed. If it be true that "no man liveth unto himself," then, no one man can practice medicine unto himself. I believe the time will come when the people will require their family physician to be an active member of one or more medical societies. In fact even now people of the better informed class are making choice by this standard, and why not? It is most reasonable that the one who loves his work and respects the profession and advances its interests by precept and example should be a safer custodian of the health and lives of those near and dear to them, than the one who practices as a mere means of livelihood, perfunctorily as it were. If the physician's life is a strenuous one, its rewards are many if he will with diligence and unselfishness seek to serve his day and generation. It is the law of the moral universe that there are no short-cuts to knowledge, no such thing as ready made experience and no counterfeit for character. Real and lasting success rests now, as ever, on honest work and personal worth.

Induction of Premature Labor in Moderately Contracted Pelvis

By A. J. SKEEL, M. D.,
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The best method of handling cases of pregnancy with various degrees and kinds of contracted pelvis is, and must always remain, a matter to be decided by the judgment and experience of the operator applied to the individual case; each case has so many problems to be solved that no general law can be laid down for its treatment.

Every operator, however, has in mind certain principles of treatment which have been evolved not only by his own experience but by the accumulated and recorded experience of others, which point out the ends to be attained, results to be expected, and dangers and complications to be avoided by certain methods of procedure.

In the treatment of moderately contracted pelvis, so much variance of opinion and such widely differing reported results are still found, that it becomes the duty of obstetricians to report cases until accumulated experience shall have made clear what difficulties are to be expected in one method of procedure, and what advantages to be gained by another.

The main questions involved in these cases depend on the following points: (1) Immediate danger to mother: (2) Later or secondary conditions affecting mother's future health and well being: (3) The immediate results as to the birth of a living or dead child: (4) If the child be born alive (*a*) Is it injured in any way? (*b*) Is it able to cope with its surroundings and survive, say the first year of its existence?

About these several problems and their relative importance, it seems to me, the entire controversy with regard to induction of premature labor, severe operative labor at term, pubiotomy, symphyseotomy, etc., is being waged.

The entire problem is far too broad to be discussed in a single paper. I shall in this article regard the relative merits of pubiotomy, symphyseotomy, Caesarean section, etc., as being a separate problem.

The question involved with regard to the induction of labor offers itself somewhat as follows: Given a patient with moderately contracted pelvis, who presents herself for examination sufficiently early, and who is tractable enough to follow the advice of the obstetrician, shall he advise induction of premature labor, or shall he take the chances of delivery at term? If premature labor be decided upon, at what time can this be most advantageously started?

As regards the safety and welfare of the mother the weight of evidence is largely in favor of induction of labor. In the first place we are assured of an easier labor, *i. e.*, whether terminated by natural forces or artificially, other things being equal, the delivery must be just so much less severe as the child's head is smaller and more readily moulded by reason of its prematurity.

The risk of infection from the introduction of the catheter, or of hydrostatic bags, is slight, and almost wholly dependent upon the care and technic of the operator. Certainly the chances of infection from the minor procedures necessary for induction of labor are no greater than those involved in difficult forceps deliveries, version, etc., at term.

In addition to the actual question of the introduction of

bacteria to the genital tract, we should bear in mind that a patient who is a long time subjected to the exhausting effects of severe labor pains has greatly diminished vital resistance. This is no small factor in determining infection, and probably is often the decisive one.

The possible danger of injury to, or separation of, the placenta, of premature rupture of membranes, etc., may be reduced to a negligible quantity by the exercise of proper skill and care on the part of the operator, and by the choice of methods suitable to the case.

As regards the matter of shock it is not produced by induction of labor, but may be quite a serious matter in the various operative procedures required to deliver a large head through a small pelvis.

If the case is allowed to go to term, we have, at the best, severe, protracted labor, leaving the woman exhausted and with diminished vital powers; in the more severe cases the risk of high forceps operation, or version, in which the danger from infection, injury and shock, far exceed those involved in a well executed premature excitation of labor; and in the worst cases the dangers incident to pubiotomy, symphyseotomy, Caesarean section, etc., in a woman who has perhaps been in labor for some time.

Against these latter procedures, besides the risk of infection and immediate injuries incident to the separation of the pelvic bones, is also cited the not inconsiderable number of cases in which the later results are poor; the woman being to a greater or less extent incapacitated for manual labor because of incomplete union, or pain at the site of union of the pelvic bones.

It may then, I take it, be accepted that in a properly chosen case, the maternal risk is less by induced labor than by any other procedure. As to the chances of the child, however, the case is not so clear. The most forceful arguments against induced labor may be summed up in two parts: First, it is urged that granted a living premature child, its chances of surviving the first year are small; and, second (a selfish argument but warranted by the facts) that the parents and friends will condemn us if, after procedures obviously designed to save the child, we still have one born dead. The disagreeable features of this latter state of affairs may be largely avoided by a proper presentation of the matter to the parents, and by avoiding painting too bright a picture to them in our zeal to get permission to do what we consider the safest and most scientific procedure.

There remains the one plea that premature children present an extremely high mortality rate during the first year. The importance of this, of course, is apparent, and if true must be given due weight.

There can be no question that, given a series of children born prematurely and another series at full term delivered with an equal degree of difficulty, the first year's mortality will be greatly in favor of the full term child, but statistics showing this have little bearing on the case.

To be just, we should compare the mortality rate after fairly easy induced labor with that after severe and especially operative delivery at term, inasmuch as it is to avoid these very operative procedures that we start labor early. We must remember the ill effects of prolonged excessive pressure on the child's head, and the large amount of moulding required for delivery of a full sized head through a pelvis even moderately contracted.

We should bear in mind that if a labor is easy when induced it would probably be severe if left to nature. If it is severe when induced, it would necessarily have been operative at term. If it is operative when induced, delivery could have occurred only by extreme measures at the full period.

If, then, we compare mortality rates after induced labor with that after forceps, version, etc., I believe the results will be not at all unfavorable to the premature child. How many cases we see of death from cerebral hemorrhage occurring several days after a difficult forceps delivery; how many children with paralysis or mental difficulty. How many aspiration pneumonias we find following versions with slight delay in delivery of the head. Yet many of these cases are reported as successful deliveries, and the deaths ascribed to various external influences.

Another matter of extreme importance in premature children is the exact degree of prematurity. Statistics show that the death rate not only increases with the degree of prematurity of the child, but that it increases in a rapidly multiplying ratio as we get farther from the normal date of delivery.

Of perhaps equal importance is the recording of the care the premature child has had after birth, whether an incubator was available, whether trained care was given it, etc. It is very doubtful whether a premature child should be brought into the world unless provision can be made for reasonably intelligent care of such child after birth. In my judgment such a condition should be a weighty argument to the obstetrician against inducing labor in that particular case.

The time is past, I hope, when any of us decide to do this or that operation upon a pregnant woman solely because her pelvic measurements show a certain grade of contraction. The most accurate pelvic measurements are deceptive, and even were they accurate should in a border line case be by no means regarded decisive as to the best operative procedure. The size and consistency of the child's head are at least of equal importance. A small head may pass with ease through a moderately contracted pelvis, and a large head may fail to engage in the superior straight of a pelvis, absolutely normal in size and shape.

I rely on the Müller method of bimanual examination as the best criterion in doubtful cases. The right hand from above crowds the head into the pelvic brim. Two fingers of the left hand in the pelvis estimate the diagonal conjugate, the inclination of the symphysis, hardness of baby's head, whether it engages, or by how much it fails to engage, and the thumb externally estimates whether or not it overlaps the pubis. This method may well be used in conjunction with Hirst's modification. This comprises taking the external conjugate of the mother, then turning the anterior blade of the pelvimeter to the side of the child's head (pressed as tightly as possible into the pelvis). Compare this with the external conjugate. The one result should serve to check the other.

My own practice is as follows: When a pregnant primipara presents herself, she is examined as early as possible. At this time the pelvic measurements are carefully taken. If they are normal she is examined again two weeks before term to determine the presentation, and to ascertain that there is no excessive growth of the head, etc. If her pelvic measurements show a moderate degree of contraction she is again examined six weeks before term and if possible thereafter, weekly.

Under no circumstances do I allow such a case to run beyond the expected date for labor unless the head is positively small enough to engage.

However, unless the relative size of the head is quite excessive, I allow primiparous women to go to term in order that they may have the test of labor.

If the head is so large at the 36th week that I am convinced a live child cannot be delivered at term, I induce labor at as late a period as may be, always later relatively than in a multipara.

If the patient be a multipara with one or more normal labors to her credit, I proceed as stated above for a normal primipara.

If the patient is a multipara with a history of previous difficult or obstructed labors, I make weekly examinations after the 34th week to determine the best time for interference. Earlier than the 34th week I do not induce labor to save the child, because I believe that in those cases in which the disproportion between the child's head and the mother's pelvis is so great that it is already marked at the 34th week, other operative procedures are preferable to induction of labor. If, however, the head may still be engaged at this date, or later, or failing to engage it, no distinct over-lapping of the pubis occurs until after this date, I believe induction of labor to be the best method of procedure. It is needless to state that this should be done at as late a period as possible. We shall regret too early interference much more frequently than delay.

The one serious objection to the procedure, the prematurity of the child and the consequent high mortality rate, should be the subject of serious preparation. The incubator, if possible, with a skilled attendant, should be provided. The supervision of a trained nurse is desirable for one or two months after delivery, not only to give the child its proper care, but to demonstrate to, and teach the parents the right methods.

It seems to me that it is a matter of vital importance that the mother should be taught by daily example extending over a considerable period just how the child is best cared for. A large proportion of deaths among full term children during their first year are due to the ignorance of parents with regard to feeding, dressing and general hygienic management. How much more important it is that a delicate premature child should be cared for intelligently.

SUMMARY

(1) In reporting cases of induced labor we ought to report the exact date of interruption of labor, whether the child is still living, and what care was given the child after birth.

(2) In properly selected cases, induced labor is the least dangerous procedure for the mother.

(3) The proper date for interference should be determined by repeated bimanual examinations by the Müller method.

(4) It is extremely important to provide skilled care for a premature child for at least two months after delivery.

3001 West 25th Street

Nervous Disorders Due to the Teeth

A PRELIMINARY REPORT

By HENRY S. UPSON, M. D.,

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My remarks of this evening have to do with a very familiar subject, the melancholy of toothache. The point is that the depression sometimes comes without the ache. The principal symptoms caused by dental lesions are: First, pain in the tooth; second, pain elsewhere, especially in the head; third, vasomotor symptoms, chills or thrills, flushes, sweating; fourth, insomnia; fifth, melancholy; sixth, muscular twitching; seventh, fever, especially when pyorrhea is present; eighth, rapid or irregular pulse. All of these symptoms are important. If in the absence of the diagnostic sign, toothache, melancholy may run into melancholia, or if sweating, weakness and flushing, caused by bad teeth, may constitute neurasthenia, or if insomnia, unaccompanied by dental pain, may result, it becomes important to make the diagnosis and remove the cause.

The two cases to be reported in outline tonight may serve to illustrate this point. The first, a young man 28 years of age, a robust mechanic, three weeks before he was first seen came home from his work, and his wife moodily remarked that she thought she was losing her mind. It immediately occurred to him that he might be losing his mind. He slept little that night or the succeeding nights, gave up his work and spent his days in fear of the asylum. In brief, tonics and assurances failed to relieve. The only discoverable lesion was dental caries, and the filling of a deep cavity extending into the pulp was followed by prompt recovery and he returned to work. There had at no time been toothache or other pain, but dizziness and sweating had been noted.

The second patient was an unmarried woman, 27 years old, a teacher. For a year she had been profoundly melancholy, with intractable insomnia, delusions of various deadly sins, and entire hopelessness of recovery. Restlessness was extreme, tonic and local uterine treatment were of no avail. As a last resort the teeth were examined. They were apparently in perfect condition. A radiograph taken by Dr Lodge showed, however, an impacted

Read before the Clinical and Pathological Section of the Cleveland Academy of Medicine, October 4, 1907

right upper third molar tooth pressing against the second molar, a condition obviously capable of causing irritation. The symptoms, in about a week after the removal of the tooth, began to improve. Recovery was complete in six or eight weeks, and has persisted for six months.

It is of course not safe to draw conclusions from two cases, but a provisional theory may be formed. The theory of suggestion hardly applies to both cases. The first one might be so explained, especially in view of the fact that the insomnia and depression followed a mild psychic shock. The second case however was one of melancholy fully in line with the depressed phase of manic-depressive insanity, a disorder in my own experience and according to all authorities singularly rebellious to suggestion of any kind. The teeth are viscera, viscera much neglected by the medical profession. Diseases of other viscera, digestive and pelvic, cause depression, insomnia, and a chain of other nervous symptoms. The inference is warranted that the teeth in melancholiacs, neurasthenics, and those afflicted with insomnia should share the honors of the medical examination equally with the contents of the chest, abdomen and pelvis, and, when diseased, should be cured.

Through the courtesy of Dr Clark an investigation is in progress of a number of patients in the State Hospital in Newburg. Of six female patients already examined, the subjects of melancholia, mania and dementia precox, one patient with melancholia and one with dementia precox have undescended wisdom teeth, one undoubtedly impacted. All have dental caries. The prevalence of dental disease alike among the sane and the insane is overwhelming and disheartening. Bad teeth are not only the rule, but the almost universal rule. Of the patients who have thus far came under my observation in this investigation, the only two whose teeth on casual inspection seemed normal proved both of them to have impacted wisdom teeth. Under the circumstances an inference from lesion to symptom is impossible; but a careful routine examination of the mouth, in cases of obscure nervousness, of anemia, dyspepsia, chronic fever, sweating and rapid heart action, will in many cases, in the absence or in the presence of lesions elsewhere, disclose irritative or septic conditions in the mouth.

My thanks are due to Dr John F. Stephan for constant cooperation in the radiographic and dental work connected with this investigation.

The Bier Treatment—Report of Cases

By JOHN DICKENSON, M. D.,
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In the year 1892, A. Bier, now Professor of Surgery in the University of Berlin, called the attention of the medical profession to his so-called passive, or congestive, hyperemic treatment for acute and chronic inflammatory affections. Notwithstanding the fact that it had been used extensively in the clinics and dispensaries of Europe for the past ten years, and had been recommended by such men as Czerny and the late von Mikulicz, it is only in the past few years that it has gained recognition, to any extent, in America. The marvelous results that are being obtained by this method, the comparative simplicity of its technic and its application to such a variety of affections make it worthy of the attention, not only of the surgeon, but also of the physician.

Bier's attention was first called to the value of hyperemia from the observations and studies made at postmortems conducted by the late renowned pathologist, Rokitansky, who found that patients suffering from pulmonary stasis due to various conditions, such as heart disease or curvature of the spine, never showed an active pulmonary tuberculosis; while, on the other hand, those suffering from diseases of the heart, producing a certain amount of anemia of the lung, such as stenosis of the pulmonary artery, were especially prone to pulmonary tuberculosis.

Bier began his first experiments at the large surgical clinic in Kiel. Active hyperemia was induced by means of various hot applications, principally by prolonged hot baths, and various glass cups—the so-called suction method. As these methods proved unsatisfactory, he then resorted to the elastic rubber bandage, the Esmarch bandage known to all surgeons and used so successfully in producing artificial anemia in cases of amputation and other operations on the extremities.

Hyperemia, the essential factor in the Bier treatment, may be active (arterial) or passive (venous.) Any organ in action is more or less hyperemic and no inflammatory process is without some hyperemia in or around the focus of the disease. Active hyperemia brings more blood to the parts and accelerates the blood current; this can be produced in a variety of ways, by dry

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or moist heat, massage, electricity, cutting vasomotor nerves, counter irritants such as iodine, etc. Passive, or venous hyperemia, one of the main agents in this method of treatment, is produced by any interference with the return venous circulation and is brought about by venous thrombosis, the application of the elastic bandage and by means of a suction or cupping apparatus.

Inflammation, which is the succession of changes occurring in an injured living tissue, provided the injury is not sufficient to at once destroy its vitality, is present to some extent in all affections for which the Bier treatment is recommended. Hyperemia, the production of which is the main object of this treatment, is one of the phenomena of inflammation. It seems essential, therefore, to consider briefly the various phenomena of inflammation that the principles underlying the same may become more clear.

First, there is a dilatation of the vessels, the capillaries and veins distend, the surface reddens, the part becomes hyperemic. There is an increased blood flow through the inflamed area, a condition of active hyperemia. However, this active hyperemia shows itself only momentarily in an ordinary inflammation. There is first seen a livid flow of blood through the dilated vessels, but in a short time this gives way to a distinct slowing of the stream, which, in acute cases and in some vessels, may even go on to complete arrest and stasis; this, however, is exceptional. The dilatation of the vessels is characterized by a slowing of the blood stream, such as we encounter when there is an obstruction to the veins of a part, a condition termed passive hyperemia or passive congestion; in inflammation, however, this occurs without evidence of the existence of any such peripheral obstruction. Therefore we conclude that, despite the dilatation of the capillaries and veins of the area involved, which in itself should favor a more rapid blood flow, the onward progress of the blood is delayed. There must be some increased local resistance to the onflow, some change, either in the constitution of the blood itself or in the lining of the vessel walls, leading to increased friction.

That some change occurs in the blood itself is evident. There is increased passage of the plasma of the blood into the surrounding tissues. Not only do we have the gross evidence of this in the swelling and somewhat edematous condition of the parts, and if a wound has been made, in the free discharge of serum from its surface, but also experimentally it can be shown that the flow of lymph from the inflamed area is greatly increased.

The mere dilatation of the thin walled vessels does not explain entirely this transudation of fluid. It is obvious that relative concentration of the blood cannot be the only factor involved. If this were the case everything leading to vascular dilatation would be accompanied by slowing of the blood stream and we would have no such condition as active hyperemia. Another factor, therefore, must be involved, and this is found in the vascular endothelium lining the capillaries and veins. The change in these cells causes the leukocytes to be arrested at the site of inflammation and the blood current to become diminished. The adhesion of the white blood cells to the vessel walls is due, it would seem, rather to a change in the endothelium than to a change in the leukocytes themselves.

Kolossow and others have shown that adjacent endothelial cells are joined directly one to another by delicate protoplasmic bridges, between which are minute spaces. When the capillary is contracted these are invisible and practically nonexistent. When dilated these spaces are actual. They not only favor increased passage of fluid from the vessel, but form regions of least resistance through which the leukocytes migrate and eventually invade the diseased area.

This alteration in the blood vessels and their contents causes a slowing of the blood current, the plastic and endothelial cells become greatly swollen, the white blood corpuscles are more numerous and cling to the sides of the vessels, the red corpuscles stick together and the liquor sanguinis contains more fibrin forming elements.

This is followed by the stage of exudation, or the passage of liquor sanguinis and white corpuscles through the walls (diapedesis). Later, by alteration in the perivascular tissue—the intercellular matrix undergoes mucoid softening—the connective tissue cells and white corpuscles proliferate and the exudate undergoes coagulation.

It would seem then, that Bier's method of treatment increases the already existing hyperemia by promoting an influx of fresh blood and a more passive hyperemia, thereby producing an increased transudation of leukocytes and liquor sanguinis. In other words, it causes a leukocytosis and phagocytosis together with an increase in the local opsonic index as compared with that of the general circulation.

The Bier method of treatment is carried out by the application of an elastic bandage or a piece of thin soft rubber tubing,

and by various glass suction cups. For diseases of the extremities the rubber bandage should be applied as a circular bandage, *i. e.*, each turn passing directly over the preceding one, well above the inflamed area. The surface of the skin should first be protected by a thin layer of cotton or gauze. The thin walled and superficial veins are naturally compressed, rather than the thick walled and deeply seated arteries, thereby causing an interference with the return venous circulation and producing venous hyperemia.

Different degrees of compression will cause different degrees of venous stasis, and in applying the bandage experience and judgment are necessary. Too firm compression will produce a marked venous stasis and if prolonged will cause more harm than good.

The following points are, therefore, to be kept in mind:

1. Compression should be just sufficient to produce a reddish-blue color of the skin.

2. The patient should suffer no pain or discomfort. It should be noted, however, that in marked acute inflammatory affections, a slight pain and discomfort, such as throbbing, is experienced even if the compression is accurately applied. This disappears eventually in five to 10 minutes, as the hyperemia tends to quiet pain by numbing the terminal nerve filaments by compression, much in the same manner that Schleich's method causes local anesthesia.

3. The temperature of the treated limb should be the same as the untreated limb.

4. The pulse beat should be just as full and distinct as before.

5. By rubbing the parts active hyperemia should be produced.

6. If the formation of pus is evident, free incisions should be made.

7. Drainage, such as iodoform gauze, etc., should be removed before treatment is started. The pouring out of serum through the wound favors drainage and liquifies the pus.

8. When edema appears the treatment should be stopped and not resumed until it all disappears.

9. If edema is present before the treatment has been administered, multiple incisions are necessary.

10. All cases should be carefully watched during treatment,

the objective signs of a too tight bandage do not make their appearance immediately. Cases of ischemic paralysis have been reported from this neglect.

If the compression is not accurate some one or all of the following conditions may be present:

1. The parts are markedly cyanotic.
2. The patient suffers a geat deal of pain and discomfort.
3. The extremities are cold and the skin may have a mottled appearance.
4. The pulse beat is absent or scarcely perceptible.
5. Edema rapidly makes its appearance.
6. By rubbing the parts active hyperemia cannot be produced.

In regard to the length of time the treatments are to be carried out, no fixed rules can be laid down. This will have to be governed by the experience and judgment of the operator, the severity of the affection, its location and whether the disease is acute or chronic. In general it may be said that in acute cases the duration of each treatment should be short, and in chronic cases for a longer period.

This method of treatment has been successfully used in all cases of pyogenic infections and with varying success in tonsillitis, otitis media, epididymitis, orchitis, lymphagitis, arthritis. neuralgia, neuritis, varicose ulcers, ununited fractures, persistent headaches (by applying the bandage around the neck), and of late in various pelvic inflammations, such as endometritis. The gynecologist may find in this treatment a successful means of handling that obstinate affection, chronic endocervicitis.

The Bier treatment is contra-indicated in any inflammation of the veins, marked arteriosclerosis, valvular disease of the heart, diabetes, and in cases in which marked nutritional changes and emaciation are present. Some observers mention erysipelas; however, I have seen one case treated with marked success.

During the past year and a half in the dispensary of St. Vincent's Charity Hospital and in my private practice, especially in the surgical work in connection with the Cleveland Provision Company, I have treated 26 cases of infected wounds by this method. In every case marked improvement could be seen after two or three days' treatment, the application lasting from one-half to three-fourths of an hour daily. Pain and swelling in practically every case subsided rapidly.

Comparing these 26 cases with many more similar ones, in which the Bier treatment was not used, it would seem that a cure was brought about in from three to seven days earlier with this method. Especially have I noted that these cases suffered less pain while undergoing treatment.

The following two cases are of some interest:

George W., a healthy robust man, age 32, structural iron worker by occupation, while intoxicated fell down a flight of stairs and received a fracture of the right thigh. The bone was set and kept in place by a Volkman and coaptation splints, together with Buck's extension. At the end of five weeks no union or callous formation could be made out. Patient denied syphilis, nor could any constitutional disease, such as nephritis, etc., be detected. After careful examination no undue mobility of the parts, marked overlapping of the ends, or any intervention of tissue between the ends could be elicited. The Bier treatment then suggested itself. After applying the bandage, twice daily, first for 15 minutes and gradually increasing it to one hour, firm union and callous formation was obtained at the end of four weeks. In nine weeks the man had a fairly useful leg.

Harry H., age 25. Contracted gonorrhea May, 1906, which was followed later by gonorrheal arthritis involving the right wrist joint. He was first seen two months after the onset of the arthritis. The joint was swollen, tender and painful; a certain amount of wrist drop was present. The bandage was applied first for 15 minutes, three times a day, and gradually increased to one-half hour during the first week, three-fourths hour during the second week, and one hour during the third week. The first week's treatment lessened the pain to a marked extent but the other conditions remained about the same. At the end of three weeks' treatment all swelling, pain and tenderness disappeared. A certain degree of wrist drop still persisted, but at the end of five weeks by the aid of an elastic wrist band he was able to resume his occupation, that of a waiter.

Five cases of epididymitis responded satisfactorily under this treatment, also several cases of tuberculous joints and indolent wounds, such as one finds at times following operations upon buboes, etc. Three cases of tuberculous cervical adenitis gave doubtful results; however, I believe that a lack of sufficient experience and perfection of technic with the suction apparatus accounted for these failures.

In conclusion, I would say that after a resume of the literature on this method of treatment, and from my own limited

experience, the most gratifying results are to be looked for in the acute pyogenic infections; also that better results are to be obtained from shorter and more frequent applications than from long and less frequent ones. Finally, it may be mentioned that in handling an acute pyogenic inflammation one is handling a surgical affection. If pus is evident free incision should be made and adequate drainage maintained combined with strict antiseptic precautions.

Relation of Druggist and Physician

The recent meeting of the American Pharmaceutical Association afforded renewed evidence of the tendency of the two professions of medicine and pharmacy to unite their efforts toward the realization of common professional aims and the elevation of the standard of both professions. The relations of druggist and physician was made the subject of frank discussion and criticism, especially in the discussion following Dr McCormack's paper, published in *The Journal A. M. A.*, Oct. 5, 1907. This paper recognized a certain antagonism of interest between the druggist and the physician and charged an endeavor on the part of some druggists to prevent legislation designed to further the public interests by regulating the sale of nostrums, etc. In reply, some of the speakers were disposed to deny the imputation and to charge some of the evils to the medical profession. Prof. W. C. Anderson cited the instances in which pharmacists had of their own accord sought to restrict the sale of cocain and other harmful drugs and suggested that the American Medical Association or other competent medical authority decide which of the patent articles now on the market are enslaving and poisoning the public, and he promised that on the publication of such a list these articles would no longer be dispensed in drug stores. As a result of this discussion a resolution was passed directing the legislative committee of the American Pharmaceutical Association to cooperate with the legislative committee of the American Medical Association in the furtherance of such legislation as is designed for the benefit of the community. The scientific papers showed a great interest in the subject of pharmacy from various sources. A number of valuable papers emanated from chemists connected with the great manufacturing firms, which showed a renewed interest in various aspects of pharmacy, especially in standardization of official products made necessary by the Food and Drugs Act.—*Jour. A. M. A., Oct. 19, 1907.*

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

The Official Organ of the Cleveland Academy of Medicine

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

The Trypsin Treatment of Cancer

The search for a cure for cancer is being so vigorously pursued and the topic is such a live one that the latest contribution of Beard, of Edinburgh, the originator of the trypsin and amylopsin treatment, is of interest. His article appears in the *Medical Record* of New York for October 19, 1907, and reviews fully the grounds upon which his theories are based. Even if the profession as a whole may be rather skeptical as to its value, as judged from the reports upon its use that have so far been published, Beard himself is convinced this his theory is in reality a scientifically proven fact and speaks in the most authoritative and dogmatic manner as to its success.

He points out that in both plant and animal life there are two stages of development which he terms asexual and sexual, the former in the animal is a brief phase, represented by the formation of the trophoblast during the early developmental period of the ovum. Later, when the sexual stage, represented by the development of the true embryo begins, the trophoblast atrophies and he ascribes this to the action of the ferments,

trypsin and amylopsin, of the primitive pancreas which begins to functionate at this period.

This action of the ferments is explained on the following grounds. He claims that the albumins of the trophoblast are dextrorotatory while its carbohydrates (glycogen and sugar) are levorotatory, whereas during the sexual stage of development represented by the embryonic and extrauterine life of the organism the albumins are levorotatory and the carbohydrates dextrorotatory. The trypsin and amylopsin have no action on living levoalbumin but they do have the power to break down the detroalbumin of the trophoblast.

According to Beard's view the cancer growth is analogous to the trophoblast and possesses many of its characteristics, especially in that it generates dextroalbumins and levocarbohydrates and is therefore attacked and destroyed by the specifically acting trypsin and amylopsin. On the other hand a specific ferment which he claims is formed by the cancer cells, and which he terms malignin, has no destructive action on the dextroalbumins of the cancer cells but does attack the levoalbumins of the body cells, representing the sexual stage of the organism, and this action explains the destructive effects of the cancer. In proof of the specific action of ferments he quotes Pasteur's discoveries as to the action of the ferments of yeast and pencillium upon the tartrates, the dextrotartrate being attacked by the pencillium and not by the yeast, while the levotartrate is affected only by the yeast.

Whereas in animal life the sexual stage is the principal one and is characterized by the presence of levoalbumins and dextrocarbohydrates, in plant life it is the asexual stage that is predominant and it is during this phase that the levoalbumins and dextrocarbohydrates occur. This is a wise provision of nature, since animal life is largely dependent upon vegetable food, and in order to be assimilable by the animal the vegetable albumins and carbohydrates must be of similar rotating power to those of the animal. During the insignificant development form of the sexual stage of plants he asserts we find the dextroalbumins and levocarbohydrates as in the asexual stage of animal life.

Beard claims that operative measures interfere with the success of his method and that postoperative cases are unsuitable for treatment. This seems to offer a serious objection to the scientific proof of a cure, as it would prohibit the removal of a portion of the growth for microscopic diagnosis, which is at pres-

ent regarded as a most important criterion as to the question of malignancy.

Whatever may be the final judgment as to the value of this treatment, so far as one can judge, the reports as yet have not been reassuring. One has to admire the absolute confidence with which Beard himself discusses his views. He disarms his critics by quoting the objections of Pasteur relative to those who critisized his early work, and who were unfamiliar with all the facts of the case and had not spent years in the study of the question as he himself had done. We wish, however, that Beard had adduced more proof in his article that the dextroalbumins and the levocarbohydrates actually do exist in the cancer cells, nor can we understand why an operative procedure should so interfere with his treatment; it is true that an operation will often apparently increase the activity of such a growth but this is by no means always the case.

His hypothesis is certainly an ingenious one and until more statistics are available, it is not unfair to so refer to his views. In the interest of humanity and as a reward for the years of patient research which Beard has devoted to the subject, we sincerely hope that his theories may prove correct.

Results in the Trypsin Treatment of Cancer

It may be interesting to note some recent results of this treatment. The adherents of the trypsin theory believe that there is a specific digestive action on the carcinoma cells and that by suitable administration the tumor will be destroyed. In the Cancer Research Laboratories of the London Middlesex Hospital, eleven cases of carcinoma of various types were treated by pancreatic extracts, samples from each kind and each lot being tested for efficiency on proteids, etc. The method was calculated to give a thorough test of the value of the digestive ferments, which were administered in four ways. Hypodermic injections of trypsin up to fifteen minims daily constituted the first part of the treatment, and were associated with oral administration of "Holadin" cachets, said to contain amylolytic and lipolytic enzymes, and "Pancro-Hepatic pepules," a combination of pancreas extract and ox-gall, the former being given half an hour before food, the latter at bed time. Besides these there were local applications to any cancerous surfaces of "Lotio Pancreatis," an extract from the pancreas. The summary of the cases is a

fair one, five being omitted on account of short time of treatment, or a condition so bad that nothing could be of any possible avail. Leaving these aside, and using the words of the article, "we have six patients left, who have undergone a course of treatment lasting from 66 days to 118 days. Of these two succumbed, one was sinking fast at the time of the last note and three were still living. Nevertheless in the case of two of those who were still living the weight had decreased, while in the third it was stationary . . . . . it is seen that the trypsin treatment did not prevent the patients from showing a progressive loss of weight. From these observations we conclude that the course of cancer, considered both as a disease and as a morbid process, is unaltered by the administration of trypsin and amylopsin."

Similar results are being obtained in this country and the great burden of evidence seems to be that the treatment is painful, owing to the frequency of the hypodermic injections, and that the results are practically uniformly nil. It would seem therefore that it might be as well to keep such methods out of the public prints until they are more fully justified, on account of the false hopes apt to be raised in the minds of those who suffer from inoperable cancers or who are unwilling to submit to the knife.

Unfortunately this subject has already been given wide publicity in the lay journals, before it had stood the test of time. Although the English reports are unfavorable, German writers seem to think highly of the treatment, so that, as *American Medicine* for October remarks editorialy, it may be a case of "A prophet being without honor in his own country."

State Registration for Nurses

There has been considerable discussion in the various medical journals as to the formation of the Pennsylvania State Committee on Nursing, with the object of obstructing the special legislation sought by trained nurses. The nurses wish to establish a standard grade of nursing proficiency with a duly defined course of training and examinations, they also wish to have all such qualified nurses registered and to establish a certain schedule of fees. Some of our esteemed contemporaries seem to be quite alarmed at the prospects of such independence and the better training of the nurse, they fear lest she may assume the dictation as to treatment that properly belongs to the doctor and they even quote one case in which certain nurses confessed to having thrown the doctor's medicine away and substituted their own.

Why the nurses should not have a more definite standing we cannot understand, the profession of nursing has progressed in a marvelous manner but at present there is absolutely no distinguishing mark by which the general public may distinguish a well trained nurse from one who has never had any practical hospital experience but who has acquired her information—or lack of it—from a correspondence school.

For the protection of the public, medical men are required to qualify before state boards and for the same reason a nurse, who has so much to do with the actual carrying out of the physician's orders, should also have some qualification.

As far as the danger of nurses assuming too much control at the bedside or of displacing the doctor, we believe no fear need be entertained, the fundamental principles of the nurses' training is that they are to carry out the doctor's orders, if, however, an emergency arises, when the physician is for a time out of reach, the nurse may have to act upon her own responsibility, is she not vastly better qualified to do so than the well meaning but absolutely inexperienced friends and relations? The more liberal her training has been, the better qualified will she be to act with discretion. The physician who finds a nurse unsatisfactory can readily dispense with her services and substitute another, and if a nurse acquire a reputation of such conduct, her professional fate is sealed.

The profession of nursing is each year assuming a higher standard, the result we are convinced being wholly beneficial. Until very recently the women who assumed this work were drawn almost entirely from the uneducated servant class. A nurse's work demands to the utmost those qualities which only a good general education and true culture can give, tact, refinement and well balanced mental powers. We have now among the nursing ranks, women of the best education, who understand to the full the importance of their work, and the call it makes upon their highest strength and intelligence. It is their ambition to raise their profession to its rightful position, to place it upon such a basis that they can commend the services of the best among their countrywomen and to exclude all ignorance and inefficiency. Were this an accomplished fact there would be small fear of encroachment or ignorant assumption of authority or disregard of the doctor's orders, it is not from knowledge but from ignorance that these things are to be feared, a well educated, well trained nurse understands her limitations as an ignorant one most

certainly does not, and she will carry out the doctor's orders with more scrupulous care and more certain knowledge.

The question of the fee schedule is open to criticism; what would be fair compensation in a large city would be possibly too high for a smaller town, in which the cost of living is proportionately lower, and the same fact is true of different sections of the United States. It must be remembered that practically a nurse's whole time, day and night, is taken up during her attendance upon a case, yet many of her expenses continue whether she be engaged or not, and owing to the strain of the work frequent intervals of rest between engagements are necessary. The fee schedule, therefore, would have to vary with the locality.

The legislation desired by the nurses is, we believe, not intended to prohibit the employment of so-called "experienced nurses," that is those who have not completed a regular course of hospital training, but its object is to establish a standard for the trained nurse with which all those who wish to call themselves "registered nurses" must comply. The experienced nurse in many instances will answer perfectly well and there will still be an ample field open to her.

From the attitude of some of the writers upon this subject, we fear they must have had some very unsatisfactory nurses to deal with and that in all probability in their particular neighborhoods there is the greater need for an elevation of the standard of nursing, such as would result from the legislation that the nurses themselves desire. Every measure that will tend to elevate the status of the trained nurse has our unqualified support.

Department of Therapeutics

CONDUCTED BY J. B. McGEE. M. D.

Veronal: Wm. House, in *Northwest Medicine* for September, writes concerning veronal and its administration, that, to those who do not mind the taste, veronal may be given dry on the tongue, and followed by a sip of hot water. Mixed with hot malted milk the taste is slight, and this method has the advantage, for neurasthenics, of concealing the amount given, making gradual reduction possible without their being aware of it. To alcoholics it is best given in good sized dose, 15 or 20 grains in a half glass of hot milk to which 15 drops of tincture of capsicum have been added, as this appears to hasten its absorption. In all cases the dose must be regulated to suit individual needs. There can be no hard and fast rule; it is well to begin with a small dose, eight or 10 grains, repeating half the amount in two hours if necessary. If the drug is to be continued for any time,

the right quantity for a given case can be quickly ascertained. In patients in whom the need of sleep is urgent, there is no sense in juggling with small doses and here 10, 15 or 20 grains may be used. After the first night gradual reduction should be practised. With the relaxation which comes from rest, nature's forces will act and patients will gain in weight, resisting power and cheerfulness, when sleep will come naturally. Veronal acts more quickly than sulphonal and is more certain than trional and gives longer sleep. It is practically free from the dangers of chloral, may be contained for long periods and does not appear to engender a habit. It does not give rise to gastric irritation, nor cause pustular skin eruptions as do the bromids. It is indicated whenever there is need for sleep, which will not come unaided, except when pain causes the insomnia. The dose in simple insomnia is eight or 10 grains, in neurasthenic insomnia 10 or 15 grains, or 10 on retiring and five in two hours if needed. Untoward effects are comparatively infrequent, and appear to consist of diplopia, vertigo, staggering, mental confusion and rarely dermatitis medicamentosum. Death has been reported several times from enormous doses. The contraindications are renal diseases (probably) especially of an acute type, extensive valvular heart lesions (if there be compensation these need not interfere), aortic stenosis on general principles, and senility when trional is equally effective, and less likely to produce vertigo, and motor incoordination the next day.

Dietetics: In the *International Clinics* (Vol. III, Series 17), David L. Edsall believes the chief difficulty in dietetics with most physicians is the result of a struggle to put together a list of food articles, especially suited to a certain disease, owing to the common feeling that diet should have a specific effect in any specific disease. Specific diets for many diseases may be developed in the future; but at present just as we are obliged to confess that in most diseases we have no specific drugs, and in using drug-therapy, must treat individuals and conditions, rather than diseases; so in dietetics, we should realize and confess to ourselves, that as a rule we have no specific principles to follow, and must simply apply our general knowledge of the constitution of foods, not, as a rule, to any special disease, but to a special individual, and the conditions he presents. He thinks there is too common a tendency to hasten to predigestion, when in difficulties. One direct disadvantage of this measure is that if the digestive functions are not normally exercised, improvement may, to be sure, result as a consequence of the rest, but if the predigestion is long continued, it is at times a difficult and laborious process to educate these organs to do their proper duties again. As regards rectal feeding, one should have a clear conception of what one is doing in such cases. His studies in exclusive rectal feeding, together with the work of others, have made it clear to his mind that when one cannot feed a patient by the mouth, one's best efforts by other means are usually so unsatisfactory, that the condition must nearly always be considered as dangerous, and one should always be on the alert, in such cases, to use the proper channel again, if possible, or to subject the patient as early as possible to any contemplated operative measures to relieve the condition.

Pneumonia: In the *American Journal of the Medical Sciences* for September, Beverly Robinson states concerning heart-clot in pneumonia that he is of the opinion that there is weighty evidence to prove that the solution of ammonia is of considerable value if used moderately and continuously in pneumonia. Its value is specially shown not as a stimulant, because in this particular he believes alcohol in the form of whisky or brandy to be more desirable, but as helping to keep the blood alkaline and fluid. In this disease, especially in the grave forms and those with extensive pulmonary consolidation, this is to his mind a very important matter. He has seen many patients in whom, before death and at the autopsy, he has been convinced that the avoidance of heart-clot would possibly or probably have meant a life saved. He quotes S. S. Cohen as to the value in pneumonia of the old empiric use of ammonium chlorid, and ammonium carbonate, and the modern use of saline infusion. He adds that in those cases in which cardiac thrombosis is threatened, nitroglycerin is frequently advised. He believes that if there be high arterial tension associated with a rapidly acting heart, which is extremely rare, this is good counsel. If there be evident vasomotor weakness and cardiac failure is suspected, he agrees with Le Fevre in strongly condemning the tendency to resort to it, since "peripheral resistance is already too low on the arterial side, and nitroglycerin only makes it lower." The tendency to coagulability of the blood is also diminished by oxygen inhalations, alcohol and diminution in the quantity of food taken. In conclusion he affirms: (1) Heart-clot as an immediate cause of death in pneumonia is more frequent than postmortem investigations, as now made, apparently sustain. (2) Clinical experience seems to justify the statement that the carbonate of ammonium has probably considerable efficacy, when properly given, in preventing heart-clot.

Acute Cystitis: Martin W. Ware, in the *Medical Record* for August 24, states that when once the bladder is infected as shown by its train of symptoms, frequent and painful micturition of a turbid urine with vesical tenesmus, it should be the physician's first duty to enjoin rest in bed, and, though the urine may be cloudy, no attempt to irrigate the bladder is in place, for the distention of the bladder will provoke more pain and spasm. The bladder too needs rest. This may be obtained by the use of suppositories of opium or codein and hyoscyamus at frequent intervals. Hot, moist applications to the suprapubic region, and hot sitz-baths, when these are available, greatly allay the vesical spasms. Hand in hand with these measures, urotropin in 0.5 gm. doses should be administered from the start to retard the growth of the organisms that have infected the bladder. It is no longer his practice to rely on the doubtful sedative action of copious draughts of decoctions of triticum repens or uva ursi or buchu. The use of liberal quantities of water is an advantage insofar as it dilutes an irritating infected urine; its disadvantage consists in the frequent urination that it provokes. It is of lesser importance to prescribe alkalies to diminish the acidity or to order benzoic acid to increase the acidity, than to reduce the degree of infection by urinary antiseptics. When the acuity of symptoms has diminished, local treatment of the infected region may be commenced.

Not by irrigation by catheter with fluids of any volume, but rather by instillation with a Guyon catheter of small calibre, of a few drops of a solution of nitrate of silver one-half to five percent into the neck of the bladder. The immediate effect is painful but opiates allay this and as the bladder becomes more tolerant, we may resort to larger washings with boric acid four percent and silver nitrate 1-400 to 1-1000. The summary of treatment is,—rest in bed; rest of the bladder with opiates; abstinence of all instrumentation; urotropin by mouth; later on topical applications, and finally free irrigation of the bladder.

Thiosinamin: The *New York Medical Journal* (Revue Medicale de la Suisse) states that the action of thiosinamin upon cicatricial tissue suggested to Renon its employment in aortic diseases. In chronic aortitis with a systolic or double murmur, in both insufficiency and stenosis, the constant result from thiosinamin was to reduce the dyspnea. It was also noticed almost as constantly, that there was a reduction of the arterial tension of from two to five centimetres of mercury in the sphygmomanometer of Potain. The albumin diminished or disappeared from the urine of which the daily quantity was frequently increased. On the other hand the physical signs were not modified and the murmurs were not changed in their character or intensity. The action of thiosinamin in arteriosclerosis is less constant when there are no clearly defined cardiac or aortic lesions. It was observed, however, that in all cases in which amelioration followed its use, the improvement continued from three to five weeks after the cessation of the treatment. The preparation employed by Renon was one gram of thiosinamin to 25 grams of distilled water, and the injections were given hypodermically once daily for 25 or 30 days. The ordinary dose was five c. c. of the fluid or 20 centigrams of thiosinamin, usually injected under the skin of the abdomen or into the muscles of the upper part of the buttock. The injections are not painful and do not produce indurations. A special point in preparing the solution is: The menstruum should be cold, and the solution should be prepared in vessels previously sterilized, so that decomposition of the thiosinamin, which is effected by a high temperature, would be avoided. In spite of every precaution the solution is not perfectly transparent, it is always a little opalescent. The distilled water may be replaced by normal salt solution (sterilized) if desired.

Gall-Stones: W. F. Waugh, in the *American Journal of Clinical Medicine* for September, writes concerning the medicinal treatment of gall-stones, that he has used sodium succinate for 25 years in the treatment of this condition, and has not found a single case in which it failed to cure. The invariable result of its administration is this: The patient takes five grains four times a day for one year; during this time the paroxysms become less frequent and less severe until they cease entirely. This dose of the tablets is continued as long as a trace of bile can be found in the urine. It is his conviction that the cure consists in the destruction of the infective germs in the biliary passages, and the restoration of a healthy condition, and not at all in the absorption or solution of the stone; the stone does no harm until

the passages become inflamed. He asserts that success lies in the continuance of the treatment, as the patient is apt to pursue it for only a few weeks, and when the spell recurs, he gives it up as a failure.

Pulsatilla: In the September number of the *Medical Council,* Finley Ellingwood says he believes that a knowledge of the physiologic action of pulsatilla has not been of material benefit in assisting us to determine its precise therapeutic action. This knowledge has been obtained by close clinical observation. The remedy is of especial efficacy when the existing disorders of the reproductive organs are a cause of anxiety. This brings within its field, spermatorrhea in the male, and amenorrhea in the female; also quite a variety of other diseases of the reproductive organs. Its influence seems to be especially directed to that process of the sympathetic nervous system which influences these organs. He has used the remedy with better results in amenorrhea than in any other class of troubles. Ten drops of a good preparation in four ounces of water, a teaspoonful every one, two or three hours, will prove of service in quite a large number of cases in which there is the so-called nervousness. If there is irregular menstruation, or if the flow is very scanty or accompanied with some pain or an increased degree of nervous irritation, it will promote a normal and regular flow, and will assist in abating the nervous phenomena. Cases with excessive leucorrheal discharge, and pain in the loins, are benefited by larger doses. Five drops of a good tincture three times a day for a couple of weeks will be beneficial. When the pulse is feeble and the capillary circulation is imperfect, or when the extremities are cold, or when there is a general relaxation of the muscular system or accompanying nervous exhaustion, this remedy should be given in conjunction with other nerve tonics or with remedies which are plainly indicated.

Opsonins: In *Science* for September 13, Hideyo Noguchi found that opsonins were most active in neutral liquids. The opsonic index estimated in the normal alkaline reacting serum was far lower than that in a neutral medium. The high stability of opsonins against desiccation and the high thermostability of dried opsonins are very striking. Almost no reduction of opsonic strength is evidenced after a serum is completely dried at 23°C for a few hours. In the dry state opsonins are well preserved even after two years. Temperatures below 150°C do not destroy opsonins in the dry state. After heating at 150°C, dry serum becomes difficult to dissolve, but opsonins may still be detected in it. Complements withstand desiccation and dry heat in a manner similar to the resistance of opsonins.

Barium Chlorid: The *New York Medical Journal,* for August 31, calls attention to the investigations of Schedel in 1903 upon patients suffering with grave cardiac lesions, he believed barium chlorid to be superior even to digitalis, in regulating the pulse and blood-pressure and increasing the functional activity of the kidneys. Other observers while admitting its value as a heart tonic, refused to recognize the same action as digitalis. Recently Pesci concluded from further

investigation, (1) Barium acts as a muscular excitant; (2) The therapeutic dose of barium chlorid is 20 to 25 centigrams (grains three to four) daily, this quantity in man producing an increase in the arterial tonicity; (3) Toxic doses exercise a profound action upon the myocardium and arrest the heart in systole; (4) Its influence is exercised directly upon the muscular fibre without the intervention of the nervous system. In ordinary doses, according to medication, barium chlorid is perfectly tolerated by the system and may be given in the therapeutic dose for 10 days at a time. The dose may even be gradually increased to 1.50 or even two grams daily without causing nausea or vomiting like caffein; nor gastrointestinal disturbances like digitalis; nor renal troubles like calomel and the balsams. He calls attention to a possible danger of unduly increasing the blood-pressure. During its administration its effects should be watched so as not to cause too great vascular tension, and especially large doses should not be given when the myocardium is weak. The diuretic effects of the drug were very noticeable in 15 cases of pleuritic effusion, in which condition Pesci considers it to be the best or most inoffensive diuretic.

Acne: In the August number of the *Monthly Cyclopaedia of Practical Medicine* (Therapeut. Monats.), Josep Kapp suggests that the tendency to acne at about the time of puberty may be of intestinal origin, and in 95% of his cases he has found evidence of abnormal putrefactive changes in the intestine, as shown by the presence of an excess of indican, phenolcresol, etc., in the urine; and this condition he attributes to the peristaltic inertia common at about the time of puberty. He has, on the strength of his observations, tried the effect in cases of acne of drugs which have an antifermentative action and which aid peristalsis, and with this object has administered a combination of one gram (15 grains) of sulphur precipitata, and 0.25 grams (four grains) of menthol given two or three times a day over a period of several months. In the 33 cases treated, substantial improvement was seen in all instances and recovery in many. The first result of the treatment was that the stools became pultaceous, and the output of phenol was greatly diminished. With this fall in the output of phenol improvement began and often in the first three or four weeks the acne papules were observed to more quickly disappear; during the next four to eight weeks, in all but one obstinate case, new papules appeared with much less frequency; and in nine cases, after three months treatment, no new papules formed. Some of the new cases have now been as long as 18 months without relapse, and may be considered to have completely recovered. During the internal treatment, local treatment altogether, it was not altogether discontinued, was reduced to a minimum.

Charity Hospital Medical Society

A meeting was held Wednesday, October 9, 1907, at the Hospital. Program: (1) Gonorrheal Knee—Presentation of Cases, George Thomas, M. D.; (2) Desquamation of the Mucosa of the Esophagus, J. H. Hewitt, M. D.; (3) Hernia of Ovary with Report of a Case, R. A. Bolt, M. D.

Academy of Medicine of Cleveland

The fifty-first regular meeting of the Academy was held at 8 P. M., Friday, October 18, 1907, at the Cleveland Medical Library. Program: The Conservation of the Potential Integrity of the Myocardium, Robert H. Babcock, M. D., Chicago, Ill. The discussion was opened by Dr Charles F. Hoover. (To be reported in our next issue.)

THE OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION

The thirteenth regular meeting of the Section was held Friday, October 25, 1907, at 8 P. M., at the Cleveland Medical Library. Program: (1) Presentation of a Case of Embolism of the Central Vein of the Retina, E. S. Lauder, M. D.; (2) Report of Cases, W. E. Bruner, M. D.

CLINICAL AND PATHOLOGICAL SECTION

The forty-fourth regular meeting was held at 8 P. M., Friday, October 4, 1907, at the Cleveland Medical Library. Program: (1) Removal of a Thirty-one Pound Dermoid Cyst; Report of a Case (to be published in full in the next issue), W. H. Humiston, M. D.; (2) On Some Forms of Nervousness Caused by the Teeth (published in full in this issue), H. S. Upson, M. D.; (3) The von Bier Treatment; Report of Cases (published in full in this issue), J. Dickenson, M. D.; (4) Tumor of the Eye; Report of a Case, H. G. Sherman, M. D. Dr Sherman gave the clinical history of a case of tumor of the eye, the exact nature of which was undecided. During the coming season it is desired that members of this Section will make special efforts to present as many interesting cases and specimens as possible. It is requested that the attendance be prompt in order to avoid the necessity of shortening the program.

EXPERIMENTAL MEDICINE SECTION

The thirty-third regular meeting was held at 8 P. M., Friday, October 11, 1907, at the Cleveland Medical Library. Program: Some Physiological Processes in the Region of the Pylorus, W. B. Cannon, M. D., Professor of Physiology, Harvard Medical School.

Dr Cannon said in part that:

The stomach is emptied *progressively* during the course of gastric digestion, by occasional discharges through the pylorus.

Mechanical agencies, either in the stomach, or in the intestine, play an unimportant part in controlling gastric evacuation; for (1) the occasional discharges through the pylorus are not the result of momentarily deepened peristalsis, and (2) the upper intestine in normal conditions is not sufficiently filled or distended to check the outgo from the stomach.

Observations on chemical conditions in the stomach have hitherto been defective for judging the mechanism of the pylorus, because the food given at different times has not been identical in amount nor uniform in consistency, and the difference in the chemical reaction of the two ends of the stomach has not been distinguished. Furthermore, these studies, like the observations of Hirsch, Serdjukow, and Tobler, that acid in the duodenum checks gastric discharge, have failed to distinguish between two factors always concerned in the passage of food through the pylorus.

The two factors are (1) the pressure at the pylorus due to recurrent

peristalsis, and (2) the action of the pyloric sphincter. The X-ray method shows that during gastric digestion peristaltic waves are passing, not occasionally, but continuously. Since the discharge from the stomach is not continuous, but occasional, the control must rest with the pyloric sphincter.

It is necessary to explain the intermittent closure of the pylorus; the usual closure, and the occasional opening. It is also necessary to explain why, for example, carbohydrates begin to leave the stomach early and depart rapidly, whereas proteids of the same amount and consistency begin to leave the stomach only after some time, and then depart slowly.

These facts can be explained on the theory that acid in the antrum opens the pylorus, acid in the duodenum closes it. Because the acid in the duodenum is soon neutralized, the closure of the pylorus is intermittent.

That acid in the antrum signals the opening of the pylorus is indicated by the following evidence: (1) moistening carbohydrates with $NaHCO_3$ retards their normally rapid exit from the stomach; (2) feeding proteids as acid proteids remarkably hastens their normally slow exit; (3) observations through a fistula in the antrum show that an acid reaction closely precedes the initial passage of food through the pylorus, that the introduction of acid causes pyloric opening, and that delaying the acid reaction causes retention of the food in the stomach in spite of strong peristalsis; (4) when the stomach is excised and kept alive in oxygenated Ringer's solution, the pylorus is opened by acid on the gastric side.

That acid in the duodenum keeps the pylorus closed is shown by the following evidence: (1) acid in the duodenum inhibits gastric discharge (observations of Hirsch, Serdjukow and Tobler), and as shown above, the effect is not due to stoppage of peristalsis, but to closure of the pylorus; (2) the stomach empties more slowly than normally when the tying of pancreatic and bile ducts prevents alkaline fluids from neutralizing the acid chyme in the duodenum; (3) the discharge of proteid becomes rapid if the pylorus is sutured to the intestine below the duodenum, or if a ring is cut through the muscular coats immediately beyond the pylorus. The effect from the duodenum is thus a local reflex mediated, like movements of the small intestine, by Auerbach's plexus.

Evidence for the acid control of the pylorus is also found in the application of the theory to previous observations on gastric discharge. Proteids leave the stomach only after considerable delay, and then emerge slowly; this fact can be explained (1) by the slow development of a marked acid reaction in the stomach due to the preliminary union of acid with proteid, and (2) by the large amount of acid borne into the duodenum by proteid chyme. Carbohydrates leave the stomach early and rapidly,—a result to be expected, since the acid secreted upon them does not unite with them, and is at once present to open the pylorus. The peculiar rates of discharge of combinations of these food-stuffs are also readily explained on the theory above stated. This fitness of the theory to explain established facts gives it additional support.

Strong support for the acid control is found in its relation to other processes in the stomach and duodenum. The retention of food in the stomach until the antrum contents are acid is necessary (1) for the proper continuance of gastric secretion and (2) for the accomplishment of gastric digestion. Such retention is also necessary in order (3) that the chyme emerging into the duodenum may bear with it the acid required to cause the flow of pancreatic juice and bile, and (4) that the pylorus may be held closed until these important secretions are thoroughly mixed with the acid chyme.

The facts presented bring the pyloric mechanism under the "law of the intestine,"—the acid when above (in the antrum) causes a relaxation of the sphincter which is below, and the acid when below (in the duodenum) causes a contraction of the sphincter which is above.

The Lakeside Hospital Medical Society

A meeting of the Lakeside Hospital Medical Society was held in the Hospital Library, Wednesday evening, October 30, 1907.

PROGRAM:

Case of Tubal Abortion with Report of Cases. Dr Allen.
Report of a Case of Double Pelvis of Kidney. Dr Birge.
Case of Ventral Hernia. Dr Hofmann.
Case of Ascites with Possible Malignancy of Liver. Dr Lowman.
Case of Poliomyelitis Anterior with Sensory Dissociation. Dr Hoover.
Case of Chronic Retention of Urine in a Boy. Dr Eisenbrey.
Case of Primary Anemia. Dr Cummer.
Report of Three Cases of Epithelioma Following Syphilis. Dr. Crile.
Case of Iodoform Poisoning Simulating Scarlet Fever. Dr Vincent.
Presentation of Pathologic Specimens. Dr Nevitt.

Book Reviews

Surgery: Its Principles and Practice. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL. D., Hon. F. R. C. S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Vol. I, Octavo of 983 pages, with 261 text-illustrations and 17 colored plates. Per volume: Cloth, $7.00 net; Half Morocco, $8.00 net. W. B. Saunders Company, Philadelphia and London.

This compact volume of 983 pages contains 22 chapters which have been contributed by 13 authors. Almost every chapter has a bibliography at the close which adds considerably to the value of the work as a book of reference.

The first chapter appropriately gives a sketch of the history of surgery, and brief biographies of the great surgeons from the time of Hippocrates to that of Lister are presented in a very readable manner by J. G. Mumford.

The second chapter deals with "Surgical Physiology" and is written by Dr G. W. Crile, who has done so much to advance and render popular this subject. This is the first time that a work on Surgery contains a chapter devoted to this subject. "It embraces such laws and factors as are used in surgical practice, which rest largely upon altered physiologic actions" and concerns itself mainly with blood-pressure.

In chapter III John C. DaCosta, Jr., writes on the "Examination of the Blood" and takes up the still unsettled questions of the clinical significance of blood-findings. His views are conservative and the statement is justly made that we must "Correlate the blood report with the other clinical symptoms" if we would obtain reliable diagnostic and prognostic data from this mode of examination.

In chapter IV Hektoen discusses admirably the theoretical side of Immunity and Infection.

The difficult subject of Inflammation is handled by Adami, who describes all local reactions of tissues to irritants and injury. The part on the repair of tissues by F. C. Wood (Chapter IX) is excellent, well illustrated, and the bibliography shows much literary research.

Frazier discusses the subjects of Thrombosis and Embolism, Erysipelas, Tetanus, Special Infections, Diseases Derived from Animals and Scurvy. The chapters are well up to date. The difference between tetanus antitoxin as a prophylactic and as a curative agent are fully recognized, and its failure in the latter capacity is considered in the light of the fact that toxins gain access to the cord through the motor nerves only.

Chapter XV deals with the Traumatic Fevers and is in many respects rather vague and rambling. The subject of diagnosis is not sufficiently considered.

In the chapter on Surgical Tuberculosis a good exposition of the etiology, histology and course of tuberculous lesions is given by J. Chalmers DaCosta. One fails to find in this chapter reference to Wright's work on opsonins.

Chapters XIX and XX on Chancroid and Syphilis are contributed by Edward Martin. They are modern, the writer seems not fully to believe in the specific character of the treponema pallidum.

Chapter XXI on Tumors, by Bland Sutton, is rather unsatisfactory and not up to date, both as to the text and the illustrations. For instance there is no mention of hypernephroma. The author is no believer in the parasitic theory of the origin of tumors.

The closing chapter is by Crile, and deals with Wounds and Contusions. The author incorporates the results of his experimental work on shock.

The publishers have done their work admirably; the paper is excellent, the illustrations likewise and for the most part original, and very few typographic errors exist. We heartily commend the work.

Volume II, Chapter XXIII, by E. H. Nichols, deals with diseases of the Bones; it contains but 56 pages, which seems too small an amount of space to devote to this important subject.

Chapters XXIV and XXVI, by D. N. Eisendrath, deal with Fractures and Dislocations. The author takes a conservative position with reference to the operative treatment of simple fractures, restricting the operation to fractures of the patella associated with extensive laceration of the aponeurosis, to fractures of the tuberosity of the os calcis and of the olecranon; in other cases the operation is indicated "when there is marked dislocation and inability to effect reduction or when there is pressure on vessels or nerves."

The chapter on Muscles, Tendons and Bursae is contributed by J. F. Binnie.

An excellent though necessarily compendious chapter is the one on Orthopedic Surgery by Lovett. A very good bibliography is attached.

Gerrish writes on the Surgery of the Lymphatic System.

The article on Surgery of the Skin is by Fordyce.

Spiller contributes an excellent article on Neuro-Pathology, and Dercum on Traumatic Neurasthenia, Traumatic Hysteria and Traumatic Insanity. Both articles should be carefully read by every surgeon.

An interesting and novel article is by DaCosta on Surgery among the Insane and the Surgery of Insanity.

The Surgery of the Nerves and of the Spine is discussed by Woolsey; he takes a conservative view in regard to operations for Fracture of the Spine; stating among other things that there is a revulsion of opinion in regard to early operation in severe injuries as the results have been disappointing and are no better than without operation.

The volume contains 572 text illustrations and nine colored plates; the publisher's work has been well done and typographic and other minor errors are exceedingly rare.

Conservative Gynecology and Electro-Therapeutics, A Practical Treatise on the Diseases of Women and Their Treatment by Electricity, by G. Betton Massey, M. D., Attending Surgeon to the American Oncologic Hospital, Philadelphia; Fellow and Ex-President of the American Electro-Therapeutic Association; Member of the American Medical Association, Etc. Fifth edition, revised. Illustrated with Twelve (12) original, full-page, chromo-lithographic plates and fifteen (15) full-page, half-tone plates of photographs taken from nature, and numerous engravings in the text. Philadelphia. R. A. Davis Company, publishers.

The fifth edition of this work follows the fourth very closely and as stated in the preface the main changes are in the consideration of the use of the direct current derived from street mains, and in the chapters on the cataphoric treatment of cancer.

The work is evidently that of an enthusiast for whom there seems no limit to the results which may be obtained by the various methods of electrical treatment. The remarks on conservative gynecology are especially emphatic and would lead us to consider well before advising operative methods for the relief of pain or nervous symptoms referable to the female pelvis. Records are given of many cases of acute inflammatory conditions entirely relieved by electrical methods. The record of 78 cases of extra-uterine pregnancy treated by abdominovaginal applications of electricity without puncture and with but a single death, is particularly interesting as well as the remarks on the comparison of the operative and electrical methods in the cure of sterility.

Another argument which is used in favor of the employment of electricity is that exact diagnosis is not necessary, or at least not so necessary as for operative treatment, as the electrical method will do no harm even though it may do no good.

Part Two, properly entitled The Rudiments of Medical Electricity, is so written that one with little knowledge of the general principles of physics and electricity may understand the essentials necessary for the selection of the correct method of treatment for any given case without being overwhelmed with the complex problems involved in an exact technical explanation.

The Abdominal and Pelvic Brain with Automatic Visceral Ganglia, by Byron Robinson, B. S., M. D., Chicago, Ill. Author of "Practical Intestinal Surgery," "Landmarks in Gynecology," "Life-size Chart of the Sympathetic Nerve," "The Peritoneum, its Histology and Physiology," "Colpoperineorrhaphy and the Structures Involved," "The Mesogastrium," "Splanchnoptosia." Professor of Gynecology and Abdominal Surgery in the Illinois Medical College; Consulting Sur-

geon to the Mary Thompson Hospital for Women and Children, and the Woman's Hospital of Chicago. Frank S. Betz, Hammond, Ind.

In this large work of 658 pages with 207 illustrations are collected writings which have appeared in many of the Medical Journals of the country. The author's views and his style are familiar to most readers of current literature and it is not necessary to expatiate to any extent on them here. He has done a large amount of dissecting and made many autopsies. The book "contains views concerning the anatomy, physiology and pathology of the abdominal and pelvic brain," being a treatise on the abdominal sympathetic nerves. These views are in large part speculative and theoretical. Our information on the physiology and pathology of the sympathetic is at best meagre and uncertain and we fail to find that they have been cleared much by this treatise.

Such subjects as constipation, splanchnoptosis, abdominal pain, the menopause, motor neurosis, hyperesthesia of the sympathetic, gastrointestinal secretion and reflex neurosis of the sympathetic are considered.

Dr Lucy Waite contributes a chapter on shock.

Robinson states "that the present volume does not belong to the stereotyped, systematized text-books" and this statement is certainly true. Among the curiosities of the volume may be mentioned the absolutely non-apropos quotations at the beginning of the chapters—such as "We are shaped and fashioned by what we love," "I exist, therefore I am," "Men are merriest when they are from home," "Uneasy lies the head that wears the crown," "Give me liberty or give me death" and "Men may come and men may go but I go on forever."

The Standard Family Physician, a practical international encyclopedia of medicine and hygiene, especially prepared for the household, by Prof. Carl Reissig, M. D., of Hamburg, Germany, and Smith Ely Jelliffe, A. M., M. D., Ph. D., Professor of Pharmacognosy, Pharmaceutical Department, Columbia University; Instructor in Pharmacology and Therapeutics, Medical Department Columbia University; Visiting Neurologist, City Hospital, New York; Associate Editor, New York Medical Journal; Managing Editor, Journal of Nervous and Mental Diseases. With the assistance of many American and German Specialists in the treatment of diseases and experts in medicine and surgery. Vol. I and II. Funk & Wagnalls Company, New York and London. 1907.

There is certainly a legitimate demand for such a work and a sufficient proof that the book is deserving of approval is found in the names of the authors and those who have endorsed it. While it is certainly true that "A little knowledge is a dangerous thing," it is often far better that complete ignorance and a certain appreciation, on the part of the laymen, of the nature of the disease and of the problems to be considered in overcoming it will lead to his more intelligent cooperation with his physician. The public until now has been largely dependent for such information upon the popular medical works published by manufacturers of nostrums, with the sole intention of increasing the sale of their own remedies by encouraging self-drugging; the very opposite purpose is the aim of this work and indiscriminate drugging is shown to be often harmful or distinctly dangerous. The language throughout has been so expressed as to

be easily intelligible and reference to the glossary will elucidate the necessarily technical terms.

Volume One contains in Part One a lengthy chapter on the anatomy and physiology of the body; a chapter on disease, describing in general terms its nature, cause, origin, course, and termination, with notes on the diagnosis and treatment. Part Two, the work proper, consists of an alphhabetical arrangement of the subject matter, taking up the various diseases, drugs, accidents, etc., etc., in their appropriate order. The greater part of Volume Two consists of a continuation of the same and is concluded by a chapter on poisons with their effects, antidotes and methods of treatment, also dose tables of drugs and a glossary.

Both volumes are abundantly illustrated and of handsome appearance. The work will probably have a large sale and it is one that a physician can recommend without hesitation to his patients.

Diseases of the Stomach. By Dr I. Boas, Specialist in Gastro-enteric Diseases in Berlin, Germany. The Sole Authorized English-American Edition from the Latest German Edition. By Albert Bernheim, M. D. (Freiburg, Germany), Assistant to the late Dr D. D. Stewart at the Philadelphia Polyclinic Hospital and Post-graduate School, as Instructor in the Department of Diseases of the Stomach and Intestines, etc., etc. Appropriately Illustrated with Five Full-page Plates and Sixty-five Engravings in the Text. 730 Royal Octavo Pages. Extra Cloth, $5.50 net. Half-Morocco, $7.00 net. Sold only by Subscription. F. A. Davis Company, Publishers, 1914-16 Cherry St., Philadelphia, Pa.

The awakening interest in the subject of this considerable volume leads to a careful inspection of its contents.

Throughout it is marked by the individual experience and thought of the author, who has contributed much to the recent advance in our knowledge of digestive disturbances.

Owing to the author's intention, explicitly stated in the preface, to write of his own practice and theory, the volume will hardly serve as an authoritative text setting forth clearly the ideas of all the best men working in this field.

It gains, however, in the directness of experience and advice from one man who is a leading teacher and clinician.

The work of the translator has been as a whole well done, though occasionally the German idea has been followed rather too closely to make it seem other than a foreign writing.

In the description of methods, the work is sufficiently clear to be of efficient help to the practitioner in working up the subject in his own laboratory, though, of course, no book can supplant the teacher.

As a whole this book is a most useful addition to the available literature and its careful study can be strongly recommended to practitioners and to students.

Manual of the Diseases of the Eye, for Students and General Practitioners, by Charles H. May, M. D. Fifth Edition. Published by Wm. Wood & Co. 1907.

The fifth edition of Dr May's Manual of Diseases of the Eye is brought up to date, a few new illustrations have been added and some old

ones replaced. The Manual is particularly suited to the student and the general practitioner as it is concise and still complete and avoids all unnecessary discussion of theories and small details.

Illustrations are well selected, showing typical cases of at least the most common and most important diseases of the eye. All the simple and most of the more extensive operations on the eye and about the orbit are given with sufficient detail to allow any one to get a clear idea of the procedure and of the time and course of necessary after-treatment.

Pathology is not very fully discussed on account of our meagre knowledge and the lack of space, but in pathologic conditions of importance, such as glaucoma, a very complete outline is given. Dr May is to be congratulated on his useful work.

American Practice of Surgery, a Complete System of the Science and Art of Surgery, by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M. D., LL. D., Albert H. Buck, M. D., of New York City. Complete in eight volumes. Profusely illustrated. Volume Three. William Wood and Company, New York. 1907.

The third volume of this system maintains the high standard established by the two preceding ones.

Part XI deals with poisoned Wounds, including the Bites and Stings of Animals and Insects, and is written by Major Chas. F. Mason, U. S. Army. In the treatment of snake bites he advises the use of Calmette's antivenene since it has proved generally effectual in the bites of all poisonous species. Erysipelas, tetanus, malignant edema, anthrax, glanders and actinomycosis are discussed although considerable space has been devoted to them already in Volume I. A chapter on Rabies is contributed by George G. Rambaud, of New York City; he emphasizes the value of the Negri bodies and the endothelial proliferation in the vagus ganglion as aids in diagnosis. From the statistics furnished, he seems to prove conclusively the value of the Pasteur treatment.

Part XII, Injuries and Surgical Diseases of Bone. Duncan Eve of Nashville deals with Fractures, he advises the use of simple apparatus such as can be improvised by the surgeon, in preference to ready-made or complicated splints, although the latter have a certain sphere of usefulness and are fully described under the fractures for which they are suitable. The open operative treatment for simple fractures is advised only in exceptional cases and is not endorsed as a method to be generally employed. Pseudarthrosis is discussed by T. Turner Thomas, of Philadelphia, of the operative methods of treatment he seems to prefer the Parkhill clamp, but due weight is given to the other generally accepted methods. Inflammatory Diseases of Bone by the late George A. Peters, of Toronto, has been very ably handled; he considers the various kinds of periostitis, and osteitis with the exception of the specific inflammations such as syphilis and tuberculosis to which special chapters are devoted. Roswell Park, of Buffalo, writes on Non-Inflammatory Diseases of Bone, including those conditions found in dwarfing and cretinism, acromegaly, rickets, osteomalacia, etc. Syphilitic Diseases of the Bones is by J. Shelton Horsley, of Richmond, Virginia. Tumors Originating in Bone, by

Channing C. Simmons, of Boston, includes the various benign and malignant growths which involve bones either primarily or secondarily.

Part XIII, Diseases and Injuries of Joints. Charles F. Painter, of Boston, writes on Non-Tuberculous and Non-Traumatic Injuries of Joints. Tuberculosis Diseases of the Bones and Joints is very well written by Alexander Primrose, of Toronto, no mention, however, is to be found of tuberculous disease of the spine, no doubt this will be discussed in a special chapter, although no note to that effect is to be found. John Chadwick Oliver, of Cincinnati, contributes a chapter on Wounds and Joints, this includes sprains and other traumatic closed injuries as well as those with lacerations of the surface.

This volume is abundantly illustrated and of excellent workmanship, the rather heavy paper makes the book rather bulky, and this fact might well be considered by the publishers in issuing further editions.

Organic Chemistry, Including Certain Portions of Physical Chemistry, for Medical, Pharmaceutical and Biological Students (with Practical Exercises), by H. D. Haskins, A. B., M. D., Instructor in Organic and Bio-Chemistry, and H. M. Hanna Fellow, Medical Department, Western Reserve University; Professor of Chemistry, Cleveland School of Pharmacy, and J. J. R. Macleod, M. B. (Aberd.), D. P. H. (Camb.), Professor of Physiology, Western Reserve University. First Edition. New York: John Wiley & Sons. London: Chapman & Hall, Ltd. 1907.

The authors have produced a work which will prove eminently satisfactory for instructing students in organic chemistry, and especially in that part of it applicable to medicine and the allied sciences. Special attention has been paid to those substances that have to do with medicine, either as metabolic products of the body, or as medicinal substances, drugs, etc.

A familiarity with organic chemistry is a practical necessity in modern medicine and if the undergraduate of today is to become the investigator of tomorrow, he must have a thorough grounding in the principles of the subject, accordingly considerable attention has been paid in the preliminary chapters to methods of analysis and synthesis and of purifying and testing organic compounds, also the necessary principles of physical chemistry are included.

The second part of the book takes up the various groups of organic bodies and a complete scheme of practical exercises is suggested. Graphic formulae are very generally used and the subject matter is exceptionally clearly expressed. By devoting less attention to many compounds, which are of no particular interest from a medical standpoint, but which often receive a good deal of consideration in the average work on organic chemistry, the size of this book has been kept within very convenient limits. It can be most warmly recommended as an excellent book for students of organic chemistry.

The Practical Medicine Series, Volume I. General Medicine, edited by Frank Billings, M. S., M. D., Head of Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury,

A. M., M. D., Professor of Medicine, Chicago Clinical School. Series 1907. The Year Book, publishers, Chicago.

This, the first volume of the Practical Medicine Series for 1907, is a most admirable and compact summary of the progress in general medicine during the past year. It comprises over 350 pages, of which more than 100 are devoted to tuberculosis, the subject being quite thoroughly considered. The recent contributions to the various subdivisions of general medicine are essentially presented, the selections having been judiciously made. The work embodies much of practical value, and furnishes a valuable aid in keeping in touch with recent medical advance.

Diseases of the Rectum, Their Consequences and Nonsurgical Treatment. By W. C. Brinkerhoff, M. D., Steinway Hall, Chicago, Ill. Price $2.00. Orban Publishing Company (not incorporated), 17-21 E. Van Buren St., Chicago, Ill., 1907.

This production is evidently not intended for the physician but for the layman. It is written so as to be quite intelligible by the latter, and consists largely of case reports of patients, suffering from hemorrhoids and their complications, who have been successfully treated by the injection method advocated by the author. The medical man will, however, look in vain for the details of the treatment which might prove instructive to him and serve to help him in the treatment of similar cases.

Acknowledgements

Bulletin of the Chicago School of Sanitary Instruction.

Monthly Bulletin of the New York State Department of Health.

Six Reprints, from Fred C. Valentine, M. D., of New York City.

The Opsonic Index in Diabetes Mellitus, by John C. DaCosta, Jr., M. D.

Observations on Plague in India, Judson Daland, M. D.

Description of the Present Methods of Instruction in Clinical Medicine in the Medico-Chirurgical College of Philadelphia, by Judson Daland, M. D.

A Brief Sketch of one of Baltimore's Greatest Men, Horatio Gates Jameson, M. D., by Henry O. Marcy, A. M., M. D., LL. D.

Obstructions to the Upper Respiratory Tract, by H. H. Briggs, M. A., M. D., Asheville, N. C.

The Early Manifestations of Laryngeal Tuberculosis, Their Frequency and Treatment, by H. H. Briggs, M. A., M. D., Asheville, N. C.

The General Practitioner in Relation to Specialism with Special Reference to Ophthalmology, H. H. Briggs, M. A., M. D., Asheville, N. C.

Five Reprints, from Clark Bell, Esq., LL. D., New York City.

Diseases of the Intestines and Peritoneum. By Dr Herrmann Nothnagel, of Vienna. Edited, with additions, by H. D. Rolleston, M. D.,

F. R. C. P., Physician to St. George's Hospital, London, England. Second Edition. Octavo of 1059 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.00 net; Half Morocco, $6.00 net.

Treatment of the Diseases of Children. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Octavo volume of 597 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.00 net; Half Morocco, $6.50 net.

Practical Fever Nursing. By Edward C. Register, M. D., Professor of the Practice of Medicine in the North Carolina Medical College. Octavo volume of 352 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $2.50 net.

A Manual of Diseases of the Nose, Throat, and Ear. By E. Baldwin Gleason, M. D., Clinical Professor of Otology at the Medico-Chirurgical College, Philadelphia. 12mo of 556 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Flexible leather, $2.50 net.

Gynecology and Abdominal Surgery. In two large octavos. Edited by Howard A. Kelly, M. D., Professor of Gynecologic Surgery at Johns Hopkins University; and Charles P. Noble, M. D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 851 pages, with 405 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company, 1907. Per volume: Cloth, $8.00 net; Half Morocco, $9.50 net.

Surgery: Its Principles and Practice. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL. D., Hon. F. R. C. S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume II. Octavo of 290 pages, with 572 text-illustrations and 9 colored plates. Philadelphia and London: W. B. Saunders Company, 1907. Per volume: Cloth, $7.00 net; Half Morocco, $8.00 net.

A Text-Book of the Practice of Medicine for Students and Practitioners, by James Magoffin French, A. M., M. D., Formerly Lecturer on the Theory and Practice of Medicine, Medical College of Ohio. Third, Revised Edition. Illustrated by one hundred and ten engravings in the text and twenty-five full-page plates in tints and colors. New York. William Wood and Company, 1907.

The Diagnosis and Treatment of Diseases of Women, by Harry Sturgeon Crossen, M. D., Clinical Professor of Gynecology, Washington University; Gynecologist to Washington University Hospital and Chief of the Gynecological Clinic; Associate Gynecologist, St. Louis Mullanphy Hospital; Consulting Gynecologist to Bethesda Hospital, St. Louis Female Hospital and St. Louis City Hospital; formerly Superintendent of the St. Louis Female Hospital; Fellow of the American Association of Obstetricians and Gynecologists; Ex-President of St. Louis Obstetrical

and Gynecological Society; Member American Medical Association, Mo. State Medical Association, St. Louis Medical Society, etc. With 700 illustrations. C. V. Mosby Medical Book and Publishing Company, St. Louis, 1907.

Medical News

R. H. Sunkel has removed to 2107 Clark Avenue, S. W.

W. B. Chamberlain and wife, of this city, have returned from abroad.

C. A. Hamann, of this city, is now located at 404 Osborn Building.

H. M. Brown and wife, of Hillsboro, have returned from their eastern trip.

O. A. Hopkins, of Middlefield, has gone to Oklahoma for an indefinite stay.

Arthur Moore, of Portsmouth, has returned from Fayetteville, W. Va., whither he went to recuperate.

U. P. White, of Athens, is at home again from an extended trip through Texas and New Mexico.

D. L. Mohn and wife, of Ashland, have returned from a two weeks' trip to New York and the Adirondacks.

L. B. Zintsmaster, of Massillon, is in Rochester, Minn., doing post-graduate work at Dr Mayo's surgical clinic.

S. B. Post, of Canton, who has been at Ingleside Hospital for treatment to an injured eye, is at his office again.

G. S. Hodson, of Washington C. H., has returned from Rochester, Minn., where he has taken a course of study.

F. Lahmers has returned to Barberton from New York, where he spent six weeks in the Postgraduate Hospital.

Sylvanus F. Basinger, formerly of Columbus Grove, is now located in New London, where he will practice his profession.

E. J. Hill, of Vermillion, is conducting a private sanitarium for the treatment of morphin, cocain, opium, alcoholic and narcotic addicts.

Joseph Blickensderfer, wife and son, left New Philadelphia about the middle of October for an indefinite stay on their farm near Lebanon.

S. B. Smith, of Carrothers, who was at one time a practitioner in Bucyrus, has taken up the practice of medicine again in Jeromeville, Ashland County.

At a meeting of the Board of Trustees of the Fayette County Children's Home, Roy E. Brown was appointed physician for the Home for the ensuing year.

A. B. Howard, formerly Superintendent of the State Hospital, Newburg, will open an office at 736 Rose Building. Practice to be limited to mental disturbances.

The October meeting of the Ottawa County Medical Society at Port Clinton was addressed by C. F. Hoover, with a series of clinical demonstrations, and by J. B. McGee on the Cardiac Tonics.

Lake County Medical Society held their forty-third regular meeting at 8.00 p. m., Monday, October 13, 1907, Parmly Hotel, Painesville, Ohio. Following is the program: Introduction of new members, reports of officers and committees, miscellaneous business, reports and presentation of cases; "Some Common Affections of the Nose and Throat," H. G. Sherman, Painesville.

Wayne County Medical Society met at the Wooster Hospital, Tuesday afternoon, October 8, 1907. R. E. Skeel, of Cleveland, made the opening address, on "The Management of Abnormal Presentations." George W. Snively, of West Lebanon, was to have read a paper on "Auto-Intoxication and its Relation to Surgical Work," but was unable to be present. H. M. Yoder related a very interesting case of dermoid cyst in the abdomen of a 16-year-old boy who had been operated on at the Wooster Hospital. Dr Weaver related an interesting case of obstruction of the bowels. The attendance of this meeting was good, and the next one is to be held in January, 1908, at the same place.

Deaths

H. W. Kitchen, of this city, died at his home, the result of a stroke of paralysis.

E. J. Copeland, of Stewart, Athens County, died of pneumonia September 20th.

Abraham Parsons, of Brink Haven, died at his home from the effects of Bright's disease.

William Speece, formerly of Quincy, Ohio, died very suddenly in New South Wales, Australia.

H. I. Roberts, one of the best known physicians of Brooke County, died of Bright's disease at his home in Wellsburg.

J. M. Crismore, a well known physician and surgeon of Helena, died at his home very recently, his death being due to a stroke.

A. G. Hart, a well known physician of Cleveland, residing at 2184 West 14th St., a veteran of the Civil War, was run down by a street car receiving injuries which resulted in his death on October 12.

The Cleveland Medical Journal

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A Review of One Hundred Cases of Rachitis

By J. J. THOMAS, M. D., and A. F. FURRER, M D., Cleveland, Ohio

Slight or moderate grades of rachitis are so common between the sixth month and the end of the second year and are so frequently overlooked by the general practitioner that the authors have thought it might be of interest to the profession if the proportion of such cases so diagnosed and treated at the Lakeside Dispensary during the past 18 months were placed on record.

We find that 40% of the infants and children between six months and two years have rachitis, which is about 12% of the entire number admitted to the children's division (medical) of the Dispensary. During the past 18 months we have been able to record 100 cases.

A comparison of the relative frequency of some of the common symptoms, most of which affect the skeleton, is appended:

(1) Rosary 98%
(2) Enlarged epiphyses, wrists.....90%
(3) Enlarged frontal and parietal eminences....70%
(4) Delayed dentition.....60%
(5) Prominent abdomen, "pot belly".....30%
(6) Weak spine, kyphosis.....20%
(7) Deformation of chest.....15%
(8) Splenic enlargement.....10%

We have further attempted to divide these cases into three grades, according to severity of the rachitis manifested.

Grade (a) Advanced rachitis, includes.....14%
Grade (b) Moderate grade, includes.....50%
Grade (c) Slight grade, includes.....36%

This table shows that the four symptoms, the rosary, enlarged epiphyses of the wrists, prominent parietal and frontal

Read before the Clinical and Pathological Section of the Cleveland Academy of Medicine, November 1, 1907

eminences, and delayed dentition, will be found in the vast majority of cases. It also shows that over 80% are of slight or moderate severity. Naturally these are the cases which are most often overlooked. We found that many, probably 50%, had been symptomatically treated, before coming to the hospital, for teething, worms, diarrhea, nervousness, spasms, etc. As far as we could discover, the diagnosis of rachitis was rarely if ever made.

There are several reasons why rachitis is frequently overlooked. For example: A child is brought to the doctor presenting perhaps only one prominent symptom, such as convulsions, requiring immediate treatment and taking up, temporarily at least, his entire attention. Or the infant may be very ill with a bronchopneumonia. In these cases the acute illness so overshadows the chronic one of malnutrition that the latter is overlooked entirely. On the contrary, the patient brought to us may not appear to be ill at all at the first glance, the mother simply complaining of a fretful baby, difficult teething, backwardness in walking, etc.

The chief reason why rachitis is not recognized, especially in the slight and moderate grades, is that the doctor is not on the lookout for it; that is to say, a complete physical examination is not made with the patient stripped.

Etiology:* Authorities agree that rachitis is largely due to faulty feeding and poor hygiene.

In the great majority of cases rachitis occurs in artificially fed infants.

In a small percentage of cases rachitis will develop in the apparently exclusively breast-fed, but in some of these cases inquiry will reveal supplementary feeding of irrational foods or, on the other hand, a debilitated condition of the mother, prolonged lactation or lactation and pregnancy going on simultaneously.

Certain races, such as the Italian and Negro, are said to be particularly susceptible to rachitis. Dr Jacobi, in a recent discussion on this disease, stated that it was rare in these races in their native countries. It is probable that all Southern races become especially susceptible to rachitis upon migrating to colder climates.

Symptoms: It is important that we bear in mind that rachitis is a constitutional disease—a disorder of nutrition, and, as

*D'Espine and Picot, 1899. Rotch, 1906. Grancher and Comby, Tome I, 1904. Stoelzner—Rachitis. Carr, 1906. Osler's Mod. Med., Vol. I. Heubner—Text-book.

such, affects the whole organism. It is probable that all the tissues suffer to a greater or less extent, but the most constant and characteristic pathologic changes occur in the bones.

In well marked cases symptoms referable to one or several systems will be noticed:

Central nervous system: As evidenced by irritability, spasms, tetany, convulsions.

Muscular system: Flabby muscles, sometimes simulating paresis, the so-called pseudoparesis of rachitis.

Circulatory system: Chiefly mechanical difficulties, secondary to serious chest deformity; very rare.

Alimentary system: Gastro-intestinal indigestion is very common.

Respiratory system: Bronchitis or bronchopneumonia.

In examining a well-marked case systematically from the head to the feet, the patient being stripped, one may notice the prominent frontal and parietal eminences, giving the head an unusually square appearance.

Absence of, or diminution of, hair over the occipital region, and head sweating. The anterior fontanelle is frequently larger than normal and closes later. In certain severe cases craniotabes may be demonstrated.

Examination of the mouth will reveal delayed dentition. The lower jaw may be underdeveloped. The thorax may be deformed. The rachitic rosary is very characteristic and may be seen and palpated at the junction of the cartilaginous and bony portion of the ribs. This symptom is present in nearly every case. The thickened epiphyses of the wrists will be found to be the most constant bony change, after the rosary.

The large abdomen, so-called "pot belly," is not necessarily a sign of rachitis. In fact, this symptom is only recorded in about one-third of our cases. The lower extremities in the majority of cases will reveal but slight changes beyond bowing of the tibia. In the severest cases, however, even in infants eight months old, bow-legs, knock-knees and anterior bowing of the long bones are often seen. In these cases the femur is also likely to be involved, as well as the upper extremities and clavicles. Palpating the muscles will reveal their flaccidity. In the sitting posture a very characteristic kyphosis will be noticed, due to the weakened spinal muscles, so-called "weak spine." The subcutaneous tissues are frequently much wasted, but not infrequently quite plump babies will have unmistakable signs of rachitis.

There is always a varying degree of anemia. The spleen was recorded palpable in about 10% of our cases. The liver was not palpated regularly.

From what is known of the etiology of rachitis, as well as what the physical examination and history reveals, it is obvious that the treatment must be mainly along dietetic and hygienic lines. Medication, if we except cod-liver oil and phosphorus, being of minor importance. As the vast majority of these cases are brought up on the various proprietary baby foods, which are known to be deficient in fats and to contain too high a percentage of carbohydrate (Holt, 1902, p. 163), it becomes imperative, during the first year of life at least, to stop this form of diet immediately, substituting a good clean milk and modifying it with cream, boiled water, lime water and sugar, according to the age and weight of the child. The number of feedings and quantity per feeding should be arranged also. For the best results the milk should be so fresh and clean that sterilization will not be necessary even in the hottest weather. The hygiene should be corrected. Very few children, especially of the poor, get enough fresh air and sunshine. The daily bath should be insisted on. In many cases it is necessary to tell the mothers not to give the baby tea, coffee, beer, fruit, vegetables, nuts, "quieting" medicines, etc.

Medication: Our routine prescription calls for:

Elixir phosphori.....20 (℥ v.)
Ol. morrhuae, ad.....60 (℥ ii)
Sig. ½ teaspoonful after meals, thrice daily.

The cod-liver oil appears to be well borne, even in teaspoonful doses. Cream or the yolk of a soft-boiled egg may be substituted for the oil.

Daily massage, while not practicable in the majority of dispensary patients, is useful in private practice. At the same time gentle attempts may be made while the bones are still soft to correct beginning deformities. Early attempts at sitting and walking should be discouraged. When a marked deformity has occurred, the case belongs to the domain of the orthopedist.

It must not be forgotten that in girls serious changes in the bony pelvis may occur as the result of rachitis.

RÉSUMÉ

1. Forty per cent of the infants and children of the hospital class between the ages of six months and two years are rachitic.

2. The rosary, enlarged epiphyses of the wrists, prominent parietal and frontal eminences and delayed dentition are the four most constant symptoms.

3. About 80% of these cases may be termed slight or moderately advanced, and are therefore more likely to be overlooked.

4. Rachitis uncomplicated is a self-limited disease tending toward gradual recovery. Untreated, however, serious deformities of the bones may occur. The most commonly affected being the sternum, ribs, spine, long bones of the extremities and pelvis.

5. Bronchitis, bronchopneumonia, pertussis and gastro-intestinal disturbances, which are so common during the first two years and which are not ordinarily considered very serious in the normally developed healthy child, when engrafted upon a constitution already weakened by the malnutrition of rachitis, become important factors in the causation of the high mortality in infants and young children.

6. The diagnosis of rachitis may be made by inspection and palpation.

7. The treatment is practically wholly along dietetic and hygienic lines.

(a) It simply means a withdrawal of proprietary and other irrational foods and substituting a clean milk, properly modified, and divided in doses suitable to the age and weight of the child.

(b) Plenty of fresh air and sunshine. Body cleanliness.

(c) The administration of cod-liver oil, or other fats, and phosphorus.

An Unusually Large Dermoid Cyst of the Ovary

By WM. H. HUMISTON, M. D., Cleveland, Ohio.

The patient, aged 51, occupation housework, had been married 30 years. Para II, the last 17 years ago, no miscarriages. Menses began at 13, had been regular without pain, the last period was in January, 1906. Slight leucorrheal discharge for many years. Her general appearance was bad, she was sallow and very much emaciated. Sleep had been disturbed for six weeks. Appetite and digestion poor, bowels constipated, urination frequent but painless, pain in the right side extending down into pelvis, backache, and vomiting frequently after taking food, were the prominent symptoms. She had had general distress and weakness from a large growth in the abdomen, first noticed in the left side seven

Read before the Clinical and Pathological Section of the Academy of Medicine of Cleveland, October 4, 1907

years ago. The pain was intermittent, but the growth steadily increased until, on admission to St. Vincent's Hospital, the abdomen was much larger than pregnancy at term. She paid no attention to the growth when first noticed, but two years ago immediate operation was advised by a physician and was refused. Her general previous history had been good.

Family History: Mother died from gastric cancer, aged 62; father of old age; two sisters and four brothers living and well.

Physical examination showed a slight perineal tear, roomy vagina, cervix could barely be touched with the finger, no encroachment in the vaginal fornices. The uterus and appendages seemed to be lifted out of the pelvis by a large fluctuating elastic growth, reaching from pubes to ensiform cartilage. Flanks were resonant. Dullness was general over distended abdomen. There was a ventral hernia as large as an orange, with an eroded spot the size of an almond nut. Temperature, 99 2/5°; pulse, 90. Blood examination: reds, 4,300,000; whites, 20,600; hemoglobin, 50% to 60%. Urinary analysis showed small amounts of bile and albumin and many granular and hyaline casts, with a few leukocytes.

Diagnosis of ovarian cyst with probably suppurating contents was made and operation advised, to which the patient consented.

The operation, lasting one hour, was performed October 31, 1907. Ten ounces of ether were used. Two litres of salt solution were administered by submammary infusion during the operation. Through a median incision the adherent omentum in the hernial sac was freed. The cream colored, pea-soup-like cyst fluid was removed by a trocar, and the tumor delivered. It arose from the right ovary and contained four balls of hair and several teeth. It was closely adherent to the side of the enlarged uterus. Supravaginal hysterectomy, including the cyst, was performed. A malignant looking mass, the size and shape of a turkey egg, was found at the junction of the sigmoid and rectum; above this was a considerable fecal accumulation that could not be forced through with moderate pressure. Another equally large mass was found in the ileum to the right of the median line, and a third on the lower border of the liver. Further operative procedure seemed inadvisable. The cervix was closed and the peritoneum united over it, leaving the pelvis entirely free from raw surfaces. The abdomen was flushed freely, four litres of saline solution being left in the abdominal cavity, and the incision closed. Patient left the table in good condition. Color of mucous membranes red, pulse and respiration good.

She had a good night; no vomiting and free excretion of urine, containing albumin and many granular and hyaline casts. Pulse 96, temperature 99° next morning. She complained only of moderate pain and the stomach retained water given frequently in small quantities. About noon the pulse grew weaker, and in spite of special heart tonics and stimulants given hypodermically, she died 24 hours after operation. There was no change in temperature and no symptoms of hemorrhage. Autopsy was not permitted.

The size of this dermoid, the total weight of sac and contents being about 31 pounds, is unusual, but very few have been reported as large. In looking up the subject, but three were found giving the exact weight.

Corealiagant in *Review de Normandy* reported a dermoid cyst weighing 50 kilos (100 pounds).

Keith, 1896, reported one weighing 100 pounds.

Ullman, *Wiener Medical Press*, reported one weighing 35 pounds.

PATHOLOGIC REPORT

By J. H. HEWITT, Pathologist to St. Vincent's Hospital

Clinical Diagnosis: Ovarian dermoid cyst with suppurating contents.

Pathologic Diagnosis: Malignant dermoid ovarian cyst with metastases in the uterus.

The specimen consists of the uterus, left tube and ovary, and cyst sac on the right.

The uterus is irregular in shape, the right side considerably larger than the left, surface rather nodular, consistency generally firm, but on the surface are numerous soft and slightly fluctuant areas, one to three mm. in diameter, round, white, discreet and confluent, occurring mostly over the fundus and adjacent to the adherent cyst. On section these prove to be small cavities containing white, necrotic, cheesy material. The uterine wall averages 2.5 cm. in thickness, and except for these cavities the muscularis appears normal. The mucosa appears normal except for several polypi about one mm. long at the fundus and lower cervical portion. The left tube seems normal. The left ovary is small, contracted, firm and fibrous and shows several small cysts containing clear fluid.

The right tube is obliterated and is made out with difficulty as a dense fibrous cord.

The right ovary, represented by a large cyst, is densely adherent to the lateral and posterior uterine wall. In the adhesions and cyst wall adjacent to the uterus are several small white areas similar to those in the uterus.

The cyst, about 32 cm. in diameter, is generally smooth externally and shows several small transparent cysts beneath the surface. The wall, from one to five mm. thick, of leathery consistency, has a greyish-yellow translucent appearance. Internally are numerous folds of a diffuse reddish color with numerous small points of ecchymosis. Over the portion attached to the uterus is an area about 5.5 cm. in diameter, surrounded by an elevated ridge of tissue. Over this area are several scaly projections of a bone-like material. A few cm. above this area, on the posterior wall, is another ridge; from this a cluster of hair is growing, and in it may be felt an irregular hard mass of bone, about three cm. in length. On this bone is a cluster of three teeth, two having the appearance of bicuspids, one resembling a canine.

The sac contained greyish-green fluid of creamy consistency, four round balls of hair matted together with greasy, caseous material, and two pieces of bone, one about four cm. long, containing four molar teeth and one canine; the other showing three teeth, a molar, a canine and a bicuspid. The total weight of sac and contents is about 31 pounds.

Microscopically the cyst wall consists of two to four layers of equal thickness; the inner layer of necrotic connective tissue cells shows no nuclei. The outer layer shows parallel bands of definite connective tissue cells. Between the layers are clear spaces lined with flattened epithelium, suggesting that the original tumor was made up of several cysts and that by the overgrowth of one, the others were compressed and left as simple spaces in the wall of the large one. The hair-covered projections of the cyst wall have a basal structure of dense connective tissue, and a surface of epithelium projecting in many places as villi into the cavity. The cells are large and irregular in shape, contain a large oval or round vesicular nucleus and appear malignant. In several places columns of epithelial cells are seen invading the subjacent basal tissues.

The abscess-like cavities in the uterine wall are filled with loosely packed epithelial cells, while the walls formed by the uterine muscle are fairly regular and resemble lymph spaces more than abscesses, as in places there is a definite endothelial lining but no evidence of infection. The epithelial cells in the

center are necrotic and form a purulent-like fluid. They are similar in type to those covering the hair-covered parts of the large cyst. Similar spaces lined by epithelium of the same type occur in the adhesions and in the uterine walls, representing the extension of the malignant growth via the lymphatics.

The uterine mucosa is slightly irregular. The surface epithelium is everywhere regular. The tubules are somewhat tortuous with an increase in the intertubular stroma.

The cervical mucosa is also irregular, but the surface epithelium is everywhere smooth and regular. The tubules show a few retention cysts and a marked increase of the fibrous connective tissue.

Microscopic examination of the fluid removed from the cyst shows it to consist of numerous fat droplets, flat epithelial cells, broken down and necrotic cells, red blood cells and some leukocytes.

Our Relations to the Insane

By H. H. DRYSDALE, M. D., Cleveland, Ohio

At this age of high-tension living there is perhaps no subject of more general or more urgent interest than that of insanity in its relation to the State. No reflecting mind can be indifferent to the importance of making ample provision for the care and treatment of those suffering from mental disease, from which no manner of intellectual or physical strength or worldly prosperity will afford any certain immunity,—a disease which, prone to feed upon excitement, finally transforms the noblest faculties of our race into a wreck so appalling that, in its contemplation, the human intelligence becomes bewildered and dismayed.

In the United States, where from manifold causes there is much mental activity and where a condition of worldly wealth attracts the surplus population of Europe, there are obvious reasons why the several factors relating to insanity should receive our best and most careful consideration.

Glancing for a moment at the past history of the insane a most unsavory spectacle presents itself. During the Middle Ages, in Europe, a deep-rooted superstition prevailed that the insane were possessed of demons which must be cast out before recovery could occur. This belief led to the adoption of many

Read before the Cleveland Council of Sociology at the Chamber of Commerce Club, Cleveland, October 28, 1907

cruel forms of treatment, or rather punishment and torture. For instance, these helpless unfortunates were frequently cast into dungeons where light never penetrated and were shamefully neglected. Many were burned to death, others scourged and abused in the vain hope of expelling the demons and liberating the victims from the power of the Prince of Darkness.

It is also recorded that at this period many of the worst insane were exhibited in cages, to the public, at fixed rates and were irritated and tormented to satisfy a morbid and vulgar curiosity.

That this frightful state of affairs continued to the early part of the eighteenth century seems incredible, but in substantiation I have only to refer to the writings of the late Doctor R. Gardiner Hill, a competent alienist of his day, and whose words are as follows: "In the early part of the eighteenth century lunatics were kept constantly chained to walls in dark cells and had nothing to lie upon but straw. Some were chained in dungeons, some gagged, outraged and otherwise abused. The keepers visited them whip in hand and lashed them into obedience; they were also half drowned in baths of surprise, and in some instances semi-strangulation was resorted to. The "bath of surprise" was so constructed that patients in passing over a trap door suddenly fell in. Some were chained in wells and the water made to rise until it reached the patient's chin. Patients in a state of nudity, women as well as men, were flogged at particular periods, chained, strapped and fastened to iron bars, and even confined in metal cages."

In 1793, Pinel, a noted French physician, became imbued with the idea that these so-called demon-haunted outcasts were suffering from real disease, and that in many instances they were as susceptible to kindly treatment as domestic animals, and he gradually acquired a distinct reputation along these lines. For this reason he was appointed by the government of France to investigate and report on the condition of the asylums of Paris, and in his findings he strongly appealed to the proper authorities for the privilege of freeing the victims he found languishing in chains. This request was at once denied him and his advice scoffed at, but Pinel had the courage of his convictions and by persistent solicitation obtained grudging assent to the liberation of one maniac, and as history goes the public on this occasion was as much alarmed as we today would be at the thought of a lion escaping from its cage during a circus parade in our streets. To

my mind there is no more touching event in history than that of this big-hearted and wise physician removing the bands and chains from the ill-fated inmates of these institutions of horrors.

From about this period we can trace the inauguration of a movement for the betterment of the insane—a movement that has continued in the face of many obstacles, and in which the medical profession of America have taken a most conspicuous part.

Before engaging in a discussion of modern methods of treatment, it is essential that we look into the present status of the insane and consider briefly the factors that are most active in the causation of diseases of the mind.

On January 1, 1906, the total population of hospitals for the insane in this country was 200,000. A conservative estimate made at this time by competent observers placed the numbers outside of hospitals at 75,000, making the total insane in Continental United States 275,000, or about 1 to 300 of population.

Of this aggregate 51% were males, 49% females; 83% were white, 17% colored, including Indians and Mongolians; 72% were American born; 28% foreign born; 50% were single, 37% married, 10% widowed and 3% divorced; 83% of the insane of this country are maintained at public cost, the annual expense amounting to $21,400,000.

In Ohio we have six public and three private institutions caring for about 10,000 insane patients at an annual expense to the State of $1,100,000.

Proceeding now to a consideration of the more important underlying factors in the production of diseased mental states, I might say that people become insane simply because of their defective organizations, which reduce their resisting power, and they consequently are unable to withstand the strains that sooner or later come to them. One person with a well-developed nervous system may endure all manner of stress without insanity, but the man that starts out with a disabled constitution is predisposed to mental wreck when sufficient strain presents itself. The most valuable legacy a father can bequeath is a healthy physical and mental inheritance.

Heredity: While it is indisputable that inherited influences are most active in the causation of insanity, we are unable at this time to adequately explain the numerous enigmatical features encountered in the transmission of normal and abnormal traits. In my judgment it will take years upon years of carefully collected clinical data before any scientific deduction can be reached.

We are able to state, however, that while nervous and mental diseases are not directly inherited, there is transmission in no less than 40% of the cases of an unstable or vitiated constitution or predisposition to various psychic disorders. Notwithstanding the fact that the ancestry may furnish instances of mental deterioration or neuropathic tendencies which frequently bring about intellectual enfeeblement in children, it does not follow that all or any of the offspring of such parentage will be insane. On the other hand the parents need not be insane to beget children that are idiotic, imbecilic or predisposed to mental disruption.

Two parents, however, of strong mentality may, on account of the unsuitability of the sexual elements to each other, produce children of deficient mental strength. The world's history reveals many interesting examples of the result of consanguineous marriages and how often do we all in our daily life see the disastrous consequences that may follow the intermarriage of relatives.

Doctor William Howe, a well known English authority, made a careful study of 95 children, the result of paternal consanguinity, and discovered 44 idiots.

The suicide tendency that runs in many families displays, perhaps, the strongest example of hereditary transmission. It has been known to occur from one generation to another, and usually appears at the same age at which it did in the parents. I am familiar with two cases, both in men, who at certain periods are possessed of strong suicidal impulses and when this morbidity overcomes them they promptly seek protection until it passes away. Otherwise they both enjoy average mental strength.

Stigmata of Degeneration: The importance of degeneracy in its relation to insanity has of late years received much consideration and study at the hands of active research workers. By degeneracy is inferred any pathologic deviation from the normal standard, distinctly the result of imperfect evolution, and should not be confounded with abnormalities following accidents of childbirth or the sequence of disease.

In a brief paper of this nature it would be impracticable to enter into a descriptive detail of each of these inherited anomalies as they are so numerous, but I might be permitted to say in passing that their importance as influential causative factors has been fully established, and very often they are the key to the mental state under debate. At the same time we should not forget that many men of the highest degree of intellectual devel-

opment frequently exhibit a single stigma, which individually is of little import, but he who possesses the majority of these defects is certainly below par and his mentality may safely be challenged.

Alcohol: Aside from physical ailments, alcohol directly or indirectly is the most potent cause of insanity. It is the provocative element in at least 40% males and 13% females among the insane. That inebriety is a disease entity and not a vice, folly or crime, must be admitted in the light of modern knowledge and advancement. The general public will not accept this deduction, at least they have little sympathy for the alcoholic, but I am charitable enough to believe it is attributable to ignorance alone. It is the same old story. The world is ever too eager to censure what it does not understand. What is subjective it accepts; what is objective it ridicules. Take for example the periodical drinker, or so-called "dipsomaniac," who, strictly speaking, is not an inebriate at all; the alcoholic debauch accompanying his emotional outbursts is merely symptomatic of his mental malady and if it had not been alcohol it would have been something else. The pronounced dipsomaniac then is mentally unsound. His will power is deranged, his reason dethroned and he is deficient in self-control, and when these recurring storms arise he is tossed about in any way his impulses direct, and in his distress seeks safety in the anesthetizing powers of alcohol. With these facts in evidence, is it not readily explainable why pledge after pledge is broken, why repeated workhouse sentences fail and why the pains and penalties so often inflicted are of no avail? The action of alcohol might be considered twofold. In the first place there is the direct action of the drug or its toxins upon brain tissue, and secondly, the mental instability transmitted to the offspring of inebriates, an inheritance that is easily disturbed by the strains and stress that invariably arise. Alcohol to my mind is as great a scourge as tuberculosis, and sometimes I think more so. If an individual should become a confirmed inebriate and die as such without bequeathing to his children or his children's children serious physical and mental defects to handicap their progress in future years, the problem would be a much easier one to solve. In this direction no greater proof is necessary than the reported results of an examination of the school children of New York city, conducted last year, wherein it was conclusively shown that between 65% and 75% of the descendants of a drinking ancestry were dullards, while but 5% of the descendants of total abstainers were dullards. Now it is not my desire to discuss the various

phases of this important subject, neither will it be my privilege to offer anything new as a remedial agent. The therapeutic application from my point of view is education. If the present generation is protected from smallpox, yellow fever and cholera by a widely disseminated knowledge regarding their cause and the methods of preventing their spread, why cannot the mentality of future generations be protected from the baneful influence of alcohol by similar means? Let our youth know the whole truth, teach them the dangers arising from the moderate use of the drug and the value of that knowledge will make itself manifest in the development of a greater degree of will-power and self-control and few of them will suffer from the infirmities that so frequently follow its excessive use.

Drugs: There can be no question but that the continued use of any narcotic or hypnotic remedy acts destructively upon cerebral activity. It is indeed deplorable that many individuals are so frail and deficient in moral control as to permit themselves to become slaves to such drugs as cocain, morphin, opium, bromid, chloral, bromoseltzer and numerous other decoctions placed upon the market to catch the over-credulous. The use or abuse of stimulants of all kinds, alleged tonics and pharmaceutical "bracers" has assumed such a habit that it is becoming an actual scourge, the dangers and formidable consequences of which cannot be too often proclaimed.

Physical Causes: The various toxins resulting from rheumatism, gout, influenza, eruptive and non-eruptive fevers, deficient action of the renal organs, the products of gastro-intestinal fermentation and the depressing effect of cardiac disturbances, organic brain disease, nervous exhaustion, epilepsy, arteriosclerosis and other intercurrent maladies all have a more or less unfavorable influence upon mental acuity.

Syphilis is a definite etiologic element in at least 12% of the cases.

Psychic Factors: Whatever interferes with brain nutrition, such as continued worry, undue mental excitement, intense monotony, severe disappointment, religious excitation, excessive mental exertion and the emotional disturbances the result of business difficulties or domestic infelicities, may seriously disturb the mental equipoise.

The promiscuous education of the young, keen competitive examinations, undue activity on the part of teachers and parents

to push their children along in educational pursuits, resulting in much cramming during school sessions, has positively caused the impairment of the intellectual vigor of many previously normal children and in some instances has led to imbecility and feeble-mindedness, and so lessened the resisting power that any subsequent strain had little difficulty in cultivating a deep-seated brain disorder. If the aid of intelligent physicians were sought in determining the question as to what children were fitted to receive a public school education, unquestionably many cases of insanity that develop later in life would never occur. The public has the right to prevent the spread of measles but it assumes no authority in matters pertaining to the prevention of diseases of the mind.

Age: Rarely do we meet a fully developed form of mental aberration in childhood. It most frequently appears after maturity, a time when the combative powers should be at their highest but are counter-balanced by excesses, indiscretions, alcoholic indulgence, and the infection of syphilis. The age of puberty is a most trying period for the mentally defective. The emotional strain of this epoch is most pronounced. Many attacks of mental disease in future years are directly traceable to this source and much seeming viciousness appearing at this age is real disease. Every school teacher knows of this condition. The boy, who prior to puberty was alert to all things associated with school life, gradually becomes inattentive and loses interest in the pastimes and sports that formerly were his delight, becomes, so to speak, mentally and physically inert. Boys of this class inherit sufficient stamina to carry them as far as the first strain, that of puberty, but their resisting power is lacking and they falter under the stress that comes at this time.

Senility: In declining years the degenerative changes incident to senile involution are active, many times in a most disastrous manner, upon the mentality of individuals who, while known to have been successful and strenuous business men, overtaxed their capacity and invited premature decay. This class of patients, while decidedly large, do not often come under public notice as their status is one of debility and rarely do they become unmanageable. They are thus easily detained within the portals of their own homes, perfectly oblivious in many cases to the joys which should be theirs and which for years they had planned, only to break down at the threshold of their cherished prospects.

Sex: Incredible as it may appear, both sexes are afflicted equally. Women, however, are more susceptible to melancholia than men, due to the fact that they have less independence and if obliged to earn their livelihood their obstacles are greater. Then again disorders of the female reproductive organs seriously interfere with their sense of well-being. The strain incident to the three epochs of motherhood is sufficient to disrupt the mental energy of women who have inherited fragile nervous systems. Of the female insanity 10% is traceable to this source. Farmers' wives show the highest percentage of insanity of any class in the United States. The struggle for existence, the effect of dissipation, inebrity, syphilis, etc., predominate among men, as do aberrant psychic conditions originating from these causes.

Occupation: To live well worthy a human being, one must labor and I do not believe that hard work of itself ever seriously disturbed cerebral functions. Associated with such distressing features as prolonged grief, continued worry or intellectual strain, it may act as an inciting cause. The so-called strenuous life, if safeguarded by proper recreation and adequate rest, is most desirable as it promotes health, happiness and longevity.

Environment: Environment makes the world as we see it. Every attribute of the parents tends, through inheritance, to reappear in the children, unless prevented by such counteracting influences as environment. As mental traits are shaped in childhood, the intellectuality of the nation depends to a large extent upon the training received at this time. In the surroundings of developing youth, particularly in the larger cities, a great many evils prevail that in my judgment have not received the attention they deserve. The practice of masturbation among boys, for instance, is much more prevalent than most of you can conceive and should be controlled by parents educating their children frankly as to the consequences of this demoralizing habit. The number of parents negligent in this matter is legion.

Our youth should appreciate the dangers arising from venereal diseases. The effect of loose reading, such as blood-thrilling novels, by immature minds will so deprave the morals that arrested development will follow, and it is just this condition that is conducive to degeneracy in the younger element.

The excessive use of cigarettes is mentioned only to be condemned. The ease with which minors can procure alcoholic beverages is one of the worst evils of our time and will indubit-

ably manifest itself upon the intellectual status of generations to come.

From infancy many children of foreigners are permitted to drink beer and wine at their meals and they are taught to consider such beverages "liquid food." Statistics recently issued in this respect emphatically show that the mentality of beer-drinking children is notoriously sluggish. Under these circumstances is it not to be expected that children growing up in an atmosphere of drunkenness develop evil proclivities, find pleasure in immoral ways and abandon themselves to lives of crime?

The influence of environment upon foreigners is best shown in the U. S. Immigration Reports. The immigrant leaves his native heath of perhaps the crudest surroundings to seek his fortune in a land that has been pictured to him "as flowing with milk and honey." He does not find conditions as bright as they were painted, disappointment faces him, worry and homesickness overcome him. If his psychic integrity is frail he looses his moral grasp and sooner or later becomes a ward of the State. These people include about 18% of all commitments. The Irish supply the greatest number and the Hebrews the least.

To summarize, I might say that the cause of insanity in most cases is confined within the individual and is part and parcel of his mental development. He whose brain is constructed of defective framework and flimsy material will break down under adverse conditions of life and the several factors I have alluded to act only as inciting causes.

With this we come to the true subject of my paper, the treatment of the insane. Following the Herculean efforts of Pinel, many strange and unusual methods of treatment were suggested and utilized. The so-called circulating swing, for example, was perhaps the most ridiculous. This contrivance was so constructed that a patient sat or was strapped in a chair, which was suspended and attached to a circular rod that was capable of being revolved a hundred times in a minute. This therapeutic measure was strongly recommended in controlling violent patients and no institution at the time was considered complete without one.

In 1779 the first asylum in the United States was erected in Williamsburg, Va., but little actual progress was made in this direction until about 1850, when the State Legislatures became interested in the subject and from that time the building of State Hospitals has been more or less continuous.

According to the last report of the Bureau of Census, we

have at present in this country 350 institutions devoted entirely to the care of those suffering from mental diseases.

In my remarks on the causation of insanity sufficient was said to indicate that much may be done to prevent the spread of alienation. There is indeed no other branch of medicine in which an ounce of prevention is of greater value. When an individual presents symptoms suggesting the outbreak of an attack of insanity, he should be kept under the continual observation of his physician until a tentative diagnosis at least is made. Only in this way will the best interests of the patient be subserved. It is extremely unfortunate that a misguided sense of kindness and the apparent fear of disturbing the reputation of the family, often leads to the postponement of appropriate treatment and many patients are thus permitted to remain in their previous environment until the condition becomes chronic or incurable. The treatment of mental diseases in private homes will, in the majority of cases, result in failure.

It is the accepted opinion of alienists the world over that the modern hospital for the insane should be constructed on the cottage plan, so that proper classification can be made and patients treated individually and not as a class. Such an institution we have at Massillon, Ohio. To be successful in treatment the equipment must not be unlike a well-governed general hospital, with efficient medical staff, modern laboratory, properly qualified nurses, diet kitchen, hydrotherapeutic and electrotherapeutic appliances, hygienic surroundings and congenial environment. It is unnecessary to state that the personnel of the medical corps must be of the highest possible order. The nature of the cases they must administer to demands not only professional attainment but a large measure of diplomacy, strength of character and the most requisite trait kindliness. The law of kindness is universal and is as applicable in the treatment of mental diseases as in the treatment of physical disorders and ought to be the guiding principle in all cases.

As years go by the benefits derived from hydrotherapeutic measures become more and more pronounced. Results are frequently observed from this form of treatment when all other means have signally failed. In many cases the scientific use of water will not only subdue violent and disturbed patients but will frequently exert a most beneficial reflex action in conditions of marked depression. The use of these measures, however, must at all times be under the control of the physician, or a competent

assistant, as there are many contra-indications to their application.

Massage is a very valuable adjunct in the treatment of the milder forms of alienation and during the period of convalescence.

Electrotherapy is of neurologic rather than psychiatric interest. In the hands of the physician it may be employed to advantage in selected cases. The medicinal treatment of these conditions is of no interest at this time and I have purposely avoided any reference to it.

It has been conceded that agreeable occupation, especially employment in the open air, contributes greatly to the contentment and recovery of the insane. Over and over again do we note instances of rapid and complete restoration following the steady application to out-door work, when all other measures have utterly failed. For medical reasons, if for no other, it would seem that a rule requiring all patients to be in some way employed might be applicable in every case in which the condition of the patient allows it. The acquisition of sufficient arable land (not less than one acre per inmate), for vegetable gardens, wide fields yielding grain, and broad meadows, will give to a large number of patients diversified avocations.

Amusements of all kinds are of the greatest value from a remedial standpoint in the treatment of these disorders. They are next to and supplementary to good food, cheerful quarters, kindly treatment, medical care and proper employment. The leading institutions in Europe, as well as those of this country, have long ago accepted the teaching of Dr Connolly, the well known Irish psychiatrist, who strongly contended that the various forms of diversion possess a distinct therapeutic value. An abstract from his writings on the subject reads as follows: "It is our duty to remove all causes of irritation and excitement from the irritable; to soothe, encourage and comfort the depressed; to repress the violent by means which leave no painful recollections and in all cases to seize any opportunity of promoting the restoration of the healthy exercise of the understanding and of the affections." In the application of these principles every variety of entertainment that can divert the mind or excite pleasurable emotions should be brought into requisition.

Until very recent years, it was considered absolutely justifiable to restrict and restrain violent and disturbed patients. The tendency today is to eradicate all inhuman methods as it has been demonstrated time and time again that restraint is not only un-

necessary but an actual obstacle in the cure of these unfortunates. We are also getting away from the custodial character of our older institutions. Barred windows are rapidly disappearing, padded cells are no more, and we no longer guard the patient as we would a criminal. The "open-door" system is now in vogue, and suitable patients are given the liberty of the grounds, while others are placed in positions of responsibility. The outcome has been that patients become encouraged, few have attempted to escape and the impulse to suicide and homicide has markedly decreased. I am able to assure you, gentlemen, that we have arrived at a time when the theory of non-restraint, once thoroughly resisted, is now almost universally accepted.

If we are to meet with any degree of success in curbing the gradual increase of hopeless insanity, energetic methods must be applied at a time when there is great hope of recovery. In the past, the majority of cases have been committed in an advanced stage of disease, many were incurable, and as a consequence over 80% of the present population of State Hospitals are what we term "chronics." Lately, however, a slight improvement has taken place and we find that a greater number of patients have been admitted in the incipient period. In 1906, our best institutions reported that of the acute insane received, 40% recovered. So, with these facts in evidence, there is but one course to pursue. The proposition that confronts us today is not the giving to those bereft of their reason a comfortable existence, but immediate medical attention so that their chances for recovery may be materially increased. To be able to strike at the root of the matter, we must devote our best endeavor to cure all recoverable cases and this can only be done by taking them in hand when the malady is developing. The State Hospital cannot supply this demand unless long-established laws are abrogated. People are not willing to subject themselves to the publicity that follows the complicated legal proceedings necessary to obtain ready admission to State institutions. Let me invite your attention for a moment to the present Probate Court procedure in matters of the insane. When a sworn complaint is made that an individual is insane, a warrant is issued for his arrest, and he is brought before the Court. Not infrequently these complaints are found to be questionable, and pending further investigation the Judge has no other recourse than to place such persons in the custody of the Sheriff, where they must remain, in the association of criminals, until final adjudication is made. It has happened many times

that patients finding themselves locked up behind prison bars on such a charge suddenly become maniacal and violent, and as the county jail is not prepared to care for such emergencies the officials have found it necessary to restrain the excited and disturbed patient by strapping him to a bed in the hospital cell until the case can be disposed of. From February 1, 1905, to October 1, 1907, 1,324 complaints of insanity were made in the Probate Court of Cuyahoga County, and of these 231 were dismissed as not insane.

Another factor, equally inhuman and unjust, is the treatment accorded the "alien insane." If, from whatever cause, an individual who has not resided in the State one year and in the county 30 days becomes mentally afflicted, he cannot, under existing laws, have the advantage of modern treatment in an appropriate hospital but must be committed to the insane department of the Cleveland Infirmary, where incurables and defectives are detained and where no provision is made for the alleviation or cure of brain disease. Such is the actual condition, as it exists in our own city today, and it seems to me that something should be done at once to rescue these helpless unfortunates from such degradation and suffering and extend to them a better chance for the restoration of their health. The solution of the problem, I believe, can come only through the organization of an "Acute Psychiatric Hospital" or "Observation Ward," conducted on the plan of a well regulated general hospital, and it is my fervent hope that a discussion on this point will suggest the means or pave the way for the establishment of a hospital of this kind in Cleveland. New York and other States have inaugurated acute hospitals, and the results achieved have been surprisingly satisfactory. If I may be permitted, I should be glad in closing to place emphasis on a few important reasons why such an institution is so urgently needed in our midst.

1. A hospital of this kind would afford the means for the scientific observation and treatment of all doubtful mental conditions, and thus remove the necessity of sending such patients to the Cleveland State Hospital and Cleveland Infirmary.

2. It would save from the State Hospital many cases in which recovery is rapid, would consequently diminish the tendency to recurrence and thus lessen the number of chronic insane.

3. Individuals who are aware that their mental condition renders them unsafe to be at large, but who are now deprived of proper treatment on account of the publicity and stigma, so

called, attached to the ordinary legal commitment, would be benefited.

4. The timely reception of patients suffering from acute forms of insanity would undoubtedly prevent or at least diminish the number of homicides and suicides occurring from this source.

5. A hospital of this nature would permit the organization of an "out-door" department, where many patients could receive skilled individual care at a time when there is great hope of aborting or cutting short an attack of mental aberration.

6. It would give to a large number of physicians and nurses an opportunity of receiving instructions in the modern care and treatment of mental disorders, in order that insane conditions may be promptly recognized and treated before it is too late.

7. Many patients discharged from State Hospitals as cured are at times much in need of proper advice and treatment, and with the facilities of an "Acute Hospital" at their disposal a system of after-treatment could be put into operation to great advantage.

8. It would permit the formation of an efficient staff or board of alienists, to examine all cases in which the mental responsibility of an individual is under debate and the submission to the Courts of formal reports based on actual observations to supersede the hypothetical expert evidence that so frequently is a parody of justice.

9. It would save the State much time and expense.

All of this I submit to your general consideration. The mentality of future generations is in our hands. If my paper has been the means of promoting an interest in the future welfare of those mentally sick, I shall be truly grateful.

1059 Rose Building

The Pathologic Findings in a Case of Pemphigus Foliaceous

OSCAR T. SCHULTZ

From the Pathological Laboratory of Western Reserve University

The pathologic findings in one of Doctor Corlett's cases of pemphigus foliaceous are here briefly recorded, it being understood that no attempts at generalization are made.

The details of the clinical history may be omitted. Mention should, however, be made of the occurrence of mental symptoms

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A Preliminary Abstract presented before the Clinical and Pathological Section of the Cleveland Academy of Medicine, November 1st, 1907

about 48 hours before death. The patient became unconscious and died in coma. Lumbar puncture, performed about 24 hours before death, withdrew a clear blood-stained fluid, but the possibility of injury to a vessel could not be excluded. The cause of the development of mental symptoms, as well as of the presence of blood in the spinal fluid, will appear from a review of the changes found at autopsy.

The body was extremely emaciated. The skin lesions were all advanced. None contained fluid. They were slightly congested, somewhat indurated, their surfaces covered with epidermal scales. They were present in greatest numbers upon the sides of the face, the ears, and the dorsal surfaces of the hands and feet. Upon the ears and the sides of the face the lesions were confluent.

As so often happens in cases of this disease a terminal bronchopneumonia was present.

The spleen was considerably enlarged. The Malpighian bodies appeared as well-defined, opaque, yellowish nodules one to three mm. in diameter.

The mesenteric lymph glands were enlarged, firm and congested. The hilum of the spleen was united to the tail of the pancreas by a mass of chronic inflammatory tissue which contained enlarged lymph glands, one of which showed coagulation necrosis.

Examination of the brain revealed an extensive subpial and interconvolutional cerebellar hemorrhage, and an area of capillary hemorrhage in the white matter beneath Broca's area.

The anatomic diagnosis was as follows: Pemphigus foliaceous. Subpial cerebellar hemorrhage. Capillary cerebral hemorrhage. Hypertrophy of the spleen. Hypertrophy and congestion of mesenteric lymph glands. Coagulation necrosis of mesenteric gland. Bronchopneumonia. Localized encapsulated tuberculosis of lung. Chronic tuberculosis of bronchial lymph glands.

The bacteriologic examination was negative. Cultures were taken from the heart's blood, the liver, the spleen, and the kidneys. All remained sterile except one tube inoculated from the heart's blood. The development of a colony of Staphylococcus albus on this one tube is believed to have been a contamination.

Certain of the microscopic findings are interesting because of their nature and their similarity.

Sections of an earlier skin lesion show thickening, irregularity and desquamation of the horny layer. In places the

epidermis is thinned by the presence within and beneath it of areas of cellular infiltration, made up of lymphocytes, fibroblasts and dilated thin-walled blood vessels. The epidermal cells about such areas are degenerated. The fibers of the cutis are swollen, have lost their nuclei and have a homogeneous hyaline appearance.

In later lesions the epidermis is thin and its surface is irregular. Extending deeply down into the cutis is a wedge-shaped area of hyaline fibrous tissue, through which run several bands of cellular tissue. The latter is made up of fibroblasts and wide thin-walled blood vessels. Lymphocytes are present in small numbers.

In the skin lesions one finds numerous round, chromatin bodies from one to three microns in diameter. Many have a narrow rim of protoplasm. Some have a larger nuclear mass at one side and a smaller chromatin dot at the opposite side. In some of the bodies several (from three to six) chromatin masses are present.

The mesenteric lymph nodes show a condition of diffuse hyperplasia of the stroma. The blood vessels are dilated and filled with blood. Hemorrhage is present. Some of the fibers of the stroma are swollen and hyaline. The normal subdivision of the gland into follicles has been lost, and very few small lymphoid cells are present. The tissue has the appearance of granulation tissue rather than that of lymphoid tissue. Many of the blood vessels are apparently newly formed.

The necrotic mesenteric gland shows, in its non-necrotic portions, the same changes as above noted, except that the hyaline degeneration of the stroma is more marked. The greater portion of the gland has undergone coagulation necrosis.

Examination of the spleen shows the Malpighian bodies to be made up almost wholly of large cells. Only about the periphery is there a very narrow zone of ripe lymphocytes. Hyaline change is seen in the fibers of the reticulum and in the blood vessel walls.

The small blood vessels in the region of cerebral hemorrhage show hyaline degeneration of their walls. Some are surrounded by a narrow zone of nuclear degeneration. In others the vessel wall has entirely disappeared. In a few vessels a small amount of fibrin is present. The vessels of the cerebellar pia show identical changes.

About the changed cerebral and cerebellar vessels, in the mesenteric glands and in the spleen chromatin bodies, like those noted in the skin, are present.

The chief question in this case is that of the association or the independence of the skin lesions and of those present in the internal organs. The similarity of the nature of the change must lead one to the conclusion that the skin lesions and those present in the lymph nodes, the spleen and the brain are part of the same pathologic process. The hyaline degeneration, the vascular changes and the chronic inflammation are everywhere identical.

The disease, in this particular case, is characterized by changes in the skin and in certain of the internal tissues of a degenerative and inflammatory character.

As yet, nothing definite can be said concerning the nature of the chromatin bodies seen in the various lesions. At first glance they look like nuclear fragments. Attention should, however, be called to the similarity which some of them, especially those with a larger and a smaller chromatin mass lying in a well defined protoplasmic body, bear to Leishman-Donovan bodies.

Nasal and Pharyngeal Obstructions in Infants and Children

By MYRON METZENBAUM, B. S., M. D., Cleveland, Ohio

Hereditary lues is the cause of the earliest obstruction to the free ingress and egress of air through the nasal passages. In this disease the inflamed and thickened mucous membrane with its abnormal mucous discharge narrows and obstructs the nasal and pharyngeal passages. This condition is the one commonly known as snuffles. If the infant responds to the antiluetic treatment, the mucous membranes will then become normal and the breathing will improve. If the lues advances a saddle-nose will develop because the cartilages are partially destroyed, thus allowing the nasal bridge to collapse and producing further mechanical obstruction to the breathing.

Adenoids: These act as a mechanical obstruction in the nasopharynx, forcing the child to draw the air in through the mouth. They often obstruct the eustachian opening, causing an impairment to the hearing. Adenoids prevent perfect articulation and seem to retard the physical and mental development. Their removal is always indicated, even in the very young, when the free breathing is markedly obstructed.

Read at the meeting of the Ohio State Pediatric Society, Cedar Point, August 28, 1907

Tonsillitis: Frequent attacks, especially with abscess formation, will cause the tonsils to remain large, and not infrequently are they large enough to nearly touch the uvula on either side. Such large tonsils, or even considerably smaller ones, may obstruct the breathing through both the nose and the mouth. The removal of such large tonsils is to be desired to prevent recurrent attacks of follicular tonsillitis, with or without abscess formation; to eliminate at least one source of rheumatic infection and subsequent chorea; to render the child less liable to diphtheritic infections; to prevent infections of the middle ear and possibly of the mastoid, and to establish normal breathing and good articulation.

Measles, diphtheria, and especially scarlet fever, cause permanent damage to the nasal and pharyngeal mucous membranes. During the active period of these diseases, the tonsils and pharyngeal glands enlarge and often suppurate. The infection may involve the middle ear, producing an otitis media, and not infrequently a mastoiditis.

Foreign bodies: Children frequently introduce foreign bodies into the nares, producing partial or complete obstruction of one or both sides, often resulting in large swellings or suppuration. These foreign bodies should be removed as soon as discovered.

Malignant growths: Sarcoma of the upper jaw, antrum, or eye occur in young children and produce a partial or complete obstruction to the nares or nasopharynx. Surgical treatment is of no avail.

Traumatic injuries: Falling on the nose and blows upon the nose may cause dislocation or fracture of the septal cartilages, producing deviation into one nostril or the other. To correct this deformity at the time of injury, introduce a closed hemostatic forcep into each nostril and, by a pressing and wiggling motion, the cartilages usually snap into place and remain there. If a fracture of the cartilage is not corrected there results an angle of the septum on the one side and a deviation of the septum towards the other, thus obstructing both nostrils; furthermore, at the seat of the fracture new cartilaginous cement material is poured out, which further obstructs and is known as a spur. Such a condition is seldom corrected until adult life, and the exact method to be followed will depend upon the state of affairs. It is usual to remove this spur by means of the nasal

saw, which will free one side so that breathing may be quite unobstructed, even if the deviation of the septum almost closes up the other nostril. The correction of a deviation of the septum is an operation of some moment.

The turbinated bodies: The middle and inferior turbinated bodies, especially the inferior, are frequently enlarged in children to such a degree as to produce a very marked obstruction to the breathing, and if local treatment and the use of bland oils in the nose are of little or no avail, then the turbinated body must be shrunk and fixed by electric cauterization, or preferably by means of chromic acid. Sometimes the turbinated bodies are so massive or the nares so very narrow that it becomes necessary to remove a portion of the turbinated bodies by means of the wire snare. Since the turbinated bodies have a most important function they must not be removed without sufficient cause. Removal of part of the middle turbinate may become necessary to free the eustachian opening.

Even if the nares be made as smooth as a double-barrel shot gun, the adenoids removed and the tonsils taken out, yet the child may not breathe well. The cause for the difficult breathing may never have been in the air passage, but due to the fact that the child cannot close its mouth, because the two jaws are not complements of each other and because the two sets of teeth do not meet in harmony. Such a condition is known as "buck teeth." Orthodontia, which deals with the correction of dental irregularities and deformities, has reached such a stage that not only each set of teeth is brought into proper alignment by making the two sets harmonize when brought together, but such a correction of the teeth, more frequently those of the upper set, brings about a proper development of the upper jaw and broadens the nasal passages. Correction of the teeth will enable the child to close its mouth so the air can be freely drawn in through the nose. It will also improve mastication, which in time will aid in the general development of the child. The child's speech will be improved and the cosmetic effects unspeakably benefited.

It is unnecessary to mention the benefits derived from proper nasal breathing and the direct bearing it has on the physical and mental development of the child.

2316 East 55th Street

The Use of the Red Cross Emblem

The following resolutions were adopted by the executive committee of the American National Red Cross, Oct. 18, 1907:

Whereas, By international agreement in the Treaty of Geneva, 1864, and the revised Treaty of Geneva, 1906, "the emblem of the red cross on a white ground and the words 'red cross' or 'Geneva cross'" were adopted to designate the personnel protected by this convention; and

Whereas, The treaty further provides (Article 23) that "the emblem of the red cross on a white ground and the words 'red cross' or 'Geneva cross' can only be used, whether in time of peace or war, to protect or designate sanitary formations and establishments, the personnel and material protected by this convention"; and

Whereas, The American National Red Cross comes under the regulations of this treaty according to Article 10, "volunteer aid societies, duly recognized and authorized by their respective governments," such recognition and authority having been conferred on the American National Red Cross in the charter granted by Congress Jan. 5, 1905, Section 2: "The corporation hereby created is designated as the organization which is authorized to act in matters of relief under said treaty"; and, furthermore,

Whereas, In the Revised Treaty of Geneva, 1906, Article 27, it is provided that "the signatory powers whose legislation should not now be adequate, engage to take or recommend to their legislatures such measures as may be necessary to prevent the use by private persons or by societies other than those on which this convention confers the right thereto of the emblem or name of the red cross or Geneva cross"; be it

Resolved, That the executive committee of the American National Red Cross requests that all hospitals, health departments and like institutions kindly desist from the use of the red cross created for the special purpose mentioned above, and suggests that for it should be substituted some other insignia, such as a green St. Andrew's cross on a white ground, to be named the "hospital cross," and used to designate all hospitals (save such as are under the medical departments of the Army and Navy and the authorized volunteer aid society of the government), all health departments and like institutions; and, further, be it

Resolved, That the executive committee of the American National Red Cross likewise requests that all individuals or business firms and corporations, who employ the Geneva red cross for business purposes, kindly desist from such use, gradually withdrawing its employment and substituting some other distinguishing mark.

The Cleveland Medical Journal

CONTINUING { THE CLEVELAND MEDICAL GAZETTE and THE CLEVELAND JOURNAL OF MEDICINE

MONTHLY

The Official Organ of the Academy of Medicine of Cleveland

OFFICE, 1110 EUCLID AVENUE

Entered March 7, 1902, as Second-Class Matter, Post-office at Cleveland, Ohio, under Act of Congress of March 3, 1879.

EDITORIAL

The Babies' Dispensary and Hospital of Cleveland

Within the past year and a half there has developed in Cleveland a movement which should appeal to every physician, since it is one occupying a most important field of preventative medicine, and yet one that, until the present, has been largely neglected. The work has progressed so quietly and unostentatiously that probably the majority of the profession are unfamiliar with the facts.

During the early months of 1906 an Association was formed with the purpose of lessening, so far as possible, the unnecessary infant mortality among the poor. Since this is due, as a rule, to insufficient and improper feeding and neglect of hygienic measures, it was evident that a campaign of instruction should be instituted and a supply of suitable milk rendered available for the poor. The best means of accomplishing these ends seemed to lie in the immediate establishment of an outdoor dispensary service in the most congested and poorest district in the city, to be supplemented later by a hospital for the reception of those infants who were too sick to be properly cared for at their

homes. The Babies' Dispensary and Hospital, in June, 1906, opened an outdoor clinic in rooms at the Central Friendly Inn, in the crowded Haymarket district of the city. From the start the Clinic met with most gratifying results and its scope developed with such rapidity that it was soon found necessary to secure larger quarters and better facilities for looking after the increased work. Within a year of the opening of the Clinic, land was secured on East 35th Street, adjoining St. Ann's Maternity Hospital, and one of the houses upon it has been remodeled for dispensary purposes. As soon as possible, a hospital of 50 beds is to be built with a large dispensary building and milk laboratory; the plans have already been drawn. At present the dispensary work of the institution, in the clinic and the homes, is alone in progress, but the urgent need of a hospital for sick infants is very apparent.

The removal of the dispensary to the new location was expected to reduce materially the number of patients at first, but the reverse has been true, and each month has seen a very satisfactory increase in the attendance of at least 50% over the preceding month. There were seen during the past year 568 new patients, with a total attendance of 2,234 and 4,624 visits in the homes were made, by the visiting nurses attached to the Clinic.

Infants up to three years of age are admitted during the dispensary hours, which are from 1.30 to 4 p. m. daily. A resident medical director, who devotes his whole time and attention to the Clinic, is in charge, assisted by another physician. The facilities for the examination and treatment of the children are of the best. There is a laboratory for chemical and microscopic examinations and a very complete plant for modifying and Pasteurizing milk supplied to poor patients. The milk comes from the Canfield dairy, which has been certified by the Milk Commission of the City of Cleveland.

The assistance of the visiting nurses is invaluable in connection with the dispensary. Three of them are detailed for this special purpose. During the Clinic hours they help in the dispensary, and at other times they follow up the cases in the homes, assisting the mothers and teaching them the proper methods of carrying out the physician's instructions, and the ways of keeping their babies well. In this way the effectiveness of the Clinic's work is enormously increased.

The educational value of the Institution is a most important feature. Mothers are encouraged to bring their newly-born

infants, even if well, to receive instructions as to the proper methods of feeding and care. Printed instructions in several languages are supplied them and great pains are taken to see that they thoroughly understand the instructions.

The Clinic has proved its value by the keen interest shown by the mothers, and their bringing not only their own infants but in persuading other mothers to avail themselves of the opportunities furnished.

In many respects the work of this Institution is unique for America, and with the careful scientific measures that are being carried out the most encouraging results are not only to be expected, but so far have actually been realized.

The Clinic is well worthy a visit of inspection by physicians and they may feel assured that a hearty welcome will be extended to them by those in charge.

Prophylaxis in Syphilis

Since the demonstration of the Spirochaete pallida there has been a renewed activity in the search for specific treatment of syphilis, and for a means of preventing the development of the disease after the actual infection or contact has taken place. The experimental work of Metschnikoff, Roux and others on monkeys, showing that certain varieties may readily be given a fairly typical syphilis, gives us a satisfactory means of control hitherto lacking, and places the work on a basis of science rather than empiricism. As regards the prophylaxis, perhaps the most important piece of research is that of Metschnikoff and Roux, in which they found that the local application of mercury in the form of a pomade within a few hours after contact was quite sufficient to prevent the development of the disease. The results have been contradicted by many, notably Neisser and his associates, who were unable to get the results obtained by Metschnikoff. In the twelfth International Congress of Hygiene, held at Berlin this year, Metschnikoff repeated his statements and showed how, in his opinion, the negative results of his opponents were obtained. For reasons which are not clear to him, but which abundant experimental work shows to be constant, the pomade must be made up of lanolin and calomel in the proportions 75 and 25, or even better, 67 and 33. In order to gain a greater degree of softness there may be added to this 10 parts of vaseline, but pomades made up entirely with vaseline or with any other medium besides the lanolin have proved to be useless.

The work of practically all the other observers has been done with pomades made up with percentages of calomel rarely exceeding 10 or 12, and with a basis of vaseline or some other material found by actual experiment in his laboratory to be inefficient. In analyses of the various pastes for sale in Paris, some even under his own name, Metschnikoff found only one with an adequate percentage. Further series of experiments confirm the previous work in its entirety.

To this method, however, he has added another, for the reason that the pomade method is confessedly useless after a period of a very limited number of hours. After the discovery of the spirochaete it was thought that, on acount of the supposedly close relationship of these organisms and the trypanosomes, a similar method of treatment might apply. It had been claimed by a number of observers that a preparation of arsenic known as atoxyl was of great efficiency in the trypanosomiases, and attempts were made to obtain curative results in syphilis by the same drug. The results were not altogether satisfactory, and further discredit was cast on the method by statements from Africa that the atoxyl was valueless in many cases of trypanosome disease. In the experiments of Metschnikoff, however, as embodied in his report at the same congress, the scope of the research dealt rather with the prevention of the disease than with its cure. In a long series of experiments upon monkeys inoculated with syphilis, he finds that doses of atoxyl injected subcutaneously, even 15 days after the inoculation, prevent the infection, while all the control monkeys, that are given no atoxyl, develop the disease. So far there has been no opportunity for experiments on man, such as were performed in the case of the pomade, but the inference, based on the comparative results of the pomade in man and monkeys, that the results of the treatment are similarly comparable, seems a fair one. The author concludes that owing to the slow multiplication of the spirochaetes in the original point of infection, as checked by careful microscopic examination of the point of inoculation, the disease is an unusually favorable one for prophylaxis, and that the chief objection to the use of atoxyl is its toxicity. The facilities for work afforded by the Pasteur Institute and the reputation of the author for careful and conscientious work make the report of great interest, and it is to be hoped that we will soon have at our disposal a series of carefully controlled cases in human beings to determine definitely whether the results in animals hold good in the same proportion for man.

Pharmacists Approval of Official Remedies

There is rather a general impression that the druggists are opposed to the efforts of the American Medical Association to induce physicians to rely more upon the United States Pharmacopeia and the National Formulary in writing their prescriptions. This is not borne out, however, by recent statements of the American Pharmaceutical Association and the Northern Ohio Druggists' Association. The former, at its recent annual meeting, passed resolutions as follows:

"*Resolved*: That it is the sense of the American Pharmaceutical Association in convention assembled, that a great advance in the ethical practice of medicine and pharmacy will be made when the medical colleges make the Pharmacopeia a prescribed text-book, or book of reference, and require a familiarity with it in their examinations.

Resolved: That we request the governing authorities of all medical colleges in the United States to put into force such a ruling in their respective institutions as will insure in future classes a well-grounded knowledge of materia medica and pharmacognosy, as set forth in the Pharmacopeia.

Resolved: That the General Secretary be directed to transmit a copy of these resolutions to each medical college in the United States, and to the medical and pharmaceutical press."

Nothing can more clearly indicate the conviction of the pharmacists that it is to the best interest of themselves, as well as physicians, to make better use of the official preparations.

The Northern Ohio Druggists' Association has adopted a most practical method of demonstration along this line. Samples of the more popular preparations of the Pharmacopeia and National Formulary are to be prepared by the students of the Cleveland School of Pharmacy and sent to practicing physicians, the exact formula will be attached so that there will be an entire absence of objectionable secrecy as to the ingredients. It is believed that when the physicians appreciate the fact that students can put up these preparations so satisfactorily, it will be accepted without question that the qualified pharmacists can at least do as well, and that this practical object lesson will result in a far wider use of these compounds.

Medical Legislation

At last the medical profession is awakening to the fact that dreaming and talking of reforms in legislative matters will accomplish little. Action, and very vigorous action, is necessary in order to overcome the efforts of those who, from selfish interests,

are opposed to legislation demanded by the medical societies. Practically, all this legislation is for the public good and cannot be construed as being prompted by self-interest on the part of medical men. The legislators can hardly understand this fact, but it must be brought home to them by the personal representations of our committee.

No matter how much enthusiasm is shown by physicians in this matter, a very practical demonstration by financial contributions must play a prominent part. There are certain legitimate expenses that must be defrayed to secure the passage of bills; for instance, the best legal talent must be secured to draw up the bills correctly in the first instance, and to watch the construction of amendments that are offered,—changes that often entirely nullify the whole intent of the original bill. If the measures we desire are to become laws, a certain amount of lobbying must be done, no matter how distasteful it may be, but we are forced to offset the tactics of our opponents in whatever way will prove most effectual, and experience has shown that personal attendance by a committee and heart-to-heart talks with the legislators are indispensable. The expenses of this committee should be met by contributions from the whole profession. The Academy of Medicine of Cleveland has therefore issued an appeal for funds to assist this worthy object, and we can only urge upon every physician that it is his duty to contribute as generously as possible.

Department of Therapeutics

CONDUCTED BY J. B. McGEE, M. D.

Typhoid Fever in the Aged: In the *American Journal of the Medical Sciences*, for October, Arthur S. Hamilton believes that the immunity to typhoid fever conferred by advancing age, is less than is generally supposed; and as regards the treatment of such cases, it is such as would be employed in younger individuals with special watchfulness for cardiac, pulmonary and genito-urinary complications. In the milder cases very little is needed to combat the fever, as it seldom rises high. Two of his patients required no treatment for this condition, but for the more serious cases bathing of some sort was necessary. In some cases tub baths were borne quite as well as in younger people, but in a number of instances they were not well borne, and sponge baths were used instead. For the diarrhea, intestinal astringents and antiseptics were found beneficial, and for the bladder disturbances, urotropin was unusually satisfactory. In those whose bladders were healthy at the onset of the disease, seven grains of urotropin every four hours or less frequently, produced

most favorable results in from two to four days. In those who had chronic bladder troubles, the results were less satisfactory. To prevent pulmonary complications during convalescence, he thinks it advisable to have the patient sit up in bed as soon as possible, and something more than liquid diet should be given as soon as the fever has subsided to near the normal. The dangers in old people of an exhausted condition with prolonged convalescence, are, in his opinion, greater than are those of relapse and perforation from too early feeding.

Cholelithiasis: George Dock, in the *Journal A. M. A.,* for October 26, observes that the possibility of dissolving gall-stones in the gall-bladder or ducts is not yet abandoned, although personally he has never attempted such solution. He has, however, seen patients in whom others had tried practically all the recommended remedies, and he has never seen any evidence of even partial solution or softening, but he has seen complete failure after the most thorough use of various drugs. He believes the stone less important than the infection in clinical cholelithiasis, and the therapeutic problem is not merely to lessen pain and to diminish spasm, but to lessen inflammation and infection and their possible results. To relieve the pain at the time of the attack opium is indispensable. A hypodermic injection should be given large enough to lessen the acuteness of the pain, but not so large as to entirely becloud the clinical picture. Atropin may be added with advantage and in full doses. For the rare, agonizing pain a whiff or two of chloroform sometimes seems necessary, yet there is a serious practical error connected with the use of chloroform in gall-stone colic. Some have an idea that full chloroform anesthesia will paralyze the muscular fibres of the bile ducts in such a way as to allow a stone to become freed. Acting on this principle he has seen a man kept almost constantly under chloroform for seven days, and in many other cases for shorter periods, but without any good results, and personally he has never used chloroform in such cases. A hot water bag or compress or any other hot application is often useful in relieving the pain, but he prefers copious washing of the stomach with hot water or hot Carlsbad water, repeating the lavage every two or three hours as required during the severe pain, and once a day afterward. Rest should be enjoined as far as possible, and movements of the bowels encouraged by hot Carlsbad water or enemas. After treatment depends on the suspected conditions in the biliary tract, careful attention being paid to the presence or absence of bile in the urine or stools, the temperature, the leukocytes, and the physical condition in the region of the bile tract.

Myocarditis: Charles Schram, in the *New York Medical Journal* for September 28, observes that in the treatment of chronic myocardial disease, the following facts should be borne in mind. That we have to deal with a chronic disease, capable of quiescence, possibly permanent, but ordinarily slowly progressive. That the heart will never be capable of more work than the present state of its parenchyma warrants. That while temporary weakness from overstrain may be amenable to treatment, any call for more work means further degeneration. That it affects all the constituent tissues, the

muscular fibrillæ, the circulatory, nervous and ganglionic apparatus, the last perhaps least. That it may be localized as for example, externally, from a pericarditis, internally from bacterial invasion, affecting perhaps the papillary muscles alone, or from an infarct or diffuse cause as from syphilis, lead or phosphorus poisoning. That compensatory hypertrophy does not take place, as when increased resistance is to be overcome, due to valvular defect within or arteriosclerosis without. That extraorganic and vascular complications usually exist.

The heart no longer supplies the energy for the patient's mode of life, and the calls upon it must be minimized temporarily; for the time being he requires absolute rest, physical and mental, until the manifestations of failing heart energy, be they cerebral, respiratory, digestive, hepatic or renal, have been relieved. At this time, any attempts, prompted by the patient's pleadings, to stimulate the heart's activity by drugs, baths or mechanical means, may invite the development of an anginal attack, sudden collapse, or "help him along in his progress to a watery grave." Sleep, his greatest necessity, may come naturally, but if hypnotics are required, paraldehyde and trional should be preferred. Temporary resort to morphin or chlorodyne is occasionally expedient. A two to four weeks course of such "rest cure" will in many cases restore the circulatory equilibrium and then is the time to begin the Nauheim treatment for increasing the heart's efficiency. Judicious medication is essential to the satisfactory management of chronic myocarditis. A most valuable remedial agent is nitroglycerin. It contracts the heart, is a vasodilator, lessens arterial resistance, and is thus the appropriate remedy for a heart, which must be relieved, and is incapable of responding to stimulation. Complications, especially those of renal origin, may require the administration of one of the digitalis group. This latter drug, however, ought scarcely to find a place in the treatment of chronic myocarditis. With arteriosclerosis, which so often accompanies it, the danger of apoplexy due to its administration is great. He has found the theobromin sodium salicylate especially valuable for stimulating the action of the kidneys. Beyond all things let it be remembered that the patient's activity, be it physical or intellectual, should be well within the margin of the heart's capacity.

Apomorphin: In the *Medical Record* for September 28, Eugene L. Fisk states concerning apomorphin hydrochlorid, that so far as the emetic dose by the mouth is concerned, the drug is practically useless as an emetic, when administered in that fashion. The possibility of depression, collapse and untoward effects from the use of apomorphin is often referred to by standard authorities, but care is seldom taken to explain that such effects are not to be feared when the drug is administered by the mouth even in relatively large doses. There is a remarkable difference between the effects of apomorphin by oral or by hypodermic administration difficult to explain. Murrell suggests the slowness of absorption as an explanation of the failure of internal doses to excite vomiting, but that seems like a restatement of the problem without answering it, and at present we have no satisfactory explanation of its vagaries. For the past ten years Fisk has given apomorphin the preference over all other expectorants, when a remedy of this class, which excites a flow of mucus, was indicated. He has found

it especially serviceable in acute or subacute laryngitis, trachitis or bronchitis, with a dry turgescent membrane, or when the bronchial tubes are obstructed with tenacious mucus, and associated with violent cough. The relief afforded by apomorphin in doses of one-eighth to one-fourth grain every two or three hours is quite remarkable when contrasted with the frequent failure of other remedies to relieve promptly such conditions. In no instance has he observed any nausea or depressing sequelæ from its administration in these doses, even when given to aged or debilitated patients. He has frequently given it to young children in doses of 1-60 to 1-12 grain, the latter to a child of eight years, with no depressing effect. He has also used it with excellent effect, and believes it may here be combined when necessary with small doses of morphin or heroin, and in many cases in which the heroin is now prescribed, apomorphin is far preferable. He always specifies the crystalline form of the drug, and a fresh preparation is to be preferred, but a greenish discoloration does not necessarily contraindicate its use.

Skin Diseases: In the *Therapeutic Gazette* for October, L. Duncan Bulkley considers general therapeutic measures in many diseases of the skin. He finds it a constant error, in regard to the previous treatment of cases which he sees, that so little attention has been paid to the patients themselves, to their physical condition, and the performance of their functions of life. He continually finds patients with various skin affections to be in a deplorable state, as far as their digestion, metabolism and elimination are concerned, and frequently finds those whose dietary and hygienic conditions are dreadfully wrong. While these may not always be the direct exciting cause of the eruption, he knows from experience that they have a very great bearing on recovery from the cutaneous disturbance, and the latter often recurs when there is a relapse in regard to the former. As a corollary to this it follows that an error is made when any line of internal treatment, designed to benefit the eruption, is continued regardless of the patient's system from time to time. He has frequently seen the same tonic or alterative treatment persisted in, when it was entirely unsuited to the patient's present condition, when there was gastric or intestinal disturbance or when the kidney secretion was grossly deranged. He cautions as to the use of arsenic in skin diseases, it is relatively rare to find patients with cutaneous maladies of any duration who have not been thus treated and commonly with arsenic alone to the utter neglect of all other internal or constitutional therapeutics, and these patients are often found to be in a deplorable state in regard to their diet and hygiene, and the action of their emunctories.

Laryngeal Phthisis: Beverley Robinson, in the *Monthly Cyclopaedia* for September, comments upon how the pendulum swings from one extreme to the other in the treatment of disease, and in none perhaps is this more evident than in the treatment of laryngeal phthisis. Not many years ago, the daily application of sprays and powders, the local use of pigments of different kinds to the larynx was the practice. Later came the period when caustics, incisions, scraping, punchings of ulcers and infiltrations was the order of the day. Today,

fortunately, we perceive a return to the old order of things, to rationalism such as the elder Flint taught us, for to him pulmonary tuberculosis, and all its expressions, had a tendency to self-limitation. Give the individual only a fair fighting chance of air and food and sunlight and in fifteen percent of such cases he would march gradually and surely toward recovery. With the others, the progress of the disease might be slow or rapid —might become stationary at times and again advance—but definite and permanent cure did not result. As to the cure of laryngeal phthisis, let us recognize that to cure it, in the vast majority of instances, is only possible provided that at the same time the pulmonary disease be cured. Therefore, we should, in his judgment, do little more or differently from what we should do were there no visible laryngeal complications. Locally and generally, he is thoroughly convinced there is nothing wiser or better than to keep such patients continuously, or as much as is practicable, in an aseptic atmosphere. This may be done, he believes, by the use of the perforated zinc inhaler, and the judicious use in connection therewith of the best beechwood creosote. There is nothing absolutely specific about the use of this remedy in this way, but he believes its importance very great indeed. He believes the zinc inhaler of value in all stages and forms of laryngeal phthisis and useful in diminishing or allaying cough, and this is frequently a great boon. He has several times seen it notably allay cough when no form of anodyne given by the mouth or applied locally would afford anything like the same degree of comfort. In addition everything possible should be done to successfully combat the general disease.

Helenin: In the *Medical Review of Reviews,* for September, James Burke summarizes the uses of helenin, a fluid crystallizable substance derived from *Inula Helenium* or elecampane. He believes its most important therapeutic action is in neutralizing toxins peculiar to deranged function of the lungs. As a topical application it successfully allays irritations of ulcers of the surface of the body through the same process that it prevents putrefaction of the urine. It is especially useful in allaying the itching of surface lesions of the skin. He cites cases as to its value in respiratory conditions: in one patient with bronchopneumonia, aged 46, the disease resisted all treatment for eight months, he was given helenin grain one-sixth, six times a day, and was cured in fifteen days. A consumptive under one-sixth grain ten times a day improved and in chronic bronchitis the cure is nearly complete. It is a therapeutic standby in pertussis; one-sixth grain every hour for urgent lung irritation with hoarseness.

Veronal: *Merck's Archives* for October (from *Therap. Monatschrift*) states that if a hypnotic, which is insoluble or only soluble with difficulty in water, be given in solution, a much more rapid action will be obtained in smaller doses. Posthypnotic symptoms and signs of intoxication are thus less liable to appear. W. Cohn, of Berlin, states that one author took crystallized veronal 0.75 gram (12 grains) at 2:30 p. m., since the action was not sufficient, a second dose of 12 grains was taken (after a warm plate of soup) at 10:30 p. m.; there was then a prompt effect and the next day stupor,

dryness of the mouth, and red urine; the trouble was that the second dose dissolved in the soup, while the first was taken dry, and thus a cumulative action set in. It follows that every dose of veronal should be followed by a copious draught of warm fluid, and that 0.5 grams (seven and one-half grains) will usually be sufficient. The powder or the tablet may also be dissolved directly in warm water, but it is not sufficient to take it in a wafer, and then drink cold water. Rudolph Topp has also demonstrated that the administration of veronal in moderate doses is never followed by any untoward effects on the following day, if the precaution is taken to order also sufficient warm fluid to permit of a solution of the drug in the stomach. The writer has experimented extensively upon himself, and has only suffered from depression on the day after, when he took the powder dry in large doses. L. Duncan Bulkley has found that veronal, unlike trional, which tends to increase the trouble, will often give relief in cases of itching and apparently with no subsequent harm.

Cannabis Indica: J. M. French, in the *American Journal of Clinical Medicine* for November, classes the chief uses of this drug under two heads—1, as an analgesic to relieve pain and lessen spasm; 2, as a hypnotic to quiet the nervous system and produce sleep. As a palliative it may be employed in a wide range of affections, but its most marked and favorable effects are to be seen in painful and spasmodic affections. It is useful in neuralgic pains, and in some cases of headache, notably sick headache or migrain. As a remedy for irritable and spasmodic coughs it is fully as effective as, and much safer than, the opiates. The extract is perhaps the most efficient preparation, though, like all the preparations of this drug, it varies greatly as to medicinal activity in different specimens. The fluid extract is also extremely variable. Cannabin and cannabin tannate are hypnotic in doses of five to 10 grains. The standard granules in use by the alkaloidists contain 1-67 grain and are given in doses of three to six every two hours till effective.

Cardiac Drugs: The *Medical Council*, for November, believes that the greatest danger in the use of digitalis grows out of the large and heedless application of the remedy to all conditions of altered heart action. Discrimination is needful. Digitalis is in no sense a remedy for heart disease, but a regulator. Its prime indication, ever and always, is failure of compensation. The most brilliant results of digitalis are obtained in mitral insufficiency with failing compensation. Strophanthus is our best substitute for digitalis. It acts just like digitalis, but a little less so, and is less liable to produce nausea and vomiting. It is an error to regard nitroglycerin as a heart tonic. It is properly employed to relieve the heart of excessive work. Its prime indication is high arterial tension. Adrenalin is regarded as one of the most powerful of heart stimulants. In many desperate cases it is the only drug that shows desirable effects.

Academy of Medicine of Cleveland

The 52 regular meeting was held Friday, November 15, 1907, at the Cleveland Medical Library.

H. Gerstenberger presented an infant showing a hernia of the lung.

E. O. Houck gave "A Review of the Coroner's Office" (to appear in full shortly). Discussed by L. E. Siegelstein and F. E. Bunts.

M. Metzenbaum read a paper on "Cleveland's Ambulance Service;" discussed by E. O. Houck, W. G. Stern and A. S. Storey. (To appear shortly.)

R. B. Newcomb, M. D., LL. B., gave a paper upon "Medico Legal Subjects." Discussed by E. O. Houck, W. H. Merriam and W. H. Weir. This paper will be printed in full in the Journal at an early date.

Clinical and Pathological Section

The 45 regular meeting was held Friday, November 1, 1907, at the Cleveland Medical Library.

W. I. LeFevre showed photographs and radiographs of a child born with webbed fingers and toes, the second instance in the same family of this deformity.

D. S. Hanson presented a patient suffering from epilepsy which followed an injury to the left side of the head. In addition to the typical grand mal attacks occurring about once in two weeks, he had thirty or forty petit mal seizures, in which he would suddenly fall to the ground, frequently injuring himself in so doing. The seizure lasted but a second, consciousness immediately returned and he at once picked himself up. There was no aura preceding these minor seizures. The case was discussed by E. F. Cushing.

J. Phillips showed a child with well marked rickets, especially marked in both clavicles; discussed by W. G. Stern.

R. H. Birge read a paper entitled "Painful Heel," with a report of cases and an exhibition of radiographs (to appear in full in the next issue); discussed by H. O. Feiss.

J. J. Thomas and A. F. Furrer read a paper entitled "Review of One Hundred Cases of Rachitis" (see page 491). Discussed by N. Rosewater, H. Gerstenberger, and W. G. Stern.

W. T. Corlett and O. T. Schultz discussed "Pemphigus Foliaceus," illustrated by a larger number of lantern slides, showing the clinical appearances of a number of patients with this disease, and the microscopic preparations from one of the cases. (For the pathologic description see page 512.)

Section of Experimental Medicine

The thirty-fourth regular meeting was held Friday, November 8, 1907, at the Cleveland Medical Library.

C. A. Hamann made some remarks upon the anatomy of the seal (*Otaria*) and showed dissections of various organs.

Attention was called to the absence of the medullary canal in the long bones, to the presence of an ossified tentorium, to the greatly developed deltoid ridge of the humerus and the large olecranon process. The symphysis pubis in this animal allows of considerable separation of the

bones in parturition, there being elastic ligaments present which permit this.

The esophagus is of large size and its walls are quite muscular, the pyloric sphincter is poorly developed. The small intestine is of enormous length (86 feet in an animal of five feet long). This great length of the small bowel is unusual among the carnivora. The cecum is quite small and inconspicuous, and is situated just below the liver. There is a considerable dilation of the common bile duct between the mucous and muscular coats of the duodenum, an enlargement of the ampulla of Vater, so to speak.

The inferior vena cava presents a very marked enlargement within the substance of the liver,—an enlargement possibly serving as a reservoir for blood while the animal is submerged beneath the surface of the water, and is not breathing. Discussed by G. W. Crile and J. J. R. MacLeod.

W. T. Howard reviewed the recent work upon cancer.

Research on tumors, especially on carcinoma, has been very active during the last 10 or 12 years. These researches have pursued widely diverse lines, and the subject may be best discussed under the following heads:

Systematic. Much good work has been done upon the classification, seats of origin and the distribution of various tumor forms in man and other animals. For instance, the separation of certain types of teratoma from the true tumors; the frequency and location of different types of tumor in the body, as sarcoma of the stomach, endotheliomata of bones; the occurrence of chorio-epithelioma in the testis and other locations, as well as in the uterus; the occurrence of adrenal rests, and their resulting tumors.

Zoologic distribution of tumors. It is now known that tumors are widely distributed among the lower animals, and Bashford and Murray have pointed out that the study of tumors is not a question of human pathology, but one of comparative zoology. For instance, a number of different types of tumor have been described in fresh-water as well as in marine fishes; carcinoma of the oyster has been described by Ryder; carcinoma of the mouse is very common; and, in a number of instances, both carcinoma and sarcoma and other types of tumor are known to occur in the horse, sheep, cow, dog, and in various wild animals, both in captivity and in the natural state.

Finer cytologic studies of tumors. With the development and perfection of modern cytologic technic, exhaustive studies have been made upon the structure of tumor cells and upon the architecture of tumors. It was soon found that tumor cells, especially those of malignant tumors, frequently contained bodies of varying size, shape and staining reaction. These bodies were, by various observers, erroneously thought to be parasites. Pianese was among the first to show that most, if not all, of these structures were derived from the nuclear materials of either the tumor cells themselves or of other cells, such as, for instance, leukocytes, which had wandered into the tumor cells. His work will always stand out as one of the most important upon the structure of tumor cells. That these "cell inclusions" represent various degenerations of nuclear substances has been confirmed recently by the work of Hertwig upon Actinospaerien depressed from over-feeding in which "cell inclusions" of much the same structural appearances occur. The origin of pigment in the pigmented tumors has been shown by Hertwig and Roessle to be from nucleolar substances. Hansemann and others have shown that the mitoses of tumor cells are often atypical. Recently Farmer and Moore and Walker have described heteropolar mitoses in cells of certain malignant tumors, similar to those occurring in ferns. Bashford and Murray have, however, apparently upset this claim. The latter authors have described what they interpret as conjugation of the nuclei of carcinoma cells. As a general rule, the nuclei of tumor cells are hyperchromatic but hypochromatism is not of infrequent occurrence. Mallory

and others have described intracellular fibrils in certain tumor cells. Another result of recent cytologic work has been the demonstration that tumor cells, especially of malignant tumors, are often much more highly differentiated than was formerly supposed.

Transplantation of tumors. One of the most remarkable recent observations is the property, which many tumors of the lower animals possess, of growing when transplanted from one animal to another of the same species. While the transplantability of tumors from man to man is apparently unobserved, implantation of certain types of cancer from one part to a neighboring part (from one labium to another) may occur. It is nearly 18 years since Hanau described a transplantable sarcoma of the rat. Since then transplantable sarcomata of the rat and carcinomata of mice have been described by a number of observers. Among the first to transplant rat sarcoma through a long series of animals was Leo Loeb, while Jensen was the first to transplant the mouse carcinoma on a large scale. Sticker, Smith and Washbourne. Bashford and Murray, Beebe and Ewing have, in recent years, very successfully transplanted a peculiar growth in dogs, which is usually called lymphosarcoma. This capacity of certain tumors of the lower animals to grow after transplantation has added much to our knowledge of tumors, especially of the modes of growth and formation of metastases. Many of the spontaneous tumors of mice and rats are very difficult to transplant, and only a small proportion of inoculated animals develop tumors, but by repeated transplantation such tumors often finally develop a high percentage of takes. Some such tumors, as for instance that of Jensen, give over 90% of successful transplantations. The best results are obtained in mouse carcinoma by inoculating very small pieces into the axilla. The most striking observation of these transplantable tumors is the wonderful capacity of multiplication of tumor cells. In three and a half years Bashford and Murray grew enough tumor cells to equal the weight of 1,500 mice. These observers have shown that when mouse carcinoma is transplanted the parenchyma cells, that is the epithelial cells, live while the connective tissue supporting structures, including the blood vessels, perish and the supporting tissue of the newly formed tumor tissue is supplied by the host. This is to be looked upon as a reaction to the tumor cells and, as a rule, this occurs in such a way that the architecture of the transplanted tumor is preserved and the tumor type is usually, but not always, persistent.

One of the most remarkable deviations from this general rule is the transformation through varying grades from carcinoma to sarcoma, which occurred in three cases in Ehrlich's laboratory. In these cases, for some unexplained reasons, the connective tissue elements were stimulated to unusual growth and greatly crowded out the epithelial cells. Contrary to former experience, Ehrlich has been able to transplant tumors to animals of different, though allied, species. He has got both carcinomata and sarcomata from the mouse to grow and produce tumors in the rat. These tumors will not, however, grow further than one generation, but by transplantation into the mouse they can be successfully retransplanted to the rat, and thus a zig-zag course may be followed from mouse to rat, from rat to mouse, from mouse to rat, and so on. Ehrlich has also described a transplantable chondroma of the mouse.

Five years ago Jensen stated that by inoculating other animals, the rabbit for instance, with mouse tumors, the inoculated animals would develop in their blood serum substances which destroyed the tumor cells when inoculated into mice with tumors. Later, Clowes noted that the blood serum of mice in which tumors had receded would confer immunity upon fresh mice, or even destroy tumors which had already started. Bashford and Murray have shown that this immunity is by no means specific, that it may be got by inoculating cells of various organs, or even red blood-cells of the healthy mouse into another mouse. Besides this form of immunity, Ehrlich recognizes another, namely, that due to the using up in the body of certain materials necessary for the growth of the tumor cells. This he calls atrepsie. Beebe and Crile have been able to cure sarcoma in dogs by transfusing the blood of a dog, sponta-

neously recovered from the tumor, into an animal with successfully growing tumors.

Etiology of tumors. (*a*) *Parasites*: In the earlier days of bacteriology, a number of different kinds of bacteria were grown from tumors and were thought by some to hold an etiologic relation to the same. Somewhat later, certain workers grew yeasts from various tumors and claimed that they were the cause of tumor formation. These erroneous ideas have long since been exploded. More tenacious were the adherents of the protozoan origin of tumors. Believers of this persuasion saw in the series of bodies, staining for the most part with nuclear dyes and generally grouped by pathologic anatomists under the head of "cell inclusions," various stages in the life cycle of protozoan parasites. These bodies are perhaps best known as the Russel fuchsin bodies and as Plimmer's bodies. It is interesting to observe that the protozoan nature of these bodies was never believed in by leading pathologic anatomists or zoologists, by many of whom they have been carefully studied. This conception of these peculiar bodies has never recovered from the blow it received from the careful cytologic studies of Pianese already alluded to. Recently Gaylord has found spirochaetes very constantly present in the carcinomata of mice. Their occurrence here is readily explained by the fact that spirochaetosis of the mouse is a wide-spread affection. The spirochaetes found by Gaylord ought to be regarded as identical with or closely related to the Spirochaete muris of Wenyon. Finally, it may be said that evidence that protozoa are the cause of tumors is lacking.

(*b*) The old theories of Tiersch and Waldeyer and Conheim are familiar to all, as is the more recent modification by Ribbert of Conheim's hypothesis. The most recent hypothesis of Farmer, Moore and Walker, who have described heterotype mitoses in tumor cells, can be best understood by the study of the diagram which I have reproduced from the article of Bashford and Murray. This hypothesis is rather complicated for those not familiar with general cytology and can, perhaps, be best set forth to a general audience in the following quotation from Bashford and Murray, "that malignant new growths arise by the transformation of the differentiated body tissues into reproductive tissue of modified character, which they (Farmer and his colleagues) specify by the term 'gametoid,' to distinguish it from the true gametogenic or reproductive tissues. They ascribe power of proliferation, independence and malignancy to this 'gametoid tissue,' which on account of its character as reduced tissue, *i. e.*, with half the somatic number of chromosomes behaves as a parasite to the surrounding tissues."

Another theory of the origin of tumors is that of Richard Hertwig, the zoologist. According to this theory, certain body cells from which the tumors spring lose their property of "organotypic" growth and adopt the "cytotypic" growth. Expressed in other words, these growing cells lose the power of differentiation, "organotypic growth," but preserve and develop one of the most marked characteristics of the "cytotypic growth," namely, that of multiplication.

From this brief, and in many respects superficial review of tumors, it is apparent that the three most important questions yet to be answered concerning tumors are: First, why do the tumors begin? Second, how do their cells attain such a huge degree of proliferative capacity? Third, how are they to be prevented and cured? In regard to the first question, Ehrlich believes that misplaced germ tissue must play a great rôle in tumor etiology, and holds that in fetal and post-fetal development aberrant germ tissue must be common. For the starting of the growth of tumor tissue, he suggests that it is necessary for it to have the presence of some peculiar incitant, an hypothetical X-body, and that for the continued growth the receptors of the tumor cells must have a relatively high avidity for certain materials in the body. Therefore, he thinks that the secret of the primary beginning of cancer growth is to be sought in what determines this avidity of the receptors of the tumor cells. The obvious fact that some incitant or stimulus is necessary for the initiation of cancer is,

of course, by no means new. A number of different kinds of stimuli may start cell proliferation, as for instance, bacteria and the various incitants of natural and artificial pathogenesis, but the incitants or stimuli of tumor growth are peculiar in that the stimulus is powerful and continuous, with the consequence that there is apparently no limit of growth of the proliferating cells. So far the nearest approach to the discovery of such a stimulus has been made by Fischer, who found that, after certain fat stains dissolved in olive oil were injected beneath the skin of rabbits, there occurs a chronic proliferation of the connective tissue, into which epithelium is attracted from the surface and grows with the formation of typical and atypical mitotic figures and the formation of nests and even typical epithelial pearls. Helmholz was able to confirm Fischer's observations and, in addition, observed the growth of a true multiple chondromata in a rabbit's ear into which the injections were made.

In regard to the prevention and treatment of tumors, Ehrlich believes that by the use of killed tumor material and repeated inoculations it will finally be possible to produce tumor immunity in all the laboratory animals.

The discovery of transplantable tumors in the lower animals has furnished opportunity for attacking the tumor problem in many directions, and it is likely that in time important practical results will follow.

The paper was discussed by C. Sihler and G. W. Crile.

Myron Metzenbaum demonstrated the process of making snow by the escape of compressed carbon dioxid gas and explained its use in the treatment of certain skin lesions.

OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION

The thirtieth regular meeting was held Friday, October 25, 1907, at the Cleveland Medical Library.

W. E. Bruner reported a case of vernal catarrh in a young man who was first seen in March, 1904. The lids were found covered with large firm follicles, packed closely together, and the case was considered as the palpebral form of vernal catarrh. Various forms of treatment had been used. The patient had been seen yearly since then; the best results have been obtained this year by the use of X-rays, as indicated by Dr Allport. Discussion of the case by Drs Stevenson and Baker.

J. N. Lenker presented the case of a woman with purulent discharge from the antrum. The treatment consisted in opening the antrum through the meatus, and later through the canine fossa. Later the antrum began filling with granulations which pushed out from the meatus, and bled very freely upon manipulation. Remarks by Dr Large, who reported a similar case, which proved to be a round-celled sarcoma. Further remarks by Drs Baker, Bruner and Cogan. Discussion closed by Dr Lenker.

W. E. Bruner presented a case of probable secondary sarcoma of the orbit, in a man about fifty years of age, whose left eye was enucleated about six years ago for glaucoma. The present growth had come up very rapidly in the past two months and now fills the entire orbit, but is not adherent to the walls. Patient refuses operation and will be kept under observation.

E. Lauder reported the case of a young lady with failure of vision in the right eye: T-N; counts fingers at four feet, left eye is normal. Veins of the right eye found dilated and tortuous and there is edema of the retina; no hemorrhages seen at that examination; at a later examination the vision had improved to 20/200, and later vision improved to 20/70, and then hemorrhages appeared. Now the vision is 20/20 partially. It is considered to be a case of embolus of the central vein.

The following are applicants for membership: Dr James G. Warner, Dr Herbert Scott Hayford, Dr Arden P. Hammond. The attention of

members is called to the fact that all names of applicants are published for the purpose of allowing any member to send written objections to the Council of the Academy, stating why such applicant should not be elected.

A meeting of the Council of the Academy for the transaction of routine business was held November 23, 1907.

St. Alexis Hospital Alumni Association

The 55 regular monthly meeting was held at The Hollenden, Thursday, November 7, 1907. Program: Management of Posterior Occipital Presentations with Report of Cases, B. S. Frary; Cleveland's Present Ambulance Service, M. Metzenbaum; Prostatitis, C. E. Corlett.

Book Reviews

A Manual of Diseases of the Nose, Throat, and Ear. By E. Baldwin Gleason, M. D., Clinical Professor of Otology at the Medico-Chirurgical College, Philadelphia. 12mo of 556 pages, profusely illustrated. Philadelphia and London. W. B. Saunders Company, 1907. Flexible leather, $2.50 net.

This handy volume of 556 pages contains a surprising amount of information and covers, in a clever and concise manner, the important facts of nose, throat and ear work. The book is intended for the use of students and general practitioners who want the essentials of this special field of medicine.

The first 64 pages are devoted to a description of the various instruments, some of which are of the author's design, used in treatment, for diagnosis and in operations. It also describes the methods of examining patients. The remainder of the volume is divided into five parts: (1) Nose; (2) Pharynx; (3) Tonsils; (4) Larynx; (5) Ear. Under each heading is given briefly the important facts of the anatomy, physiology and pathology of the organs, which increases the value of this work as a text-book. The subject matter under each head is carefully considered and presented in a clear manner. The author makes frequent reference to cases and incidents connected with his extensive experience, which adds to the interest as well as being instructive. At the end of the volume are some 42 pages of formulas, which have been referred to in the text by their numbers, thus saving space and repetition. The book is profusely illustrated with 262 engravings, most of which are good. We can heartily recommend this book by Dr Gleason.

A Text-book of Pathology. By Francis Delafield, M. D., LL. D., and T. Mitchell Prudden, M. D., LL. D. Eighth edition. With thirteen full-page plates and six hundred and fifty illustrations in the text, in black and colors; 1057 pages. William Wood & Co., New York, 1907.

If a book review is to maintain a judicious balance between praise and adverse criticism the space allotted to the review of the eighth edition of Delafield and Prudden's Text-book of Pathology ought to be devoted almost exclusively to commendation. The present edition has undergone certain changes, all of which must be considered improvements of a book already excellent in its earlier editions.

That portion of the book dealing with technic is to be praised, not only because of its more sensible location at the end of the volume, but also because of the very recent methods incorporated, the wealth of material included in so small a space and the sound advice given the practitioner in regard to the proper preparation of material which is to be submitted to the pathologist for microscopic examination.

The illustrations are profuse and so well chosen and so well executed as to be really valuable. Those made from photographs are particularly praiseworthy. As much cannot be said for the colored illustrations of bacteria. The colors are not very true and some of the plates seem to be showing evidences of wear.

The enlargement of the section on General Pathology at the expense of the space devoted to purely bacteriologic matter is a step in the right direction. Special Pathology is not unduly drawn out. Those divisions of this part of the subject which deserve more detailed discussion, particularly pneumonia, lung tuberculosis, cirrhosis of the liver and nephritis, receive excellent exposition.

The chapter on immunity has been revised and reviews the most recent additions to our knowledge of this important subject. Ehrlich's hypothesis forms the basis for the discussion, and the new facts which have been brought out in the work upon immunity are explained according to this theory. The subject is, naturally, one of exceeding complexity, but the language used in its elucidation is so entertaining and so devoid of unnecessary technicalities that the student must derive as much pleasure as profit from the reading of pages 158 to 191. After one has read the statement that "The conception of Ehrlich as to the nature of antitoxin is that of the chemist" it is surprising that there is no mention of the work of Arrhenius, whose explanations are even more purely chemical than are those of Ehrlich.

The general discussion on infection, inflammation and tumors is as pleasingly and lucidly written as is that on immunity.

The fact that 69 pages are devoted to the index indicates the completeness and value of this important part of the volume.

Improvements might be suggested in a few minor points. The proper generic name for the group of spiral organisms, of constantly increasing importance in pathology, is Spirochaeta rather than "Spirochaete." The use of the article "the" before specific zoologic names cannot be considered the best of usage. The coccidoidal infection of Rixford and Gilchrist (page 117) is not, of course, a "protozoan infection" and should be removed from its present position.

The foot-note references to the literature, while not voluminous, are well selected and will lead the aspiring student to the bibliography of the particular subject which he may wish to pursue further.

The book can be unhesitatingly recommended to the student as the best one volume text-book of pathology in the English language.

Merck's 1907 Index (Third Edition). An Encyclopedia for the Chemist, Pharmacist and Physician, stating the Names and Synonyms; Source or Origin; Chemical Nature and Formulas; Physical Form, Appearance and Properties; Melting and Boiling Points; Solubilities; Specific Gravities and Methods of Testing; Physiological Effects; Therapeutic Uses; Modes of Administration and Application;

Ordinary and Maximum Doses; Incompatibles; Antidotes; Special Cautions; Hints on Keeping and Handling, etc., of the Chemicals and Drugs Used in Chemistry, Medicine and the Arts. Merck & Co., New York.

Merck's Index is already familiar to many of our readers as a convenient source of information about drugs and their preparations, chemicals, etc. A large amount of data is supplied (see descriptive title above). The present edition, owing to the omission of all advertising matter, contains much more information and refers to many more preparations than the edition of 1896, although the dimensions of the present volume are smaller and more convenient. The price of each preparation is relatively expressed as the values are constantly fluctuating. All drugs and chemicals made by the Merck Company are so designated by the title "Merck," which is a sure proof of their reliability. Not only is the book of value to the physician, but also to the pharmacist, chemist, or any one having occasion to use chemicals.

Visiting and Pocket Reference Book (Perpetual), 1908. Price 50 cents. J. H. Chambers & Co., St. Louis, Mo.

Revised and enlarged, handsomely vellum bound, lapel, pocket size. Synopsis of contents: Table of signs; How to keep visiting list; Obstetrical memoranda; Clinical emergencies; Artificial respiration; Poisons and antidotes; Dose table; Important incompatibles; Ruled printed pages for: Weekly visiting list, memoranda, nurses' addresses, clinical record, obstetric record, birth record, bills rendered, cash received, miscellaneous memoranda, death record, vaccination record, articles loaned, cash loaned.

A very convenient visiting list, containing in addition a large amount of condensed information easily available in emergencies.

Five Hundred Surgical Suggestions. Practical Brevities in Surgical Diagnosis and Treatment. By Walter M. Brickner, B. S., M. D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York; Editor-in-Chief, American Journal of Surgery, and Eli Moschcowitz, A. B., M. D., Assistant Physician, Mount Sinai Hospital Dispensary, New York; Associate Editor, American Journal of Surgery. Second Series. Duodecimo; 125 pages. New York: Surgery Publishing Co., 92 William St., 1907. Price $1.00.

The first edition of this little work was recently reviewed in these columns. The present revised and enlarged version embraces an increased amount of valuable information, especially such points as are apt to be taken for granted and hence omitted in larger works. The subject matter is arranged under headings such as Neck, Abdomen, Extremities, Fractures, etc., etc. While no claim is made for completeness, the book will suggest valuable details of surgical work to the practitioner.

Paraffin in Surgery. A critical and clinical study by Wm. H. Luckett, M. D., Attending Surgeon, Harlem Hospital, Surgeon to the Mt. Sinai Hospital Dispensary of New York, and Frank I. Horne, M. D., formerly Assistant Surgeon, Mt. Sinai Hospital Dispensary. 12 mo., 38 illustrations, 118 pages. Surgery Publishing Co., 92 William St., New York City. Cloth $2.00.

This monograph makes an effort to collect and analyze the voluminous literature on the use of paraffin in surgery, and to give a study of the

results of the author's clinical experience and experiments upon cadavers and animals. The early chapters are devoted to the consideration of the sphere of paraffin injections, the early and late dispositions of paraffin in tissues and the physical state of the paraffin bearing upon its disposition. The later chapters discuss the technic and armamentarium of the injections, giving a record of results satisfactory and otherwise. The volume is well illustrated with photographs of apparatus and cases treated, as well as photomicrographs of tissues removed. A sufficient number of cases is reported in detail to get a fair idea of the indications for the use of paraffin in surgery and to demonstrate the accidents and dangers which attend its use.

Gynecology and Abdominal Surgery. In two large octavos. Edited by Howard A. Kelly, M. D., Professor of Gynecologic Surgery at Johns Hopkins University; and Charles P. Noble, M. D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 851 pages, with 405 original illustrations by Mr. Hermann Becker and Mr. Max Brödel. Philadelphia and London: W. B. Saunders Company, 1907. Per volume, Cloth, $8.00 net; Half Morocco, $9.50 net.

The greater scope of this work, as compared with strictly gynecologic treatises, has much to recommend it. Gynecology today consists largely of abdominal operative work, and the gynecologist must be prepared to deal with any abdominal complication involving any organ that may be encountered during an operation.

Some 16 different authors have contributed to the first volume, each of whom is specially fitted to discuss his or her particular part of the subject. It is impossible to discuss the contribution of each one of these, but a perusal of the respective chapters will indicate their value. Some chapters, however, are deserving of special mention.

Elizabeth Hurdon gives a monograph upon the Pathology of the Reproductive Organs, abundantly illustrated with numerous plates, some of which have been borrowed from well-known works. It seems a distinct advantage to have the pathology all in one chapter. This, with Ford's very complete and up-to-date contribution on Bacteriology, will prove especially valuable to those interested in the scientific laboratory side of the subject.

Medical Gynecology, by Noble and Anspach, will appeal to the general practitioner who does not attempt operative work. While the author does not claim that all conditions can be cured by local and constitutional measures, he shows what a great deal can be accomplished by nonoperative methods. He discusses all the different gynecologic conditions, and this chapter is one of the most valuable and practical.

The vexed question as to the superiority of the vaginal or abdominal route for operative procedures has been left to the judgment or preference of the reader. Both methods, with their advantages and drawbacks, have been fully discussed, each by one of its leading exponents, Byford giving an excellent article on Vaginal Section for Diseases of the Ovaries and Tubes.

The Radical Operative Treatment of Uterine Cancer by Abdominal Hysterectomy, a most important subject, is well handled by Clark, and this is supplemented by a short chapter on the Byrne Method of Treatment

for Cancer with the Galvanocautery by Werder. Clark reviews the history of the operative procedure and carefully weighs the statistics of the leading operators. He advises radical operation if the disease has not progressed too far, but he thinks that the removal of the glands is best omitted.

Noble has dealt very ably with Abdominal Hysteromyomectomy and Myomectomy. Operative Technic is fully discussed by Kelly who has also written several other chapters.

Throughout, considerable attention has been paid to the history of the development of gynecology, and many references to the literature are appended; this adds to the interest, but also to the bulk of the work. Nevertheless it is well worth the additional space. The illustrations are very numerous, and the fact that most of them are by Becker and Brödel is sufficient indication that they could not be improved upon.

This first volume is most excellent in every particular. It will appeal to the general practitioner who does not operate, to the general surgeon, the obstetrician, as well as to the gynecologist.

Acknowledgements

The Johns Hopkins University Circular.

Medical Record Visiting List. Wm. Wood & Co.

Bulletin of the University of Nebraska College of Medicine.

Intestinal Perforation in Typhoid Fever; Its Diagnosis and Surgical Treatment, by J. E. Allaben, M. D., Rockford, Ill.

A Text-Book of Physiology. By Isaac Ott, A. M., M. D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. Second revised edition. Illustrated with 393 half-tone engravings, many in colors. Royal Octavo, 815 pages. Bound in extra cloth. Price, $3.50, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. D., Assistant Professor of Pathology, University and Bellevue Hospital Medical School. Octavo of 536 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.00 net; half morocco, $6.50 net.

A Text-Book of Practical Gynecology. For Practitioners and Students. By D. Tod Gilliam, M. D., Emeritus Professor of Gynecology in Starling-Ohio Medical College, and Sometime Professor of Gynecology, Starling Medical College; Gynecologist to St. Anthony and St. Francis Hospitals; Consulting Gynecologist to Park View Sanitarium, Columbus, Ohio; Fellow of the American Association of Obstetricians and Gynecologists; Member of the American Medical Association, of the Ninth International Medical Congress, etc. Second, revised edition. Illustrated with 350 engravings, a colored frontispiece, and 13 full-page half-tone plates. 642 Royal Octavo pages. Extra cloth, $4.50 net; half-morocco, gilt-top, $6.00, net. Sold only by subscription. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph. D., LL. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eighth revised edition. Octavo of 1317 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.50 net; half morocco, $7.00 net.

A Treatise on Diseases of the Skin. For the use of advanced students and practitioners. By Henry W. Stelwagon, M. D., Ph. D., Pro-

fessor of Dermatology, Jefferson Medical College, Philadelphia. Fifth edition, revised. Handsome octavo of 1150 pages, with 267 text-illustrations, and 34 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $6.00 net; half morocco, $7.50 net.

The Pancreas: Its Surgery and Pathology. By A. W. Mayo Robson, D. Sc. (Leeds), F. R. C. S. (Eng.) of London, and P. J. Cammidge, M. D. (Eng.) D. P. H. (Camb.), of London. Octavo volume of 546 pages, fully illustrated. Philadelphia and London. W. B. Saunders Company, 1907. Cloth, $5.00 net; half morocco, $6.50 net.

Medical News

S. E. Deeley, of Mt. Vernon, is spending some thirty days in Mexico City.

James McMurray, of Marion, is taking an extended trip through the West.

Perry Gregg, of Cincinnati, with his family, expects to locate in Miamisburg.

C. J. Aldrich, of this city, recently spent ten days in Tennessee, duck shooting.

J. E. Baker, of Caledonia, is making a western trip, stopping in Nevada and California.

H. H. Noble and wife, of this city, have returned to their home after an absence of four months.

A. R. Baker and wife, of this city, have taken apartments for the winter in the Hotel Euclid.

Secord H. Large and wife, have closed their summer home on the lake shore, and are now living in town.

Newman T. B. Nobles and wife, of this city, sailed on November 16 for several months' travel in Europe.

J. M. Higgins and son, of Athens, recently spent a couple of weeks hunting in the mountains of Virginia.

J. A. Miller, of Pomeroy, recently sustained an injury to his ankle, which has caused him some inconvenience.

F. C. Griffis, of Mt. Gilead, has returned home from a seven years' service as army surgeon in the Philippines.

W. H. Tucker, of Eldorado, has gone to Philadelphia, where he has entered school, taking a post-graduate course.

O. A. Rhodes has sold his practice to H. M. Northam, of Glandorff. Dr Rhodes is as yet undecided where he will locate.

The Lake County Medical Society held their forty-fourth regular meeting at 8.00 p. m., Monday, November 4, 1907, in the Assembly room of the Parmly Hotel, Painesville. Program: Reports and Presentation of Cases; Nomination of Officers for 1908, Committee, Drs Lowe, Amidon, and Merriman; Miscellaneous Business; "Cerebrospinal Meningitis," L. W. Ladd, Cleveland; Discussion of Subject.

Deaths

S. M. Weit, of Crestline, died in that city at the age of 70 years.

Ewing Welch Robinson, the oldest practicing physician of Cleveland, recently died.